

The Influence of the Density of Buddhist Temples on the Spatial Distribution of Happiness of the Elderly in Thailand

Rattanahon, P., Laohasiriwong, W., Nilnate, N., Yotha, N., Phanyotha, S., Thammasarn, K., Senahad, N. and Prasit, N.*

Faculty of Public Health, Khon Kaen University, Thailand, E-mail: Nakapr@kku.ac.th*

*Corresponding Author

DOI: <https://doi.org/10.52939/ijg.v18i3.2213>

Abstract

This study statistically identified the localized association between patterns of happiness and its association with religion among elderly people in Thailand. This study was conducted by using a data set from the National Statistical Office (NSO) of Thailand, 2017. A Moran's I, local indicators of spatial association (LISA), and spatial regression were used to identify the spatial autocorrelation between the density of Buddhist temples, with reflecting the socioeconomic status and happiness among elderly. Findings showed that among the total of 33,343 participants, 65.92 %were happy. There was a spatial global autocorrelation between the density of Buddhist temple and elderly's happiness with the Moran's I values of 0.204. The LISA analysis indicated 11 hot-spots or high-high clusters. Buddhist temple density could predict happiness among the elderly by 54.8 percent. In addition, Supporting the maintenance and restoration of Buddhist temples is critical to ensuring the aging society in Thailand experiences lasting happiness. That promotes and supports, particularly when it comes to mental health. Increase the morale of the elderly and their life expectancy by providing them with more opportunities. It has an impact on the well-being of long-term happiness

1. Introduction

The global old population will grow from 10.0 percent in 2000 to 14.2 percent in 2025 and 21.0 percent in 2050 (Chamie, 2005). Medical and public health technology advancements are being implemented in every country on the planet, including Thailand. The population is living longer and having fewer children, which results in a significant rise in the number of old individuals. It has impacted every country on the planet, including Thailand, which has an aging population. According to the world's aging population (Mahishale, 2015), Thai population has an increasing tendency in terms of persons aged 60 and beyond. In 2010, there were 6.8-7.6 million senior persons, which climbed to 10.8 million by 2020. Additionally, it boosted the share of the senior population who live to a ripe old age. Males lived to an average of 68.15 years, while females lived to an average of 72.39 years (National Statistical Office, 2017). In 2016, Thailand had around 11 million senior persons, defined as those aged 60 and above, out of a total population of 68.5 million, or 16.5 percent. Thailand is projected to become a fully "Aged Society" by 2021, as the senior population aged 60 and above increases by more than 20% (TGRI, 2017). Happiness is so important that it

is required of everyone in society, particularly the elderly. Internal and environmental elements such as self-esteem, contentment with self-performance, satisfaction with the surroundings, adequacy of money, and living in a healthy family all contribute to life happiness (Whangmahaporn et al., 2018). In addition, spiritual wellbeing is found to related with elderly happiness. Numerous Thai seniors suffer from poor quality of life as a consequence of unmet demands, health promotion practices, low self-esteem, and lack of social support. These are critical aspects affecting the elderly's quality of life since they propel varied human behaviors ahead, such as depression and the desire to isolate oneself from a community (Munsawaengsub, 2012). The elderly are reliant on everyday activities as well as activities essential for survival that have an effect on the elderly's quality of life and need modification and development since the elderly's quality of life has an effect on the whole economy and society (Rojpaisarnkit, 2016).

In the context of Thai society, it was discovered that the definitions were consistent across all perspectives: religion, affluence, health care, and aging population planning.

Additionally, Thailand places a higher premium on national self-reliance, service quality, human values, and dignity; one of its goals is to cultivate a healthy culture and promote good well-being and happiness (Pornsiripongse et al., 2016 and Ayuwat et al., 2020). Since empirical evidence is needed to support this policy, the present study was thus conducted to determine whether there were spatial distribution patterns of happiness among elderly Thai population which reflect both health and socioeconomic contributing to happiness in the Thai elderly in different provinces. From past studies, it has been found that Buddhism is important for happiness, good well-being and good quality of life in the elderly (Vajiravamsa and Phoisup, 2021 and Phugkaew and Brahmabandit, 2020). However, there have not been any studies of Buddhist temples in area model or GIS in Thailand. Therefore, this objective study aims to answer the research question whether Buddhist temples are related and can predict the happiness of the elderly in Thailand.

