Integrating Quantitative and Qualitative Insights: Addressing Mental Health Challenges Among Thai Elderly Living Alone in Bangkok

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ABSTRACT
This research investigates the living conditions that affect the mental health of Thai elderly who live alone in Bangkok by using a mixed-methods approach. A survey of 64 participants identified key factors such as living arrangements, social support, financial security, and access to healthcare as important. Many commented that home modifications and community engagements improve their quality of life. Interviews revealed coping strategies, including spiritual practices and community centers, along with challenges such as the mistrust in mental health services, loneliness, and struggles relating to aging. Despite concern about safety and accessibility, there was strong preference for aging in place. This research highlighted the connection between social, psychological, and physical factors, and recommending culturally appropriate interventions, better housing design, and accessible mental health services to improve well-being and quality of life.

1. Introduction:

The ratio of elderly people has been increasing globally. In 2000, Thailand's population who aged 60 years and over was 10.3% of the total population[4]. In 2022, Thailand officially become a Complete Aged Society. According to data from the National Statistical Office, around 18.3% of the total population, approximately 12,116,199 people, were aged 60 years and above. According to this data, Thailand is expected to have elderly population surpassing 28% in 2031, making it a Super Aged Society[8]. Currently, people aged 60 and above around 23.2% living alone. This demographic shift, especially in Bangkok, creates serious challenges such as loneliness, social isolation, and mental health issues including anxiety and depression. Living alone becomes even more serious due to the poor living condition, lack of safety features, and limited approaches to metal health services. Financial challenges and lower social interactions also affected their overall well-being[11]. This study discusses how living conditions affect the mental health of the elderly who live alone by using quantitative survey from 64 participants and qualitative interviews. The finding indicates that home modifications, better social support, and more community activities are important for solving these challenges. By combining both numbers and personal stories, this study provides useful ideas for policymakers and healthcare workers to improve the mental health and quality of the elderly people in urban areas[6].

2. Literature Reviews:

Demographic Shifts and Aging in Thailand

Thailand is going through big changes in its population, mainly because fewer babies are being born and people are living longer. In 1980, the average woman had 3.4 children, but by 2023, this number dropped to just 1.3. At the same time, life expectancy has increased from 64 years in 1980 to 77 years in 2019[9]. These changes mean that Thailand's population is aging quickly, and the country is now considered an "Aged Society." As of January 2024, 20% of the population, or about 13.2 million people, are elderly. Of these, 23.2% live alone because of economic difficulties, changes in family structures, and younger people moving to cities or other countries.

Urbanization and modernization have also changed how families are structured. In the past, extended families were common, but now nuclear families, single-parent households, and skipped-generation families (where grandparents raise grandchildren) are more typical. Because of this, fewer elderly people live with their children. In 1986, 77% of elderly people lived with their children, but by 2007,

this number had dropped to 59%. At the same time, the number of elderly people living alone or only with a spouse has almost doubled, leading to more social isolation and loneliness[5].

Economic growth has played a role in these changes too. As Thailand has moved from being a low-income to a middle-income country, many families have moved to cities for work, which has disrupted traditional caregiving systems. There are also differences in life expectancy between men and women. As of 2024, men live an average of 74.9 years, while women live 81.1 years.

These changes are putting pressure on Thailand's family-based care systems. More social support and healthcare services are needed to help the growing elderly population and ensure they can live healthy, connected lives.

Mental Health Challenges Among the Elderly

The mental health of elderly individuals in Thailand is becoming a serious concern due to social, economic, and family changes. Many older adults face mental health challenges such as loneliness, depression, and anxiety, which are often worsened by decreasing family support and growing social isolation. Changes in family structure, including smaller family sizes and the migration of younger adults for work, have led to a decline in elderly individuals living with their children. In 1986, about 77% of elderly people lived with their children, but by 2007, this number had decreased to 59%. At the same time, the proportion of elderly individuals living alone has doubled to 8%, and if including those who live only with a spouse, the figure increases to 25%[5].

Several factors contribute to the mental health issues among elderly individuals. Physical decline, including frailty, chronic diseases, and dementia, can make it more difficult for them to stay independent. Psychologically, many elderly people experience distress due to losing their spouse or close friends, leading to grief and emotional pain. Moreover, as family roles change, many elderly individuals feel excluded from decision-making in modern households, sometimes being seen as "outdated" or less important in the family[5].

Social isolation and loneliness have a strong impact on mental well-being. When elderly people have less contact with family and community, they are more likely to suffer from mental health problems such as insomnia, anxiety, and even physical health conditions like high blood pressure and heart disease[11]. Department of Older Persons, n.d.). The situation is even worse in big cities like Bangkok, where there are fewer public spaces for elderly people to meet and socialize, making them more vulnerable to mental health issues.

To improve the situation, it is important to encourage elderly people to stay socially active, engage in physical activities, and maintain spiritual well-being. Participating in community activities and having strong social networks can help reduce loneliness and improve mental health. Additionally, making changes to the living environment can help elderly individuals remain independent and active[11].

