



From minority stress to active aging readiness: inclusive recreation as community-level social infrastructure for LGBTQ+ adults in rural Thailand

Del estrés de las minorías a la preparación para el envejecimiento activo: la recreación inclusiva como infraestructura social a nivel comunitario para adultos LGBTQ+ en zonas rurales de Tailandia

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Abstract

Introduction: Despite symbolic progress toward sexual and gender diversity in Thailand, LGBTQ+ adults in rural communities continue to experience structural minority stress, conditional acceptance, and uncertainty regarding future caregiving, which undermine subjective well-being and active aging readiness.

Objective: This study aimed to develop a mixed-methods model explaining how inclusive recreation functions as a socially embedded mechanism linking minority stress and active aging readiness among rural LGBTQ+ adults.

Methodology: An exploratory sequential mixed-methods design integrated a quantitative survey of 220 LGBTQ+ adults aged 40 years and older with qualitative interviews, non-participant observation, and participatory action research to co-create an inclusive recreation model.

Results: Social support was the strongest positive predictor of active aging readiness ($\beta = 0.42$, $p < 0.001$), while minority stress showed a significant negative association ($\beta = -0.28$, $p < 0.01$). Recreational spaces were perceived as safe ($M = 4.09$, $SD = 0.89$), and qualitative findings highlighted caregiving-related anxiety.

Discussion: Inclusive recreation mediates minority stress by fostering relational safety, visibility, and collective affirmation within everyday community life.

Conclusions: Inclusive recreation operates as community-level social infrastructure supporting psychological safety and confidence in aging among rural LGBTQ+ adults.

Keywords

LGBTQ+ adults; minority stress; inclusive recreation; active aging readiness; rural Thailand.

Resumen

Introducción: A pesar del progreso simbólico hacia la diversidad sexual y de género en Tailandia, los adultos LGBTQ+ que viven en comunidades rurales continúan experimentando estrés de minorías de carácter estructural, aceptación condicional e incertidumbre respecto al cuidado futuro, factores que debilitan el bienestar subjetivo y la preparación para el envejecimiento activo.

Objetivo: Este estudio tuvo como objetivo desarrollar un modelo de métodos mixtos que explique cómo la recreación inclusiva funciona como un mecanismo socialmente integrado que vincula el estrés de minorías con la preparación para el envejecimiento activo entre adultos LGBTQ+ en contextos rurales.

Metodología: Se empleó un diseño secuencial exploratorio de métodos mixtos que integró una encuesta cuantitativa aplicada a 220 adultos LGBTQ+ de 40 años o más, junto con entrevistas cualitativas, observación no participante e investigación acción participativa para la cocreación de un modelo de recreación inclusiva.

Resultados: El apoyo social emergió como el predictor positivo más fuerte de la preparación para el envejecimiento activo ($\beta = 0.42$, $p < 0.001$), mientras que el estrés de minorías mostró una asociación negativa significativa ($\beta = -0.28$, $p < 0.01$). Los espacios recreativos fueron percibidos como seguros ($M = 4.09$, $DE = 0.89$), y los hallazgos cualitativos destacaron la ansiedad relacionada con la ausencia de cuidados en la vejez.

Discusión: La recreación inclusiva media el impacto del estrés de minorías al fomentar seguridad relacional, visibilidad y afirmación colectiva en la vida comunitaria cotidiana.

Conclusiones: La recreación inclusiva opera como una forma de infraestructura social a nivel comunitario que respalda la seguridad psicológica y la confianza en el proceso de envejecimiento entre adultos LGBTQ+ en zonas rurales.

Palabras clave

Adultos LGBTQ+; estrés de minorías; recreación inclusiva; preparación para el envejecimiento activo; Tailandia rural.