2. Methods and Materials

2.1 Study Design and Population

This study used 2 datasets for analysis including 1) a data set on Report on the 2017 Survey of the Older Persons in Thailand among 58,103 participants who participated in the National Statistical Office (NSO). The survey used a multistage random sampling to select the participants from all 77 provinces which represented the total population. The inclusion criteria of our study were those who had complete the data on older person's happiness. The total of 33,343 respondents fulfilled the criteria and were proceeded for the analysis (National Statistical Office, 2017).

2.2 Statistical Analysis

This study used the Quantum GIS program to determine the spatial distribution patterns of independent factors and happiness among elderly. The GeoDa program was used to analyze spatial autocorrelation by specifying 3 k-Nearest neighbor provinces that connecting as a criterion to identify grouping which using the weight matrix to analyze spatial correlation (Anselin et al., 2006 and Cliff and Ord, 1981). Bivariate Moran's I analysis was used to identify the global autocorrelation within the country. The global autocorrelation statistics provide a single measure of spatial autocorrelation for an attribute in the country as a whole (Anselin et al., 2006 and Anselin, 1993). The Moran scatter plot is a plot in which the spatially lagged variable is plotted on the y-axis and the original variable is plotted on the x-

axis. Both variables were normalized, and the graph was divided into four quadrants: high-high (upper right) and low-low (lower left) indicate positive spatial autocorrelation, while high-low (lower right) and low-high (upper left) indicate negative spatial autocorrelation. Moran's I is equal to the slope of the linear fit to the scatter plot (Anselin et al., 2006 and Anselin, 1996). Moran's I has an expected value of $-1/(n - 1)$ and is interpreted similarly to the product-moment correlation coefficient. Informally, a value of +1 indicates a high degree of positive spatial autocorrelation (i.e., clustering of similar values), a value of 0 indicates random spatial ordering, and a value of -1 indicates a high degree of negative spatial autocorrelation (Anselin et al., 2006 and Anselin, 1993).

Then, a local indicator of spatial association (LISA) was used to determine the local spatial autocorrelation patterns of the variables (Anselin, 1993 and 1995). This procedure generates a spatial association for each unique location. The maps identify locations with significant local Moran statistics (LISA significance maps) and categorize them according to the type of association (LISA cluster maps) (Anselin et al., 2006). In the map, the dark red is an indication of spatial clusters when having a high frequency of an independent factor with a high proportion of happiness among elderly in the identified province with three neighboring provinces (high surrounded by high or hot-spot or high-high). The dark blue location is indication of spatial clusters when a low frequency of the factor with a low proportion of happiness among elderly in the identified province with three neighboring provinces (low surrounded by low or cold-spot or low-low). In contrast, the light red and light blue are indicators of spatial outliers (respectively, high surrounded by low or high-low, and low surrounded by high or low-high) (Anselin et al., 2006 and Anselin, 1995). The statistical significance level was 0.05. The simulation used 999 permutations to evaluate the sensitivity of the results

To avoid biases caused by spatial dependence, this study attempts to select the most appropriate models from the set of Ordinary Least Squares (OLS) models and spatial regression models to analyze happiness among elderly population in Thailand. In regression analysis, spatial regression models capture spatial dependence. Spatial La Model (SLM) and Spatial Error Model (SEM) are two types of linear spatial dependence models (SEM). The dependent variable in the SLM is dependent on the variable in the neighboring space.

The spatial influence in the SEM is solely due to the error terms (Viton, 2010). The spatial regression

models were estimated using maximum likelihood (Elhorst, 2010), and queen contiguity weights were

used as spatial weights in this study (Pacheco and Tyrrell, 2010) where Y denotes the dependent variable, X denotes the independent variable, is the independent variable's coefficient, W denotes the spatial weight, is the spatial lag coefficient, and is the spatial error coefficient. Moran's I was used to determine the spatial relationship between happiness and elderly variables. If there is significant spatial autocorrelation, the OLS should be avoided. Anselin (2005) proposed a decision rule for selecting spatial regression models. If both the robust LM (lag) and the robust LM (error) are significant, select the one with the highest test value. Greater R² and log-likelihood values, as well as a lower Akaike information criterion (AIC), indicate that the model is more performant and suitable for future analysis (Anselin et al., 2006 and Cliff and Ord, 1981). As illustrated in Figure 1, this research's conceptual framework.