Living Environment and Mental Health

The living environment has an important impact on the mental health and well-being of elderly individuals. Factors such as accessibility, safety, opportunities for social interaction, and connection to the community strongly affect their quality of life. Well-designed living spaces can help elderly people maintain independence and reduce the need for caregivers, which can improve their mental health and lower feelings of loneliness and anxiety[12].

In Thailand, traditional family-based caregiving is becoming less common due to changes in family structures and migration patterns. As a result, many elderly individuals now live alone or with other elderly persons. Between 1996 and 2018, the percentage of elderly households increased from 29.5% to 42.6%, while the number of elderly living alone grew from 2.3% to 6.5% (National Statistical Office, n.d.; Iamtrakul & Chayphong, 2022). This change highlights the growing need for supportive and flexible living environments that meet the needs of the aging population.

The idea of "aging in place" refers to the preference of elderly individuals to stay in their own homes and communities while remaining safe and independent. Making home adjustments, such as installing handrails, improving lighting, and using non-slip flooring, is necessary to enhance their safety and quality of life[14]. These modifications help elderly people continue their daily activities with fewer risks, allowing them to feel more confident and independent.

Additionally, mental health benefits from social and physical environments that encourage engagement and interaction. Having shared spaces for recreation and quiet areas for relaxation can support emotional well-being. Senior housing facilities that integrate physical, social, and psychological needs help elderly individuals adjust better and experience improved mental health[3].

In conclusion, a well-planned living environment that considers both physical and mental needs is essential for supporting the well-being of elderly individuals. By promoting safety, independence, and social connections, such environments can significantly improve their quality of life and overall happiness. However, it is also important that these solutions are made available and affordable to a wider range of elderly people, so they can benefit from better living conditions.

Social Support and Community Engagement

Social support and community involvement are very important for improving the mental health and overall well-being of elderly individuals. In Thailand, the decline of traditional extended family systems has left many elderly people socially isolated, especially those who live alone or in urban areas. A lack of social interaction with family and friends has been linked to higher risks of depression, anxiety, and other mental health problems[5].

Being part of a community can help to reduce these challenges. Taking part in community activities and keeping social connections with friends can help elderly people feel less lonely and more included. Regular interactions with family, neighbors, and community members provide emotional and psychological support, which is very important for their mental well-being[11].

Various programs and initiatives that encourage social participation, such as community centers, senior clubs, and volunteer work, can help elderly individuals build relationships and stay active. These activities also support interactions between different generations, which helps to keep traditional family values and narrow the gap between young and old, creating a more supportive social environment (Shi, 2017).

Moreover, urban planning and public policies can improve social support by creating safe, accessible, and elderly-friendly public spaces where older adults can engage with their peers and the wider community. These spaces allow elderly individuals to participate in physical activities and social gatherings, which can improve their emotional well-being.

In conclusion, strengthening social support and increasing community engagement are essential strategies to address the emotional and psychological needs of the elderly. By improving these connections, elderly individuals can experience less loneliness and develop a stronger sense of purpose and belonging in society. However, efforts should be made to ensure these opportunities are widely available, especially for those in disadvantaged communities.

Urban Context of Bangkok and Elderly Well-Being

The urban environment of Bangkok brings both problems and chances for the well-being of elderly people. As of 2024, the city’s population is about 11.23 million, with much of this growth coming from migration and urban expansion (Macrotrends, 2024). The high number of people living in the city, especially in central areas, has made more elderly individuals live separated from their families. It is expected that in the next 20 years, about 11% of Bangkok’s elderly population will live alone, which will make loneliness, depression, and anxiety more common among them.

Bangkok’s fast urbanization has also reduced the number of community spaces, making elderly people

more isolated. Unlike in rural areas, where older people join community gatherings, those in Bangkok have less opportunities to socialize. This lack of connection makes them feel lonely and ignored. Also, financial struggles and the movement of younger people to find better jobs have made traditional family support weaker. Because of this, many elderly people do not get regular care or emotional help from their families[5].

However, even with these problems, city life can also give good chances to improve elderly well-being. Building more public spaces, improving infrastructure for older adults, and having social programs can reduce some of the bad effects of urbanization. Activities like senior groups, better public transport, and changes in housing that help elderly live by themselves can support their mental and social health[14].

In conclusion, while Bangkok's city environment makes life harder for elderly people, especially because of social isolation and fewer public spaces, these issues can be fixed with better policies and actions. Making the city more inclusive, where elderly people can interact more and move around safely, can help improve both their physical and mental health. However, the success of these efforts depends on how well they are put in place and if elderly people from different financial backgrounds can access them.

Gaps in Existing Research

Current research on elderly mental health and well-being in Thailand has improved over time, but there are still important gaps that need more attention. While many studies have reported the rising social isolation and mental health problems among elderly people living alone, there is not enough research on how urban environments, especially in big cities like Bangkok, make these problems worse or help reduce them. Also, the role of community involvement and public spaces in improving the mental and emotional health of elderly people is still not fully studied[11].

Many global studies focus on how elderly people depend on formal healthcare systems for both physical and mental support. But Thailand is different because most elderly people rely more on informal support from family, friends, or community-based care. This raises concerns about whether these support systems are enough to meet the changing healthcare needs of the aging population, especially in cities like Bangkok where life is more urbanized. Also, little research has been done on how informal caregiving affects both the caregiver and the elderly person, such as the stress it may cause to caregivers and how that affects the quality of care they provide[6].