Introduction

Although Thailand is frequently portrayed in international discourse as a society characterized by tolerance toward sexual and gender diversity, the everyday realities experienced by LGBTQ+ individuals reveal a far more uneven and context-dependent social landscape. Public narratives often emphasize visibility, cultural openness, and recent legal developments, including the enactment of marriage equality in early 2025, creating an image of broad societal acceptance. Yet such representations tend to obscure the distinction between surface-level tolerance and deeper forms of social inclusion, a pattern that aligns with Minority Stress Theory, which conceptualizes stigma as a structurally embedded condition shaping expectations, relationships, and everyday decision-making, rather than a series of isolated discriminatory events (Meyer, 2003). In many Thai contexts, particularly outside major urban centers, acceptance of LGBTQ+ identities remains conditional and fragile, shaped by cultural expectations surrounding gender conformity, family continuity, religious values, and social reputation (Tongterm, 2025; Tongterm et al., 2023). Individuals may be publicly visible yet simultaneously experience subtle exclusion within families and close community networks, a dynamic that recent international scholarship has identified as characteristic of pragmatic or conditional acceptance rather than substantive inclusion (Lampe & McKay, 2025). These dynamics are especially pronounced in rural areas, where social life is tightly bound to kinship structures and communal norms, intensifying minority stress and reinforcing long-standing patterns of silence, self-censorship, and constrained life choices.

For LGBTQ+ adults in rural Thailand, such conditional acceptance becomes increasingly consequential as individuals approach later life stages, particularly in relation to concerns about future caregiving, social dependency, and long-term security. Unlike urban settings where alternative support networks and LGBTQ+-affirming services are more accessible, rural communities often lack visible or trusted structures of care beyond the family. As a result, aging-related anxiety among LGBTQ+ adults is frequently shaped not only by health considerations but by uncertainty regarding who will provide care, advocacy, and emotional support later in life. Recent international scholarship confirms that caregiving insecurity is a shared and pressing concern among aging LGBTQ+ populations across diverse cultural contexts, underscoring its relevance as a structural rather than merely individual issue (Hall et al., 2025). In rural environments, where reliance on informal care systems is especially pronounced, this uncertainty further compounds minority stress and undermines subjective well-being and confidence in aging in place.

Within the broader literature on aging and well-being, active aging is widely conceptualized as a multidimensional process encompassing physical health, psychological resilience, social participation, and a sense of meaning in later life. However, dominant models of active aging have largely been developed within heteronormative and urban-oriented frameworks, often emphasizing individual health behaviors while underestimating the importance of leisure, social belonging, and culturally embedded participation. Evidence from leisure and gerontological research highlights that engagement in recreational and free-time activities plays a central role in promoting quality of life and psychological well-being among older adults, particularly in rural settings where formal support systems are limited (Tena et al., 2024). For LGBTQ+ populations, active aging cannot be separated from experiences of safety, recognition, and belonging, dimensions that remain insufficiently integrated into conventional aging models (Tee et al., 2025).

Against this backdrop, recreation cannot be understood merely as an individual lifestyle choice or health-related behavior. Instead, it may function as a socially embedded mechanism through which psychological safety, relational continuity, and collective visibility are negotiated in everyday community life. Empirical studies demonstrate that physical activity and recreation are associated with improved psychological well-being among older adults in rural contexts (Quintero et al., 2024), while emerging evidence suggests that inclusive recreational environments can buffer minority stress and foster resilience among LGBTQ+ populations (Pistella et al., 2025). Building on these insights, the present study adopts a mixed-methods approach to examine how minority stress, social support, and inclusive recreation interact to shape subjective well-being and active aging readiness among LGBTQ+ adults in rural Thailand. By conceptualizing inclusive recreation as a form of community-level social infrastructure, this study advances a framework that moves beyond individual behavior change and

highlights the role of culturally grounded, participatory recreational practices, exemplified by the Phusing Model, in supporting dignity, visibility, and sustainable pathways toward active aging.

Method

This study adopted a methodological framework designed to examine the interrelationships among minority stress, physical activity, inclusive recreation, and active aging readiness among LGBTQ+ adults in rural Thailand. The research design was informed by established mixed-methods principles for examining complex, socially embedded phenomena that require both statistical explanation and contextual interpretation. Accordingly, the methodology was structured to generate explanatory empirical evidence while simultaneously supporting community-based development and feasibility assessment. All procedures were conducted with careful attention to the social sensitivity and ethical considerations associated with working with LGBTQ+ populations in rural settings.