3. Results

3.1 Spatial Distribution Characteristics of Elderly's Happiness

About two third of elderly were happy (65.92%). The highest proportion was observed in the southern province of Chumphon (97.0%), whereas it was the lowest in Narathiwat province (42.32%). The decile distribution indicated the highest deciles of 94.0-97.0 percent in 7 provinces of Chumphon, Udon Thani, Rayong, Nakhon Nayok, Sakon Nakhon, Khon Kaen,

Yasothon and Samut Prakan Provinces (Figure 2). The highest decile of 16.8-31.3 percent for Density of Buddhist temple were observed in Nonthaburi, Bangkok, Samut Songkhram, Ang Thong, Nong Khai, Phra Nakhon Si Ayutthaya, Maha Sarakham and Roi Et provinces (Figure 3).

3.2 Factors Associated with Happiness among Elderly in Thailand

The Moran's I indicated statistical significance clustering association patterns of an independent factor and happiness among elderly in Thailand (p-value <0.05). There was the spatial correlation between the distribution pattern of the Buddhist temple density in the same direction as the happiness among elderly pattern (Moran's I= 0.204). The LISA analysis indicated 11 hot-spots or high-high clusters of Buddhist temple density and high level of happiness among elderly with also high values in the surrounding 3 provinces in Saraburi, Phra Nakhon Si Ayutthaya, Bangkok, Pathum Thani, Nakhon Pathom, Nonthaburi, Samut Prakan, Samut Sakhon, Samut Songkhram, Nakhon Nayok and Nong Bua Lamphu Provinces. In addition, there were 3 provinces with low density of Buddhist temple with high level of happiness among elderly in Chachoengsao, Chonburi, Ranong and Krabi provinces surrounded by low level of Buddhist temple density in three neighboring provinces (low-high cluster).

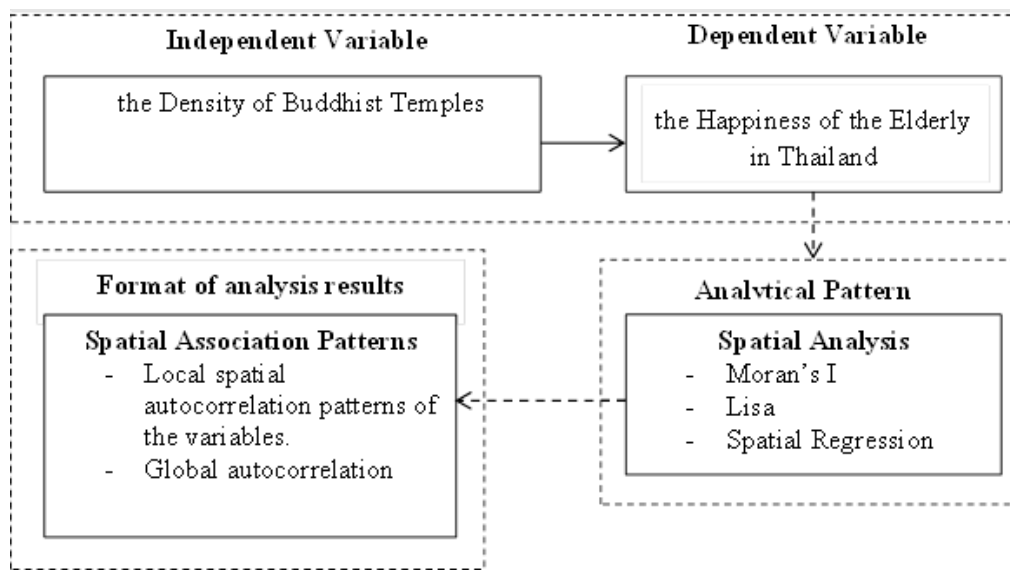


Figure 1: Conceptual Framework of the Purposed Correlation between Related the Density of Buddhist Temples and the Happiness of the Elderly in Thailand