Much of the existing literature looks at traditional family caregiving and family structure, but it does not fully explore how fast urbanization and changing family setups in Thailand affect elderly care. For example, there is little discussion on how moving from big extended families to smaller nuclear families or even single-person households affects mental health services and policies[5]. Although the idea of "aging in place" is often talked about, there are not enough detailed studies on how to successfully apply this idea in highly populated cities[14].

Lastly, even though there is recognition that elderly people need more accessible and age-friendly environments, there is not enough real data on how specific changes, like home adjustments or improved public spaces, impact the mental well-being of elderly people in Thailand[12]. This shows the need for more research to bring together urban planning, public policy, and mental health strategies that fit the needs of the aging population.

3. Research Methodology:

This study use a mixed-methods approach to look at the mental health problems of Thai elderly living alone in Bangkok. The study apply surveys to find important things like where they live, who supports them, and their health, while interviews give a closer look at their struggles. By using both, the study tries to get a full understanding of both the numbers and the real-life stories of elderly people living alone. This way, the results are not just about data, but also about their lives. The next part explain

how the study was done, how data was collect, and how it was studied.

Study Population and Sampling

The target population for this study consists of Thai elderly individuals aged 60 years and above who live alone in Bangkok. This group was selected because they are particularly vulnerable to mental health challenges, such as loneliness, isolation, and limited access to social and healthcare services. These issues are often influenced by their living environments, making this population a key focus for understanding the interplay between mental health and living conditions in urban settings.

A total of 64 participants were recruited for the study. A purposive sampling technique was employed to ensure participants met specific criteria, including age, living arrangement (living alone), and residence in Bangkok. This approach allowed the selection of individuals who could provide both quantitative data for statistical analysis and qualitative insights into personal experiences.

Figure 1. Living Arrangement Distribution

The demographic profile of the participants was diverse. Ages ranged from 60 to 87 years, with the majority being women (57 participants) and a smaller group of men (7 participants)

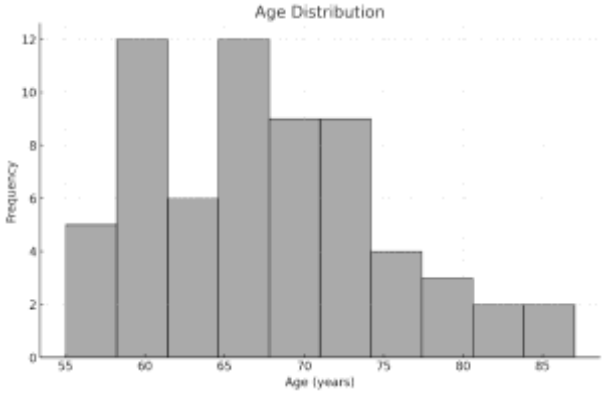

Figure 2. Age Distribution

Most participants were retired, while some were unemployed or still employed. In terms of education, participants ranged from primary school graduates to those with higher education degrees. Participants also represented various areas of Bangkok, including central, eastern, western, northern, and southern regions, ensuring a wide range of living conditions and access to resources. These demographic details provide a well-rounded perspective on the challenges and needs of this population.

Quantitative Data Collection Method

The quantitative data for this study was collected using a structured survey instrument designed to gather detailed information about the living conditions, social support, health, and financial stability of Thai elderly individuals living alone in Bangkok. The survey included both closed-ended and Likert-scale questions to capture measurable trends and relationships. Key topics covered in the survey

included living conditions, such as home modifications, safety concerns, and preferences for aging in place. Social support was assessed by examining the frequency of interactions, types of support received (emotional, financial, or daily assistance), and involvement in community activities. The survey also measured health status, covering chronic illnesses, mental health conditions, access to healthcare, and exercise habits. Additionally, financial stability was evaluated by looking at sources of income, satisfaction with financial resources, and level of financial independence. The survey was pilot-tested with a small group of participants to refine the questions before full implementation, ensuring clarity and relevance.

To accommodate the elderly participants, data collection was conducted through face-to-face interviews at their homes or community centers, depending on their preference. This approach helped address any difficulties in reading or interpreting the survey, ensuring a high response rate and accurate data collection. Each interview lasted approximately 30 to 45 minutes, allowing participants sufficient time to respond thoughtfully. This method created a comfortable environment, enabling participants to share their experiences openly, thus providing robust quantitative data for analysis and forming a strong foundation for understanding key trends affecting the mental health of elderly individuals living alone.

Qualitative Data Collection Method

The qualitative data for this study was collected through semi-structured interviews, designed to explore the personal experiences and challenges of Thai elderly individuals living alone in Bangkok. This approach allowed for flexibility in discussions, ensuring that key topics were addressed while also providing space for participants to share their unique experiences. The interviews were conducted one-on-one in a local community center, creating a comfortable and familiar environment for the participants. Using a semi-structured format, the discussions balanced guided questions with open-ended responses, enabling a deeper understanding of the participants' lived experiences. Each interview lasted approximately 45 to 60 minutes, depending on the participant’s responses and willingness to elaborate.