Research Design

An exploratory sequential mixed-methods design was employed, integrating quantitative and qualitative approaches. This design was selected to enable initial identification of predictive psychosocial relationships, followed by qualitative exploration of the social processes and experiential meanings underlying those relationships (Creswell, & Clark, 2017). The mixed-methods framework was complemented by a participatory action research (PAR) component, emphasizing collaboration with community stakeholders in the co-creation and pilot implementation of an inclusive recreation model. This integrated design allowed the study to address explanatory, developmental, and feasibility-related objectives within a single coherent methodological structure, consistent with prior sequential exploratory research conducted in rural Southeast Asian contexts (Syaukani et al., 2024).

Study Setting and Participants

The study was conducted in rural districts of Sisaket Province in northeastern Thailand. The target population consisted of LGBTQ+ adults aged 40 years and older who had resided in rural communities for a minimum of five years. This age threshold was selected to capture individuals approaching later life stages in which concerns related to social security, caregiving, and preparation for aging become increasingly salient, aligning with gerontological research identifying midlife as a critical period for assessing later-life readiness (Fredriksen-Goldsen & Kim, 2017). Participants self-identified across diverse sexual orientations and gender identities, including gay men, lesbian women, transgender individuals, bisexual persons, and non-binary individuals. Inclusion criteria required voluntary participation and Thai language proficiency.

Sampling Strategy

To ensure alignment with the research objectives, participants were recruited into four complementary groups:

- 1) Quantitative sample: A total of 220 participants were recruited for the survey phase addressing Objectives 1 and 2. Snowball sampling was employed due to the socially sensitive and partially hidden nature of LGBTQ+ populations in rural settings, an approach widely used in sexual and gender minority research where probability sampling is not feasible (Meyer & Wilson, 2009).
- 2) Qualitative key informants: Twenty participants were purposively selected for in-depth interviews to capture diverse life experiences, patterns of physical activity, and engagement with recreational spaces. Data collection continued until thematic saturation was achieved, consistent with qualitative methodological standards (Braun & Clarke, 2006).
- 3) Observational groups: Five recreational activities involving LGBTQ+ adults were selected for non-participant observation to examine interaction patterns, participation dynamics, and contextual conditions of recreational engagement.
- 4) PAR participants: Thirty participants were recruited for the co-creation and pilot implementation of the inclusive recreation model, corresponding to Objectives 3 and 4 related to participatory development and feasibility assessment.



Data Collection Instruments

Quantitative data were collected using a structured questionnaire comprising sections on demographic characteristics, minority stress, social support, subjective well-being, perceived active aging readiness, and physical activity behaviors. All items were measured using five-point Likert-type scales. Physical activity behaviors were assessed in relation to established frameworks for recreational engagement and psychological well-being in aging populations, emphasizing participation, perceived safety, and meaningful engagement rather than performance intensity (Quintero et al., 2024).

Qualitative data were collected through semi-structured interview guides, focus group discussion protocols, and non-participant observation forms. These instruments were designed to explore experiences of minority stress, perceptions of psychological safety, identity affirmation, and expectations toward inclusive recreational spaces within rural communities.

Content validity was assessed by a panel of five experts in sports science, recreation, and social research. The Index of Item–Objective Congruence ranged from 0.88 to 1.00 across all instruments. Reliability testing of the questionnaire yielded a Cronbach’s alpha coefficient of 0.87, indicating satisfactory internal consistency.

Data Collection and PAR Procedures

Data collection was conducted in three sequential phases. Phase 1 involved administration of the quantitative survey to examine predictive relationships among minority stress, social support, physical activity, subjective well-being, and perceived active aging readiness. Phase 2 consisted of in-depth interviews and focus group discussions to explore social mechanisms underlying recreational participation in rural LGBTQ+ contexts. Phase 3 employed a participatory action research cycle of planning, action, observation, and reflection to co-design and pilot an inclusive recreational activity, implemented as the Phusing Model during a local community festival. This phase was designed to examine contextual feasibility and social acceptance rather than to evaluate intervention efficacy (Baum et al., 2006).