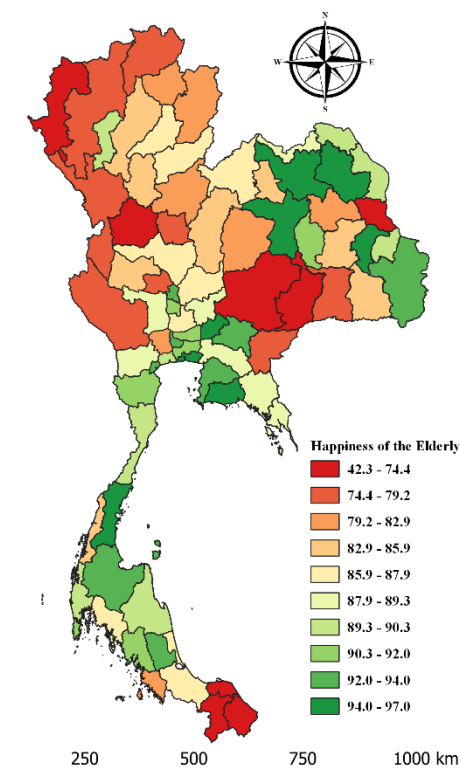


Figure 2: Decile distribution of happiness among Elderly in Thailand

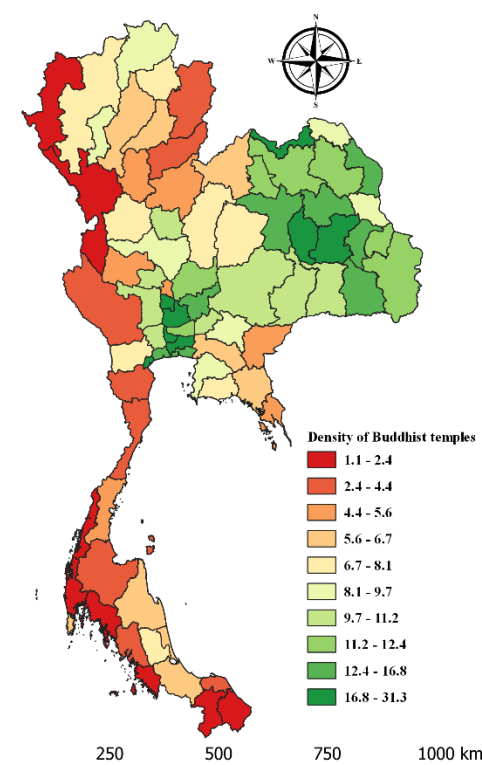


Figure 3: Decile distribution Density of Buddhist Temple (per/ kilometer) in Thailand

And also, there were provinces with high density of Buddhist temple and low level of happiness among elderly, in Nakhon Ratchasima province surrounded by high density of Buddhist temple in three neighboring provinces (high – low cluster). In contrast, LISA analysis showed clusters of a province with a low concentration of the Buddhist temple and happiness among elderly with also low values of surrounding 3 provinces (cold-spot or low-low clusters). There were 3 low-low clusters found in Pattani, Yala and Narathiwat provinces (Figure 4).

3.3 Model Performances of OLS, SLM and SEM Relationship of Happiness Elderly with the Density of Buddha Temple among Elderly Population in Thailand

The first step to creating a spatial regression model was to determine whether the non-spatial model contained spatial dependencies and heterogeneity. The Moran's I analysis showed significant results, hence, there were spatial dependencies, which means that each province in Thailand had a close relationship with the one next to it. This relationship

will be explained in greater detail later in the course of spatial regression modeling.

Based on OLS, SLM and SEM (Table 1), It demonstrated a statistically significant result for the Lagrange Multiplier error, indicating that the spatial error model is more appropriate for use. Following the specification of the spatial model, the model parameters needed to be estimated. The following table summarizes the results of the model parameter estimation for the selected model parameter, namely the spatial error model. The parameter estimation results from the SEM obtained variable extensions of the proportion of healthy elderly and density of Buddhist temple, a significant effect on happiness of elderly at the 0.05 significance level. However, night time light did not show a significant effect at the 0.05 significance level.