The interviews covered several important topics related to mental health challenges and coping mechanisms. The loneliness and isolation section explored participants’ feelings of loneliness and their strategies for coping with living alone. The study also examined coping strategies, focusing on personal habits, routines, and spiritual practices used to maintain mental well-being. Another key topic was home safety, where participants discussed their perceptions of safety in their living environment and any modifications made to enhance security and accessibility. The level of community engagement was also explored by assessing participation in social activities and its impact on mental health and social connections. Lastly, the study investigated access to support, including the availability and use of family, community, or healthcare services.

Figure 3. The Words Cloud

To ensure accuracy and reliability, all interviews were audio-recorded with participants' consent and later transcribed verbatim for thorough data analysis. The transcriptions were carefully reviewed to reflect participants' perspectives and experiences accurately, with sensitive information anonymized to maintain confidentiality. This qualitative approach provided rich and detailed insights into the lived experiences of elderly individuals living alone, complementing the quantitative data and offering a comprehensive understanding of the mental health challenges they face.

4. Whoqol-Bref:

The WHOQOL-BREF was derived from data collected using the WHOQOL-100. It produces scores for four domains related to quality of life: physical health, psychological, social relationships and environment. It also includes one facet on overall quality of life and general health[2]. It is a widely used tool for assessing quality of life across multiple domains. It evaluates four key areas: Physical Health, which includes mobility, energy levels, and physical pain; Psychological Health, covering emotional well-being, self-esteem, and cognitive functioning; Social Relationships, which assess personal relationships, social support, and satisfaction with social interactions; and Environmental Factors, examining living conditions, safety, access to healthcare, and financial resources. The questionnaire consists of 26 items, including two general questions about overall quality of life and health, followed by 24 domain-specific items. Responses are recorded on a 5-point Likert scale, measuring frequency, intensity, capacity, or satisfaction. Scoring involves averaging the responses within each domain and transforming them into a 0–100 scale, where higher scores indicate better quality of life.

The justification for using WHOQOL-BREF in this study is based on its multidimensional nature, which aligns with the research focus on mental health, social support, and living environments. It has been validated in Thailand, ensuring cultural relevance, and its shorter format makes it practical and less burdensome for elderly participants. Additionally, the tool facilitates comparability across different demographic groups and living arrangements, making it valuable for broader analysis.

A structured survey instrument was also employed in this research to systematically collect data from elderly individuals living alone in Bangkok. This instrument includes a comprehensive set of questions designed to assess mental health, quality of life, social interactions, and living environments. The survey covers several key aspects, beginning with demographic information, which collects data on age, gender, marital status, educational background, and income level to identify participant characteristics. The living environment assessment evaluates physical and social conditions, including safety features such as handrails and lighting, accessibility, and proximity to community resources. To measure mental health, validated tools are incorporated, including the Geriatric Depression Scale (GDS) for assessing depression levels and the UCLA Loneliness Scale for evaluating social isolation. Quality of life is measured using the WHOQOL-BREF, covering physical, psychological, social, and environmental domains. Additionally, physical activity is assessed using the Physical Activity Scale for the Elderly (PASE), which quantifies the frequency and intensity of physical activities, while functional independence is measured through the Barthel Index, evaluating participants' ability to perform daily activities independently.

The justification for using a structured survey lies in its standardization, ensuring consistent data collection across participants for reliable comparisons. It incorporates validated tools, internationally recognized and culturally adapted for the Thai context, enhancing the credibility of findings. The survey provides a comprehensive scope, covering a wide range of variables related to elderly well-being, from mental health to environmental factors. Moreover, its ease of administration ensures accessibility for elderly participants with varying levels of literacy or cognitive function, making it a valuable instrument for this study.

Structured Survey Instrument

The structured survey instrument employed in this research is designed to systematically collect data from elderly individuals living alone in Bangkok. The instrument includes a comprehensive set of questions aimed at understanding the participants' mental health, quality of life, social interactions, and living environment.

This study collects demographic information, including age, gender, marital status, educational background, and income level, to understand the key characteristics of participants. It also assesses the living environment, focusing on physical and social conditions such as safety features (e.g., handrails, lighting), accessibility, and proximity to community resources.

To evaluate mental health, the study uses validated tools. The Geriatric Depression Scale (GDS) measures depression levels, specifically designed for older adults, focusing on depressive symptoms common in this age group[7]. The UCLA Loneliness Scale assesses feelings of loneliness and social isolation, proving to be a reliable and accurate tool for both college students and elderly individuals[1]. Additionally, quality of life is assessed using the WHOQOL-BREF, covering physical, psychological, social, and environmental domains.

Physical activity levels are measured using the Physical Activity Scale for the Elderly (PASE), which evaluates the frequency and intensity of leisure, household, and work-related activities over a one-week period. This tool is validated and widely used for assessing physical activity in older adults[13]. Furthermore, functional independence is measured using the Barthel Index, which evaluates the ability to perform Activities of Daily Living (ADLs), such as bathing, dressing, eating, toileting, and walking. ADLs help determine functional independence and distinguish between healthy aging and functional decline, particularly in older adults and those with cognitive impairment[10].