Data Analysis and Integration

Quantitative data were analyzed using descriptive statistics and multiple regression analysis to examine predictive relationships relevant to Objectives 1 and 2. Qualitative data were analyzed using thematic analysis, with interview transcripts and field notes coded to identify patterns related to identity affirmation, psychological safety, and community interaction (Braun & Clarke, 2006). Integration of quantitative and qualitative findings followed a sequential explanatory logic, in which initial quantitative trends informed the development of interview protocols and thematic emphases in the qualitative phase (Fredriksen-Goldsen & Kim, 2017). Joint-display analysis was subsequently employed to support the conceptual synthesis, illustrating pathways linking minority stress, inclusive recreation, and active aging readiness without inferring causality beyond the empirical scope of the study (Creswell, & Clark, 2017).

Ethical Considerations

Ethical approval was obtained from the Human Research Ethics Committee of Sisaket Rajabhat University (Approval No. HE681010). All participants received detailed information regarding the study objectives and procedures and provided informed consent prior to participation. Confidentiality and anonymity were strictly maintained, and participants were informed of their right to withdraw from the study at any stage without consequence.

Results

This section reports the empirical findings generated through the multi-phased mixed-methods research process, integrating quantitative survey results, qualitative inquiry, and participatory action research outcomes. In accordance with conventions in leisure and recreation studies, the results are organized by research objectives and reported in a descriptive and neutral manner. Emphasis is placed on psychosocial patterns, lived experiences, and implementation characteristics, without interpretive elaboration beyond the empirical scope of the data. The presentation progresses from participant

characteristics and baseline psychosocial conditions to relational patterns relevant to active aging readiness, followed by predictive relationships, experiential dimensions of recreation, implementation outcomes, and convergent findings across data sources.

Participant Characteristics and Psychosocial Baseline

The quantitative phase included 220 LGBTQ+ adults residing in rural districts of Sisaket Province (n = 220). All participants were aged 40 years or older and had lived in rural communities for a minimum of five years, indicating prolonged exposure to local social and cultural environments. In terms of biological sex, 67.73% identified as male (n = 149) and 32.27% as female (n = 71). Participants self-identified across diverse sexual orientations and gender identities, including gay men, lesbian women, transgender individuals, bisexual persons, and non-binary individuals. Most reported long-term residence within their communities and ongoing involvement in family-based and communal social networks, such as participation in household activities, local events, and informal community interactions.

Descriptive analysis indicated relatively high perceived social support from family members and close social ties, with a mean score of 4.02 (SD = 0.95). Notably, perceived safety and inclusion within recreational spaces were reported at a comparably high level (M = 4.09, SD = 0.89), highlighting the salience of these environments in participants' everyday lives. Experiences related to discrimination or negative social attitudes when accessing community spaces were reported at a moderate level (M = 3.44, SD = 1.35), suggesting the coexistence of social acceptance and situational constraints within rural community settings.

Measures of subjective well-being and perceived readiness for active aging were situated within a moderate range, reflecting cautious expectations regarding future caregiving arrangements, economic security, and the continuity of social support as participants age. These patterns indicate underlying uncertainties related to long-term care, financial stability, and informal support structures in rural contexts, which were consistent with qualitative accounts describing aging-related anxiety linked to the absence of traditional family caregiving arrangements.

Predictive Factors of Subjective Well-being and Active Aging Readiness

To address Objective 1, multiple regression analyses were conducted to examine predictive relationships between individual, social, and structural factors and perceived active aging readiness among LGBTQ+ adults in rural settings. The regression model demonstrated that social support, minority stress, and physical activity behavior collectively accounted for a substantial proportion of variance in perceived active aging readiness ($R^2 = 0.48$, $p < 0.001$).

Social support emerged as the strongest positive predictor of perceived aging readiness ($\beta = 0.42$, $p < 0.001$), whereas minority stress demonstrated a statistically significant negative association ($\beta = -0.28$, $p < 0.01$). Physical activity behavior showed a positive association within the model ($\beta = 0.16$, $p < 0.05$), although its standardized effect size was smaller relative to social support, indicating a supportive rather than dominant role within the overall predictive structure. Selected demographic characteristics did not reach statistical significance.