The results in R^2 value of 0.548 indicated that the independent variables contained in the model can explain the variation in the percentage of happiness among elderly by 54.8%, while the remaining 45.2% is explained by other variables outside the model.

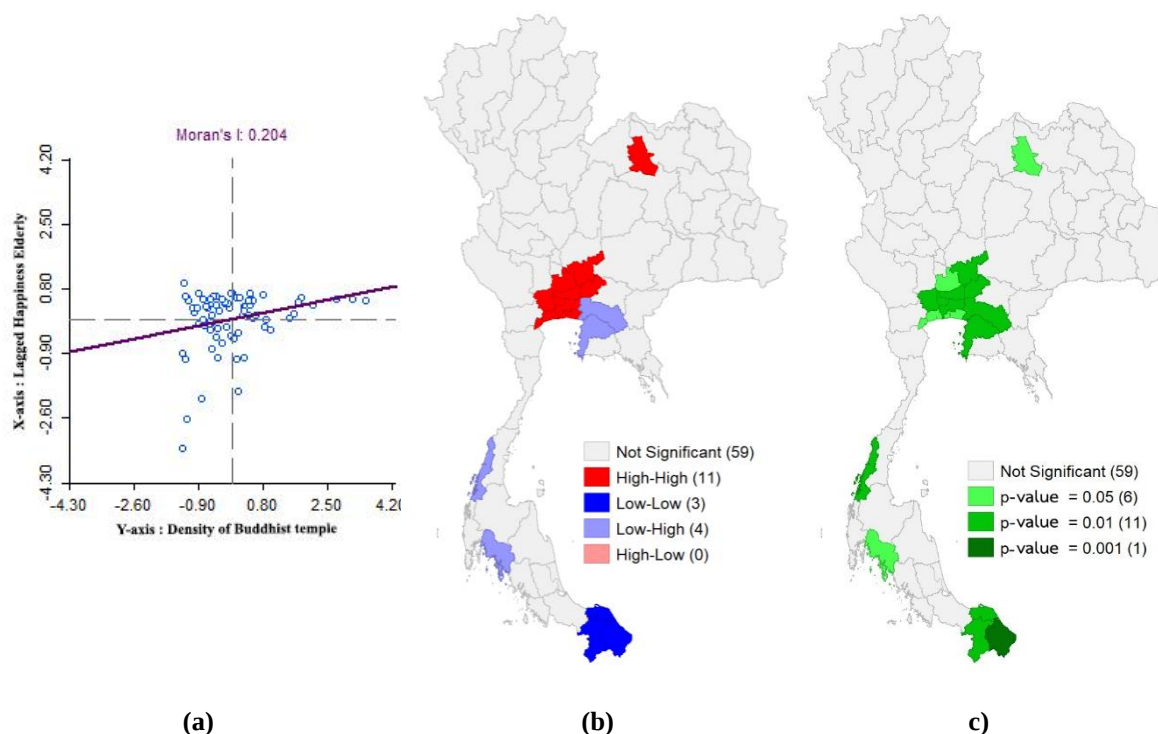


Figure 4: LISA and Moran's I scatter plot matrix of Density of Buddhist temple (per/ kilometer) on happiness among elderly in Thailand; (a) Moran's I scatter plot matrix (Bivariate: density of Buddhist temple and happiness elderly); (b) Cluster maps of Density of Buddhist temple and happiness elderly; (c) Significance maps of Density of Buddhist temple and happiness elderly

Table 1: Spatial regression analysis of OLS, SLM and SEM relationship of happiness among elderly with the density of Buddha temples among elderly population in Thailand

Factors	OLS	Spatial Regression Analysis	
		SLM	SEM
Buddhist temple density	0.577**	0.351*	0.437*
Constant	79.189**	25.019**	80.533**
P		0.664**	
λ			0.677**
R-Squared	0.120	0.548	0.548
AIC	573.001	536.324	534.985
BIC	577.689	543.356	539.672

4. Discussion

The past change in the demographic structure has resulted in Thailand's society progressing toward an aged society over the last decade. This is a significant change in light of the fact that elderly Thai society has its own distinct culture in which the elderly are highly valued. As a result, the study of Thailand's elderly became interesting. Therefore, the study of the life happiness of the Thai aging population has become interesting. Happiness is a critical component of life quality, as it is one of the markers of subjective well-being and a general sign of

successful aging (Whangmahaporn et al., 2018 and Amani, 2016). In addition, individuals with good health and no stress in mind had higher levels of happiness. The health status of the elderly was related to the density of temples and the prosperity of the provinces. These are the most important factors in promoting happiness in the elderly. When elderly people are happy, they have good mental health, which promotes the health of the body accordingly and sustainably.