These structured survey is designed to ensure consistent data collection, allowing for reliable comparisons between participants. It includes validated tools that are internationally recognized and adapted for the Thai context, making the data more credible. The survey covers various important factors related to elderly well-being, such as mental health, physical activity, and living environment. It is also easy to use, ensuring that elderly participants with different literacy levels or cognitive abilities can complete it comfortably.

Semi-Structured Interview Guide

The semi-structured interview guide in this research is developed to gather in-depth insights into the lived experiences, perceptions, and challenges faced by elderly individuals living alone in Bangkok. It complements the structured survey instrument by providing qualitative data that allows for a deeper understanding of the participants' mental health, social interactions, and environmental influences.

The interview guide follows a structured format while allowing flexibility to explore individual perspectives. It covers key thematic areas, including mental health, focusing on loneliness, anxiety, and coping strategies, and social connections, examining interactions with family, friends, and the community. The living environment section assesses safety, accessibility, and comfort, while daily activities explore routines, physical activities, and community involvement. The support systems section identifies formal and informal sources of help, such as family, neighbors, or social services. Probing questions encourage detailed responses, ensuring richer insights.

5. Data Analysis

Quantitative Analysis

The quantitative analysis in this study examines the relationship between living conditions and the mental health of elderly individuals living alone in Bangkok. Data was collected using structured surveys, focusing on various factors such as demographic information, living arrangements, social support, health status, economic conditions, and preferences for aging in place.

Key Finding

1. Demographic Characteristic

The majority were aged between 60 and 69 years, with most being female (57 out of 64 participants). Educational levels varied, with 30 participants holding undergraduate degrees, followed by 17 with high school education. A large proportion of the participants were retired (42), while others were unemployed (13) or employed (8), reflecting diverse socioeconomic statuses.

2. Living Environment

Most participants lived with others (47), while 17 lived alone. Home modifications were prevalent among participants, including anti-slip flooring, handrails, and Western-style toilets, which enhanced safety and accessibility for daily activities. Homeownership was common, with 44 participants owning their residences, and 53 considered their homes safe for aging in place, demonstrating the significance of secure and adaptable living conditions.

3. Social Support and Community Engagement

Social support and community engagement played crucial roles in the participants' well-being. Regular social interaction was observed, with 40 participants reporting daily interactions and 12 interacting several times a week. Emotional support (reported by 15 participants) and assistance with daily activities (13 participants) were common forms of help, though 14 participants reported receiving no support at all. Community engagement was notably high, with 63 participants actively participating in various activities, highlighting the importance of fostering social inclusion for the elderly.

4. Health and Well-Being

Health and well-being were main themes in the analysis. General health was rated as "good" by 35 participants and "moderate" by 17, though chronic conditions such as high blood pressure were frequently reported. Mental health concerns, including anxiety and loneliness, were acknowledged by some participants, though 39 indicated no mental health issues. Regular physical activity was a positive influence, with 32 participants engaging in daily exercise, which was linked to better health outcomes.

5. Economic Situation

Economic conditions varied among the participants. While 28 participants were satisfied or very satisfied with their financial situation, others expressed moderate or low satisfaction. Savings, family support, and pensions served as primary income sources, with financial independence being more common among those relying on savings or pensions. These findings underscore the significance of economic stability in influencing the elderly's quality of life.

6. Preferences for Aging in Place

The concept of aging in place emerged as highly valued among participants, with 61 considering it "important" or "very important." Safety concerns, such as the risk of accidents and health emergencies, significantly influenced their preferences. Participants emphasized the importance of staying in familiar and supportive environments as they aged.

Table 1. The Preferences for Aging in Place among The Survey's Participants

Category	Summary
Demographic Characteristics	Most participants were aged 60-69, predominantly female, with varied education and employment statuses.
Living Environments	The majority lived with others, had home modifications for safety, and considered their homes suitable for aging in place.
Social Support & Community Engagement	Most had regular social interactions and high community participation, though some lacked emotional and daily support.

Health & Well-being	While many rated their health as good, chronic conditions were common, and some experienced mental health concerns like anxiety and loneliness.
Economic Situation	Financial satisfaction varied, with income primarily from savings, pensions, and family support, impacting independence.
Preferences for Aging in Place	Aging in place was highly valued, influenced by safety concerns and the preference for familiar environments.

Statistical Analysis

Statistical analysis revealed that participants living alone reported lower satisfaction in the social relationship and environmental domains, emphasizing the impact of isolation on well-being. A positive correlation was observed between financial satisfaction and physical/psychological health, although social and environmental factors also played crucial roles. Scores from the WHOQOL-BREF highlighted higher satisfaction in the physical and environmental domains, indicating participants' general contentment with mobility and living conditions. However, lower psychological and social scores pointed to challenges like loneliness and limited emotional support.

In conclusion, the quantitative analysis demonstrated that living environments, social support, and economic stability significantly impact the mental health and quality of life of elderly individuals living alone in Bangkok. These findings underscore the need for targeted interventions, such as home modifications, community engagement programs, and enhanced social support systems, to promote their well-being and independence.

Qualitative Analysis

The qualitative analysis of this research offers rich insights into the lived experiences, challenges, and coping mechanisms of elderly individuals living alone in Bangkok. The findings were derived from in-depth interviews, emphasizing personal narratives that complement the quantitative data.