All regression models met the assumptions required for multivariate analysis, and no multicollinearity was detected among predictor variables (variance inflation factor < 2.0). The selection of predictor variables reflected the study's conceptual focus on social and structural determinants of aging readiness in marginalized populations, allowing the regression model to capture key psychosocial pathways without introducing unnecessary model complexity.

Physical Activity and Recreation as Social Contexts of Participation

Findings related to Objective 2 highlight physical activity and recreation as salient social contexts shaping participation among LGBTQ+ adults in rural communities. Quantitative results indicated that perceived psychological safety within recreational and exercise spaces received a high mean score (M = 4.09, SD = 0.89), suggesting that such environments were viewed as comparatively secure settings for engagement. Participants also reported a preference for recreational activities specifically designed to accommodate LGBTQ+ identities and participation needs (M = 3.82, SD = 1.05).

Qualitative accounts corroborated these patterns by describing recreational spaces as contexts in which participants could engage socially with reduced concern over judgment or social surveillance. Several participants emphasized that recreation provided temporary relief from the need to conceal identity in everyday rural life. One participant explained:

“In our volleyball group, I can truly be myself. I do not have to think about how I act or speak. It feels safer than other public places in the village.”

These accounts indicate that recreational settings functioned as socially meaningful spaces that enabled participation, interaction, and emotional ease within otherwise constrained community environments.

Participatory Co-creation and Development of the Inclusive Recreation Model

In alignment with Objective 3, the inclusive recreation model was developed through a participatory action research (PAR) process involving LGBTQ+ adults and local community stakeholders. The process followed iterative cycles of planning, action, observation, and reflection, allowing participants to articulate preferred forms of activity, identify perceived barriers to participation, and address contextual considerations related to local culture and community norms.

Volleyball was collectively selected as the pilot activity due to its cultural familiarity, low resource requirements, and established role in rural community gatherings. Participation rules were intentionally adapted to emphasize inclusivity, flexibility, and cooperative engagement rather than competitive performance. These modified rules reduced performance pressure and facilitated participation across diverse gender identities and age groups. The resulting model, referred to as the Phusing Model, aligned with existing local recreational practices while accommodating multiple forms of expression and participation.

Implementation Outcomes, Feasibility, and Social Acceptance

The pilot implementation of the inclusive recreation model was conducted within the context of a local cultural festival, situating the activity within an established communal setting. Observational records indicated sustained engagement and continuous participation throughout the event, with the activity embedded alongside routine cultural and social practices.

Community engagement was primarily observed through spectating, informal interaction, and shared presence within the event space. These patterns reflected a form of pragmatic social acceptance, characterized by situational tolerance and public coexistence without overt attitudinal endorsement. Participation proceeded without reported incidents of disruption or overt conflict, supporting the feasibility of embedding inclusive recreation within existing rural social infrastructures. Observational notes also documented practical challenges related to public recognition and participation continuity, which were recorded as part of the implementation process. The implementation process and its social visibility are presented in Figure 1.

Figure 1. Pilot implementation and social visibility of inclusive recreation within a rural community context



(A) Community-level visibility during a local cultural festival.

Public presence of LGBTQ+ adults through inclusive recreational activities embedded within a Songkran festival in Sisaket Province. The image illustrates how inclusive recreation operates within existing communal social settings, enabling social visibility, shared presence, and everyday coexistence.

(B) Participatory pilot implementation (Phase 2).

The pilot activity session, “Rainbow Rally: Topping with Heart, Beyond Gender,” demonstrating participatory engagement across age groups and gender identities. The session reflects the co-created, non-competitive character of the activity developed through the participatory action research process.

Note: All images have been processed to ensure participant anonymity in accordance with ethical protocols and reviewer recommendations. The figure is provided for contextual illustration of implementation processes and social interaction and does not constitute primary analytical data.