Good health has been viewed as the ultimate desire for all. As stated in the Buddhist saying "Aro Kaya Parama Yapaé", being healthy is more essential than wealth (Sriruecha, 2002)—avoidance of sickness is a beautiful gain, but hundreds of millions of dollars are useless in the absence of good health (Dissawan, 2019). A healthy person has a sound mind and contributes to the happiness of others around them. To obtain excellent health, numerous methods were used, including self-care, maintaining a pleasant attitude via Dhamma practice, and doing merit-making. They believed that excellent health is a necessary component of a happy life since it increases one's capacity for work and lowers one's reliance on one's offspring (Amani, 2016), which resulted in a favorable self-image (Whangmahaporn et al., 2018). Good health is defined as a state of vitality and the absence of chronic illnesses. As people age, limitations stemming from declining health tend to constrain their ways of living within the family setting. Their level of enjoyment was mostly determined by their interactions with their progeny as they grew older. In the country's central area, advancements in technology, education, and the medical system have resulted in healthy senior living in an environment that is contemporary and comfortable for promoting the elderly's health (Rojanaprapa, 2017). With the support from society, the elderly feel comfortable, happy, and they have easy access to their needs as well (Intharasaen et al., 2021). In contrast, mental health had an adverse effect in the three southern border provinces, which have been affected by numerous crimes. Poor mental health leads to creating negative health effects in the elderly due to stress and various problems (Songwathana and Sangchan, 2015 and Noothongkaew, 2018).

Thailand's national religion is Buddhism. Buddhism is divided into two branches: Theravada, or Hinayana Buddhism, and Mahayana Buddhism (Sriruecha, 2002). According to Buddhist philosophy, all human happiness is ephemeral and hence generates sorrow. Indeed, Buddhists believe that human beings are never entirely fulfilled, that they are always yearning for more and suffering as a result of their cravings. According to Buddhism, the only way to be free of suffering and the never-ending cycle of reincarnation is to attain nirvana (Sriruecha, 2002 and Yamaguchi, 2016). Generally, merit-making takes place at a temple or wat. According to Thai tradition, the wat serves as the community's moral, social, and symbolic center. The capacity to accomplish merit was a popular desire among the elderly since it was believed to result in a better life both now and in future incarnations. Making merit resulted in being pleasant, serene, detached, and

anxiety-free in life and death (Sriruecha 2002 and Visārado, 2016), which corresponds to the density of temples in each province of Thailand. The central region of the country has most temple density (per/kilometer) (National Buddhism Office, 2017). Consistent in terms of places that encourage the elderly to be happy, the temple is a source for the elderly to practice dharma. It is at the center of the mind of the elderly to have peace within themselves. The results of the study show the concentration of Buddhist temple density in the central region. Which is in line with the mental state of the elderly who are happy. Therefore, it can be said that the more temples in the community area, the more the elderly will be promoted and supported, thus giving the elderly more encouragement and a longer lifespan. It affects the well-being of sustainable happiness (Chantupamo and Sodprasert, 2019). In addition, regarding peace and happiness, in some provinces which have attractions for tourists such as beaches, etc., also encourage the elderly to be happy with travel and relaxations, besides going to practice meditation at temples.

In addition to promoting and supporting the minds of the elderly, Buddhist temples serve as gathering places for the elderly to socialize and form networks major factors that establish the function of social support. To create a well-being structure, positive thoughts and attitudes should be exchanged. It helps seniors of the same age group develop their morale and friendship in a congregation at a Buddhist temple (Sangkhamanee et al., 2021). As a result of the foregoing and the findings of this study, it can be concluded that Buddhist temples play a significant role in fostering happiness among the elderly. Both in terms of mental health and social roles among the elderly, particularly Thai Buddhist seniors, it is critical to support temple maintenance and restoration in order to coexist with Thailand's aging society.