Key Finding

1. Loneliness and Social Connection

Loneliness emerged as a common theme among participants, often linked to life transitions such as retirement, the loss of a spouse, or living apart from family members. Many participants expressed a strong desire for meaningful social connections but faced barriers such as a lack of nearby family or community resources. Despite this, community centers and senior clubs played a vital role in fostering social interactions, offering activities like yoga and dancing, which were appreciated by participants for reducing loneliness and improving mental well-being.

2. Living Environment

The participants' perceptions of their living environments varied. While most found their homes familiar and safe, some raised concerns about specific issues, such as noise pollution, poor ventilation, and the absence of safety features like handrails or non-slip floors. Financial constraints and mistrust in contractors often delayed the desired home improvements, despite an awareness of the importance of modifications for safety and comfort.

3. Mental Health

Mental health challenges, including stress, overthinking, and limited access to formal mental health services, were common. While many participants relied on spiritual practices, household chores, or community activities as coping mechanisms, a lack of awareness and mistrust in mental health services prevented them from seeking professional help. Emotional support from family and friends was inconsistent, with financial assistance being more readily available than emotional or practical support.

4. Aging in Place and Safety

Participants highlighted the importance of preparing for future needs, including planning home modifications to enhance safety and accessibility. Some expressed a proactive approach to adapting their homes, such as adding handrails or improving ventilation, as part of their effort to age in place comfortably. Daily routines involving household chores and participation in community activities were seen as strategies to maintain independence and mitigate loneliness.

Overall, the qualitative analysis underscores the complex interplay between social connections, living environments, and mental health in shaping the quality of life for elderly individuals living alone in Bangkok. These findings provide a foundation for targeted interventions to improve their well-being, emphasizing the importance of accessible community resources, enhanced social support networks, and safer, more adaptable living environments.

Table 2. The Preferences of Aging in Place among The Interviewees

Category	Summary
Loneliness & Social Connections	Loneliness was common due to life transitions, but community centers and senior clubs helped reduce isolation through social activities.
Living Environment	While most participants felt safe at home, concerns about noise, poor ventilation, and a lack of safety features persisted, with financial and trust issues delaying improvements.
Mental Health	Stress and overthinking were prevalent, and while many relied on spiritual and household activities for coping, mistrust in mental health services limited professional support.
Aging in Place & Safety	Participants valued home modifications for future safety and used daily routines and community engagement to maintain independence.

Data Integration

The integration of qualitative and quantitative findings in this research provides a comprehensive understanding of the experiences and challenges faced by elderly individuals living alone in Bangkok. By triangulating these data, a clearer picture emerges of how living environments, social connections, and mental health intersect to influence their quality of life.

1. Loneliness and Social Connection

Quantitative data revealed that participants living alone had lower scores in the social relationship domain of the WHOQOL-BREF, indicating reduced satisfaction with social interactions. This finding aligns with qualitative insights where participants frequently described feelings of loneliness stemming from retirement, the loss of a spouse, and limited contact with family or neighbors. While 40% of participants reported daily interactions in the quantitative survey, the qualitative data highlighted that these interactions were often superficial, lacking emotional depth.

Community centers and senior clubs, mentioned in the qualitative interviews, were identified as critical for fostering social connections and reducing loneliness. However, quantitative data indicated that only 63% of participants were engaged in such activities, suggesting a gap in accessibility or awareness of these resources.

2. Living Environment

Quantitative findings showed that 83% of participants considered their homes safe for aging in place, with common modifications like handrails and anti-slip flooring. However, the qualitative data revealed underlying challenges, such as financial constraints and mistrust in contractors, which delayed home improvements. Participants expressed concerns about inadequate ventilation and noise pollution, factors not explicitly captured in the quantitative survey.

The integration of data shows a divergence between perceived safety and the reality of living conditions. While participants may report their homes as safe, qualitative narratives indicate unmet needs in creating truly age-friendly environments.

3. Mental Health

The Geriatric Depression Scale (GDS) scores from the quantitative analysis revealed moderate levels of depression among some participants, particularly those living alone. Qualitative data provided context to these findings, with participants describing stress, overthinking, and a lack of emotional support as key contributors to their mental health challenges.

While the quantitative data emphasized physical health as a predictor of mental well-being, qualitative findings highlighted the importance of spiritual practices and community activities as coping mechanisms. For example, participants who engaged in religious or community activities reported fewer feelings of loneliness and stress in their qualitative interviews, aligning with higher WHOQOL-BREF psychological domain scores.

4. Aging in Place and Independence

Quantitative analysis showed that 95% of participants valued the concept of aging in place, with preferences for staying in familiar environments. Qualitative data elaborated on this, revealing that participants viewed home modifications and daily routines as essential to maintaining independence. For instance, participants who engaged in daily household chores or light physical activities, as indicated in the Physical Activity Scale for the Elderly (PASE), also reported higher levels of satisfaction in their qualitative interviews.

The integration of data underscores the role of tailored interventions in enhancing safety and independence. While quantitative data provides an overview of preferences and trends, qualitative narratives shed light on the barriers and motivations behind these preferences.