Convergence of Empirical Findings

Across quantitative, qualitative, and participatory data sources, convergent empirical patterns were observed regarding the psychosocial conditions associated with subjective well-being and perceived readiness for aging among LGBTQ+ adults in rural communities. Quantitative findings identified social support as the strongest predictor of aging readiness, while qualitative narratives consistently emphasized peer connection, family presence, and collective participation as primary sources of psychological security. These convergent patterns are summarized through a joint display integrating quantitative indicators and illustrative lived experiences (Table 1).

Qualitative data further revealed dimensions of structural vulnerability, particularly among participants engaged in informal or wage-based labor with limited savings and uncertain long-term caregiving arrangements. One participant reflected:

“I am not afraid of getting older, but I am afraid of having no money and no one to take care of me when I cannot work anymore.”

A spatial paradox was also evident. While rural communities demonstrated visible acceptance during festivals and collective activities, participants reported continued exclusion from symbolic or decision-making spaces within local power structures. As one participant noted:

“At the festival, everyone smiles and watches us play. But when it comes to village meetings or leadership, we are still invisible.”

At the same time, qualitative narratives confirmed the buffering role of family and close social networks in mitigating minority stress. Participants frequently described family acceptance as the foundation of emotional well-being, even when broader societal acceptance remained conditional or situational.

Notably, quantitative findings identifying social support as the strongest predictor of aging readiness converged directly with qualitative accounts emphasizing family and peer relationships as central

mechanisms of security and resilience, as illustrated in the integrated joint display (Table 1). Together, these convergent findings establish an empirically grounded foundation for the conceptual synthesis presented in the subsequent Discussion section.

Table 1. Joint Display: Integration of Psychosocial Predictors and Lived Experiences of LGBTQ+ Adults

Integration Themes	Quantitative Results	Qualitative Lived Experiences (Illustrative Quotes)
Social Support & Security	Social support was the strongest predictor of aging readiness ($\beta = 0.42, p < 0.001$)	"Even without children, having friends and family here makes me feel secure. I know I will not be alone when I get older."
Minority Stress & Aging Anxiety	Minority stress negatively predicted aging readiness ($\beta = -0.28, p < 0.01$)	"Sometimes I avoid public places because I am afraid of being judged. It makes me worry about my future."
Structural Vulnerability	Moderate levels of perceived insecurity regarding future care and financial stability	"I still work day to day. If I get sick or old, I do not know what will happen to me."
Psychological Safety in Recreation	High perceived safety in recreational spaces (mean = 4.09, S.D. = 0.89)	"In the volleyball group, I feel relaxed. I do not have to hide who I am."
Visibility & Pragmatic Acceptance	Preference for inclusive activities (mean = 3.82, S.D. = 1.05)	"People watch us play and do not interfere. It feels like acceptance, even if it is only for that moment."

Discussion

This discussion interprets the study findings through an explicitly articulated recreation-centered theoretical lens, moving beyond descriptive synthesis toward a more integrated and empirically grounded explanation of how minority stress, inclusive recreation, and active aging readiness intersect as a dynamic process in rural Thai contexts. Quantitative and qualitative evidence are examined jointly to ensure that interpretations remain grounded in empirical data while advancing a contribution anchored in recreation science, contributing cautiously to theoretical and practical debates on LGBTQ+ aging, recreation, and social inclusion.

Minority stress as a structural condition shaping well-being and aging readiness

The findings indicate that minority stress among LGBTQ+ adults in rural Thailand is experienced less as episodic acts of overt discrimination and more as a structurally embedded condition that shapes everyday relational life and future-oriented expectations. In line with Minority Stress Theory (Meyer, 2003), stress does not arise solely from direct stigma but accumulates through chronic expectations of rejection, concealment, and social dependency. Quantitative results identifying social support as the strongest predictor of perceived active aging readiness converge with qualitative narratives emphasizing family acceptance, peer connection, and informal kinship networks as relational foundations of psychological security rather than isolated emotional resources.