5. Conclusion

Buddhism is deeply ingrained in Thai society, and the elderly, who are Buddhist, cling to the teachings of the Buddha. Therefore, Buddhist temples are an essential aspect in promoting peace and social roles among the senior population. It will result in the establishment of happiness in Thailand's senior society. As a result, Buddhist temples serve as the spiritual focal point for this generation. That promotes and supports, particularly when it comes to mental health. Increase the morale of the elderly and their life expectancy by providing them with more opportunities. It has an impact on the well-being of long-term happiness.

As a result, it is critical to support the data with GIS analysis, which can be viewed as a measuring tool in each province and surrounding areas in terms of creating happiness for the elderly in Thailand. This study demonstrates the critical nature of Buddhist temples in Thailand, particularly for the elderly who practice Buddhism in order to live a good life and experience lasting happiness. Therefore, supporting the maintenance and restoration of Buddhist temples to coexist with Thailand's aging society is critical to ensuring the aging society in Thailand experiences lasting happiness.

Acknowledgement

The authors would like to express our sincere appreciation to National Statistical Office of Thailand: Report on the 2017 survey of the older persons in Thailand for dataset. Special thanks to the Faculty of Public Health, Khon Kaen University, Khon Kaen University, Thailand for the supports.

References

- Amani, R., 2016, Happiness in the Elderly: The Role of Self-Esteem, *Aging Psychology*, Vol. 2(1), 80-73.
- Anselin, L., 1993, *The Moran Scatterplot as an ESDA Tool to Assess Local Instability in Spatial Association: Regional Research Institute*, West Virginia University Morgantown.
- Anselin, L., 1995, Local Indicators of Spatial Association (LISA), *Geographical Analysis*, Vol. 27(2), 93-115.
- Anselin, L., 1996, Chapter Eight the Moran Scatterplot as an ESDA Tool to Assess Local Instability in Spatial Association. *Spatial Analytical Perspectives on GIS*, Vol. 4, 111-125.
- Anselin, L., 2005, *Exploring Spatial Data with GeoDaTM: a Workbook*, Center for Spatially Integrated Social Science. 1-244, https://www.geos.ed.ac.uk/~gisteac/fspat/geoda_workbook.pdf.
- Anselin, L., Syabri, I. and Kho, Y., 2006, GeoDa: an Introduction to Spatial Data Analysis. *Geographical Analysis*, Vol. 38(1), 5-22.
- Ayuwat, D., Hong-ngam, J., Saranrittichai, K., Chumanmak, R., Narongchai, W. and Auraiampai, N., 2020, The Determinant Factors of Life Happiness of Elderly in Rural Area, Northeast Thailand. *International Journal of Academic Research in Business and Social Sciences*, Vol. 10(14), 190-199.
- Chamie, J., 2005, *World Population Ageing: 1950-2050*. Population Division, Department of Economic and Social Affairs, United Nations Secretariat, New York, 34-42.
- Chantupamo, P. T. and Sodprasert, S., 2019, Promoting Temples as the Center for Improving the Elderly Life's Quality in Urban Communities of Nakhon Pathom Province, *Journal of MCU Peace Studies*, Vol. 7(5), 1407-1421.
- Cliff, A. D. and Ord, J. K., 1981, Spatial and Temporal Analysis: Autocorrelation in Space and Time. *Quantitative Geography: a British view*, Vol.1, 104-110.
- Dissawan, P., 2019, Way of Living of the Elderly According to Buddhist Principles. *The Journal of Research and Academics*, Vol. 2(2), 107-120.
- Elhorst, J. P., 2010, Applied Spatial Econometrics: Raising the Bar. *Spatial Economic Analysis*, Vol. 5(1), 9-28.
- Foundation of Thai Gerontology Research and Development Institute (TGRI), 2017, *Situation of the Thai Elderly 2016*. Nakhon Pathom: Printery Co., Ltd.
- Intharasaen, W., Boonkoun, W. and Kheovichai, K., 2021, A Study of the Current Situation of Happiness in Elderly in Thailand 4.0 Period in the Central Provinces of Thailand. *Journal of Humanities and Social Sciences*, Vol. 12(24), 78-90.
- Mahishale, V., 2015, Ageing World: Health Care Challenges. *Journal of the Scientific Society*, Vol. 42(3), 138-143, DOI:10.4103/09745009-165540.
- Munsawaengsub, C., 2012, Factors Influencing the Mental Health of the Elderly in Songkhla, Thailand. *Journal of the Medical Association of Thailand*, Vol. 95(6), S8-S15.
- National Buddhism Office, 2017, *List of temples in Thailand*. [Online] 11 August 2021, available: http://www.buddhiststudies-nrru.net/?page_id=3926.
- National Statistical Office, 2017, *Report on the 2017 Survey of the Older Persons in Thailand*. Bangkok: Bureau of Socio-Economic and Opinion1, National Statistical Office. <http://www.nso.go.th/sites/2014en/Pages/survey/Social/Demographic,%20Population%20and%20Housing/The-Survey-Of-Elderly-In-Thailand.aspx>.
- Noothongkaew, K., 2018, The Effect towards Thai Buddhists Way of Life from the Violent Situation in the Five Southern Border Provinces, *Journal of MCU Nakhondhat*, Vol. 5(2), 165-183.
- Pacheco, A. I. and Tyrrell, T. J., 2002, Testing Spatial Patterns and Growth Spillover Effects in Clusters