5. Social and Economic Support

Quantitative data revealed that financial support was more readily available than emotional or practical assistance, with 44% of participants relying on pensions or savings. Qualitative insights enriched this finding by showing that while financial stability reduced stress, the absence of emotional support often exacerbated feelings of loneliness. Participants emphasized the need for balanced support, combining financial security with meaningful social interactions.

6. Conclusion

The integration of quantitative and qualitative data in this research provides a nuanced understanding of the mental health challenges faced by elderly individuals living alone in Bangkok. Quantitative findings revealed trends such as 63% of participants actively engaging in community activities and 83% considering their homes safe for aging in place. However, lower social relationship satisfaction scores in the WHOQOL-BREF and moderate Geriatric Depression Scale (GDS) levels among participants living alone highlighted the prevalence of loneliness and mental health concerns. Qualitative insights further enriched these findings, illustrating how these challenges manifest in daily life and coping strategies.

Loneliness emerged as a significant factor influencing mental health, with participants frequently attributing it to retirement, the loss of a spouse, and children's migration to other regions. While 40% of participants reported daily interactions, qualitative interviews revealed that these interactions were often transactional or lacked emotional depth, intensifying feelings of isolation. Community centers and senior clubs were seen as vital spaces for fostering connections, with activities like yoga and dancing providing not just physical engagement but also emotional upliftment. However, barriers such as accessibility and awareness limited participation, leaving gaps in social support.

The research also found disparities in living environments. Quantitatively, 53 participants reported their homes as safe for aging in place, yet qualitative narratives revealed concerns about noise pollution, poor ventilation, and inadequate safety features like handrails. Financial constraints were a common barrier to making necessary modifications, even though participants expressed a clear understanding of their importance. This discrepancy underscores the need for affordable and accessible solutions to enhance living conditions for the elderly.

Mental health challenges, including anxiety, overthinking, and limited access to mental health services, were prevalent. While quantitative data highlighted moderate GDS levels, qualitative findings revealed a heavy reliance on spiritual practices, household chores, and community engagement as coping mechanisms. A lack of awareness and mistrust in mental health services further compounded these issues, leaving many participants without adequate professional support. Financial assistance was more readily available than emotional support, with 44% of participants relying on pensions or savings. However, qualitative data emphasized that while financial stability reduced stress, it did not alleviate feelings of emotional neglect.

The concept of aging in place was strongly valued, with 95% of participants preferring to remain in their homes. Daily routines, including household chores and physical activities such as walking, were identified as critical to maintaining independence. Quantitative data showed a correlation between higher scores in the physical and environmental domains of WHOQOL-BREF and participants' satisfaction with mobility and living conditions. Qualitative findings complemented this by revealing participants' proactive efforts to prepare their homes for future needs, despite financial and logistical challenges.

This study highlights the complex interplay between social, environmental, and mental health factors that shape the quality of life for elderly individuals living alone in Bangkok. The integration of quantitative trends and qualitative depth reveals a clear need for holistic interventions. Expanding access to community resources, enhancing social support networks, and providing affordable housing modifications are critical to addressing the multifaceted challenges faced by this vulnerable population.

Specific findings from this research offer actionable recommendations for policymakers, community organizations, and healthcare providers. By addressing barriers to social interaction, mental health services, and environmental safety, this research provides a roadmap for improving the well-being of Thai elderly living alone in urban contexts. Leveraging both data sets ensures that future interventions are grounded in both statistical evidence and the lived experiences of the elderly, paving the way for meaningful improvements in their quality of life.

7. Ethical Consideration

The ethical considerations of this research ensured the protection, respect, and empowerment of the elderly participants. By prioritizing informed consent, confidentiality, cultural sensitivity, and minimizing harm, the study maintained high ethical standards throughout its implementation. These measures not only protected the participants but also strengthened the credibility and reliability of the research findings.

Informed Consent

Participants were fully informed about the purpose, objectives, and scope of the research, as well as their role in it. A detailed explanation was provided in simple and accessible language to ensure comprehension. Written or verbal consent was obtained before data collection, and participants were assured that their participation was entirely voluntary. They were also informed of their right to withdraw from the study at any time without any negative consequences.

Confidentiality and Privacy

All personal and identifying information collected during the study was treated with strict confidentiality. Participant data was anonymized to protect identities, with unique codes assigned to each participant instead of names or other personal details. Survey responses, interview recordings, and transcripts were securely stored and accessed only by authorized researchers. The study ensured that no identifiable information was included in reports or publications.

Minimizing Harms

Given the sensitive nature of the topics discussed, such as loneliness, mental health, and living conditions, the research prioritized minimizing psychological discomfort. Interviewers were trained to handle sensitive discussions empathetically and respectfully. Participants were not pressured to discuss any topics they found uncomfortable and were given the option to skip questions or terminate the interview at any point.

Cultural Sensitivity

The study recognized the importance of cultural norms and values in shaping the lives of elderly individuals in Thailand. Researchers used culturally appropriate language and approaches during interactions to ensure participants felt respected and understood. Instruments like WHOQOL-BREF and the Geriatric Depression Scale were used in culturally validated forms to ensure relevance and accuracy.

Voluntary Participation and Non-Coercion

Participation in the study was entirely voluntary. No incentives or compensation were offered that could unduly influence participation. Participants were given ample time to decide whether to join the study and were not subjected to any pressure or coercion.