Importantly, the present findings extend Minority Stress Theory by foregrounding a future-oriented dimension of stress that is particularly salient in rural aging contexts. Although reported discrimination in public spaces was moderate, qualitative accounts revealed that anticipatory anxieties related to caregiving absence, economic insecurity, and fear of becoming a burden exerted a disproportionate influence on perceived readiness for later life. This extension is especially relevant in non-Western rural settings, where aging security remains closely tied to family-based care rather than institutional welfare systems. Recent international studies on queer caregiving and aging insecurity (Hall et al., 2025; Lampe & McKay, 2025) reinforce this interpretation, suggesting that caregiving anxiety constitutes a core yet under-theorized component of minority stress among older LGBTQ+ adults.

Recreation as a social mechanism mediating stress and self-worth

Beyond identifying predictive relationships, the findings indicate that physical activity and recreation function as socially embedded mechanisms through which minority stress is experienced and managed among LGBTQ+ adults in rural contexts. High levels of perceived psychological safety within recreational spaces, together with qualitative accounts of reduced self-censorship, suggest that these environments are valued not primarily for physical outcomes but for their relational qualities, including visibility, affirmation, and collective presence. Recreation thus operates as an intentionally structured social context that enables temporary relief from normative scrutiny and supports the reconstruction of self-worth, rather than merely as an individual health behavior.



This interpretation challenges conventional active aging models that frame physical activity mainly in terms of fitness and functional independence and often assume heteronormative life courses. In contrast, the present findings are consistent with emerging evidence that group-based leisure and recreational engagement plays a critical role in enhancing psychological well-being among older adults in rural settings (Quintero et al., 2024), indicating that recreation functions as a socially embedded buffering mechanism that mitigates minority stress rather than as a standalone intervention.

Co-creation as a pathway to culturally grounded inclusion

The participatory action research component demonstrates that inclusive recreation in rural LGBTQ+ contexts must be co-created rather than externally imposed, as participatory processes prioritize contextual appropriateness and community legitimacy over externally defined program efficiency (Baum et al., 2006). Empirical evidence indicates that the selection of volleyball as the pilot activity was driven by cultural familiarity, accessibility, and participant preference rather than researcher assumptions. Within the rural Thai context, volleyball represents a culturally familiar recreational platform that enables participation without explicit identity disclosure, thereby reducing exposure to minority stress while maintaining social acceptability. The adaptation of participation rules to emphasize cooperation, flexibility, and non-competitive engagement reflects an intentional recreational design aligned with local practices, supporting psychological safety and identity affirmation among LGBTQ+ adults (Pistella et al., 2025).

Challenges encountered during implementation, including fewer participating teams than initially anticipated and limited material incentives, should be understood as reflections of structural constraints rather than program shortcomings. These constraints are shaped by rural social hierarchies, informal labor conditions, and lingering ambivalence toward LGBTQ+ visibility. Consistent with analyses of negotiated acceptance in public and communal spaces, visibility within recreational contexts does not necessarily translate into structural inclusion but reflects a pragmatic accommodation shaped by local power relations (Goh, 2018). The findings do not suggest that co-creation guarantees unconditional acceptance; rather, participatory processes enhance feasibility and contextual fit while simultaneously revealing the negotiated boundaries of inclusion within rural community life.

Feasibility, acceptance, and the politics of visibility in rural communities

Findings from the implementation phase indicate that social acceptance in rural communities operates in a pragmatic and context-dependent manner. By embedding inclusive recreational activities within an established communal festival, LGBTQ+ participation was framed as collective enjoyment and social contribution rather than as an explicit ideological claim, with observational patterns of spectating, informal interaction, and shared presence empirically illustrating a form of pragmatic social acceptance characterized by situational tolerance and peaceful coexistence without necessitating deeper attitudinal change. At the same time, qualitative accounts reveal a spatial paradox in which visibility was permitted and even normalized within festive and recreational settings, while exclusion persisted in symbolic, political, and decision-making spaces within local power structures. This divergence underscores a critical distinction between visibility and structural inclusion, indicating that acceptance in rural contexts does not equate to equality but reflects a negotiated social arrangement shaped by cultural norms, power relations, and the boundaries of communal legitimacy, a pattern that resonates with broader analyses of LGBTQ+ visibility and political inclusion in non-Western social contexts (Goh, 2018).