- of Cities. *Journal of Geographical Systems*, Vol. 4(3), 275-285.
- Phugkaew, V. and Brahmabandit, P., 2020, Elderly Well-Being Promotion by Buddhist Peaceful Means, *Journal of MCU Peace Studies*, Vol. 8(2), 751-762.
- Pornsiripongse, S., Sasiwongsaroj, K. and Ketjamnong, P., 2014, Buddhist Temple: A Religious Capital Approach for Preparing Thailand toward the Aging Society, In Contemporary Socio-Cultural and Political perspectives in Thailand, *Springer*, 65-82.
- Rojanaprapa, W., 2017, Behavioral of Using Technology Affecting the Happiness Levels of the Elderly in Bangkok Metropolitan. *Academic Journal of Suan Dusit Graduate School*, 13(1), 89-104.
- Rojpaisarnkit, K., 2016, Factors Influencing Well-Being in the Elderly Living in the Rural Areas of Eastern Thailand. *The Journal of Behavioral Science*, Vol. 11(2), 31-50.
- Sangkhamanee, P., Waewsri, P. and Chaiha, A., 2021, Temples as the Source of Building Happiness of Community in Thai Society. *Ratanabuth Journal*, Vol. 3(2), 49-62.
- three Southern Thai Border Provinces: A Literature Review. *Princess of Naradhiwas University Journal*, Vol. 7(2), 75-88.
- Sriruecha, P., 2002, Happy Life of the Elderly in a Village of Khon Kaen Province: a Case Study of Ban Kai Na of Muang District. *Journal of Health Science*, Vol. 11(1), 44-54.
- Vajiravamsa, P. W. and Phoissup, P. P., 2021, The Criterion of the Happiness of Elderly People in Thai Society. *The Journal of Institute of Trainer Monk Development*, Vol. 3(2), 1-14.
- Visārado, P., 2016, An Application of the Four Buddhist Principles of Development (Bhāvanā) in Balancing Life for the Elderly Persons in Modern Society. *Journal of Buddhist Education and Research*, Vol. 2(2), 69-76.
- Viton, P. A., 2010, Notes on Spatial Econometric Models. *City and Regional Planning*, 2-17.
- Whangmahaporn, P., Simmonds, P. and Whangmahaporn, B., 2018, Factors Affecting Quality of Life of the Elderly in Thailand. *Asian Political Science Review*, Vol. 2(2), 79-87.
- Yamaguchi, K., 2018, *The Prevention of Elder Abuse and the Essential Teachings of Buddhism*. Shukutoku University Graduate School of Integrated Human and Social Welfare Studies bulletin, Vol. 25, 35-46.