Debriefing and Follow-Up Support

After data collection, participants were provided with information about local support services, such as mental health hotlines, community centers, and healthcare facilities, in case the research discussions raised concerns or emotions requiring additional support. Participants were also encouraged to reach out to these resources if needed.

Ethical Approval

The research obtained approval from a recognized ethics review board or institutional review committee prior to the commencement of the study. This ensured that the study design, methods, and procedures adhered to established ethical standards.

Transparency in Finding

Participants were informed that the study’s findings would be used to improve policies and interventions for elderly well-being. They were also given the option to receive a summary of the results upon completion of the study, fostering trust and transparency.

8. Limitations of the Methodology

This study faced several methodological limitations that may affect the generalizability and depth of its findings. The This study faced several methodological limitations that may affect the generalizability and depth of its findings. The relatively small sample size and focus on elderly individuals living alone in Bangkok limited the applicability of the results to other regions in Thailand, particularly rural areas where cultural and social dynamics differ significantly. This geographic scope also restricts the broader relevance of the findings to Thailand's diverse elderly population.

Data collection relied on self-reported surveys and interviews, which are susceptible to biases such as social desirability and recall errors. The cross-sectional design further constrained the study by

capturing data at a single point in time, making it difficult to establish causal relationships between variables like social support, living conditions, and mental health outcomes.

Despite using culturally validated tools, there were potential constraints related to language nuances and cultural interpretations, which may have influenced participants' responses. Additionally, accessibility challenges might have excluded certain subgroups, such as those with severe mobility limitations or limited technological access, potentially skewing the findings.

Finally, the study lacked a longitudinal component, preventing insights into changes over time in participants' mental health, social connections, and living environments. The exclusion of perspectives from family members, caregivers, and community organizations also limited the research's ability to provide a holistic understanding of the elderly's challenges and support systems. Addressing these limitations in future studies can enhance the depth and applicability of the findings.

Reference

[1] Austin, B. A. (1983). Factorial structure of the UCLA loneliness scale. Psychological Reports, 53(3), 883–889. https://doi.org/10.2466/pr0.1983.53.3.883

[2] Group, N. T. W. (1998). Development of the World Health Organization WHOQOL-BREF Quality of Life Assessment. Psychological Medicine, 28(3), 551–558. https://doi.org/10.1017/s0033291798006667

[3] Jolanki, O. H. (2021). Senior Housing as a living environment that supports Well-Being in Old Age. *Frontiers in Public Health*, *8*. https://doi.org/10.3389/fpubh.2020.589371

[4] Keeratipongpaiboon, T. (2012). Population ageing: changes in household composition and economic behaviour in Thailand. https://doi.org/10.25501/soas.00014570

[5] Knodel, J., & Chayovan, N. (2008). Intergenerational relationships and family care and support for Thai elderly. Ageing International, 33(1–4), 15–27. https://doi.org/10.1007/s12126-009-9026-7

[6] Knodel, J., & Saengtienchai, C. (2006). Rural parents with urban children: social and economic implications of migration for the rural elderly in Thailand. Population Space and Place, 13(3), 193–210. https://doi.org/10.1002/psp.436

[7] Montorio, I., & Izal, M. (1996). The Geriatric Depression Scale: A Review of Its Development and Utility. International Psychogeriatrics, 8(1), 103–112. https://doi.org/10.1017/s104161029600250.

[8] Phumplab, M. (2023). Thai Industrial Policies Towards the Challenges of an Aging Society. Economy, Culture & History Japan Spotlight Bimonthly, 42(6).

[9] Poonpolkul, P., Porapakkarm, P., & Wasi, N. (2023). Aging, inadequacy, and fiscal constraint: The case of Thailand. International Studies of Economics, 19(1), 35–67. https://doi.org/10.1002/ise3.66

[10] Rockwood, K. (2007). The measuring, meaning and importance of activities of daily living (ADLs) as an outcome. International Psychogeriatrics, 19(3), 467–482. https://doi.org/10.1017/s1041610207004966

[11] Thanakwang, K., Ingersoll-Dayton, B., & Soonthorndhada, K. (2012). The relationships among family, friends, and psychological well-being for Thai elderly. Aging & Mental Health, 16(8), 993–1003. https://doi.org/10.1080/13607863.2012.692762

[12] Verderber, S., Koyabashi, U., Cruz, C. D., Sadat, A., & Anderson, D. C. (2023). Residential Environments for Older Persons: A Comprehensive Literature Review (2005–2022). HERD Health Environments Research & Design Journal, 16(3), 291–337. https://doi.org/10.1177/19375867231152611

[13] Washburn, R. A., McAuley, E., Katula, J., Mihalko, S. L., & Boileau, R. A. (1999). The Physical Activity Scale for the Elderly (PASE). Journal of Clinical Epidemiology, 52(7), 643–651. https://doi.org/10.1016/s0895-4356(99)00049-9

[14] Yu, J., & Rosenberg, M. W. (2017). "No place like home": Aging in post-reform Beijing. Health & Place, 46, 192–200. https://doi.org/10.1016/j.healthplace.2017.05.015