Toward an integrated model of inclusive recreation and active aging

Synthesizing quantitative and qualitative findings, this study proposes a more explicitly articulated and empirically grounded conceptual understanding of how minority stress, inclusive recreation, and active aging readiness are interconnected. Minority stress emerges as a structurally produced condition shaped by relational expectations and future insecurity rather than frequent hostile encounters alone. Inclusive recreation is re-conceptualized as community-level social infrastructure that transforms social interaction into perceived safety, identity affirmation, and strengthened relational ties.

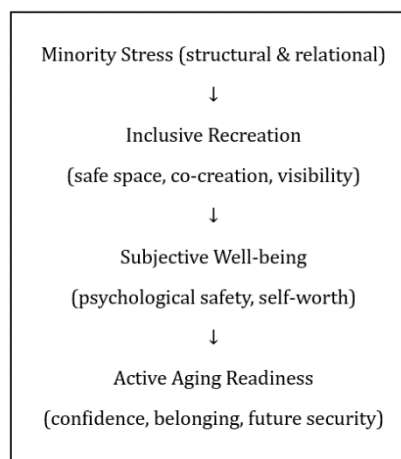
Through repeated participation in affirming recreational spaces, subjective well-being is enhanced and confidence in aging within one's community is cautiously reinforced. This model should be understood as a conceptual synthesis grounded in empirical observation rather than a causal framework. The findings illustrate a plausible, context-specific pathway through which inclusive recreation may



support aging readiness when embedded within local social systems, consistent with recent scholarship emphasizing social infrastructure as a foundation for resilience and well-being (Marheni et al., 2024).

In summary, this discussion remains anchored in empirical evidence while advancing a recreation-centered theoretical contribution to scholarship on aging. The findings demonstrate how minority stress operates as a structural condition, how recreation mediates stress through socially embedded mechanisms, and how participatory co-creation enhances feasibility without guaranteeing unconditional acceptance. From a practical perspective, the model suggests that community-based recreational initiatives and local policy interventions should prioritize relational safety, cultural familiarity, and participatory design rather than uniform program replication. Such an approach positions inclusive recreation as an incremental form of social infrastructure capable of supporting dignity, belonging, and aging readiness among LGBTQ+ adults in rural Thailand. The integrated conceptual pathway is illustrated in Figure 2.

Figure 2. Integrated conceptual pathway illustrating inclusive recreation as community-level social infrastructure linking minority stress, subjective well-being, and active aging readiness among LGBTQ+ adults in rural Thailand.



Conclusions

This study demonstrates that subjective well-being and active aging readiness among LGBTQ+ adults in rural Thailand are shaped through the interaction of structural minority stress, relational security, and socially embedded recreational practices, rather than being determined solely by individual health behaviors. Quantitative findings indicate that social support and relational stability function as the primary anchor of aging readiness, underscoring that minority stress in rural contexts is experienced less as episodic discrimination and more as a persistent, future-oriented concern related to caregiving availability, social legitimacy, and long-term belonging within the community. Qualitative evidence further shows that physical activity and recreation function as social mechanisms through which psychological safety, self-worth, and collective affirmation are cultivated in settings where acceptance remains conditional, operating as relational contexts that temporarily reduce identity-related self-monitoring and enable visible participation without direct confrontation of prevailing norms. When co-created through participatory processes and aligned with local cultural practices, as exemplified by the Phusing Model, inclusive recreation demonstrates contextual feasibility and pragmatic social acceptance, enabling LGBTQ+ adults to participate visibly in community life while maintaining social harmony. By integrating these convergent findings, the study advances a conceptual understanding of inclusive recreation as an emergent form of community-level social infrastructure that supports dignity, relational continuity, and confidence in aging in place, thereby extending active aging frameworks beyond individual lifestyle choice toward a structural and relational resource, particularly in contexts where formal welfare systems remain limited. Together, the findings suggest that community-based recreational initiatives grounded in relational safety, cultural familiarity, and participatory design offer sustainable pathways toward active aging readiness beyond behavior change alone.

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