

ENHANCING THE WELL-BEING OF ELDERLY RESIDENTS IN CHINA THROUGH LEISURE ACTIVITIES: A DRIVING MODEL OF WELL-BEING

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Abstract: *Leisure activities have been found to have a significant impact on the well-being of elderly individuals. This study aimed to explore the relationship between leisure and well-being of elderly residents in China and construct a driving model of well-being. Using social support theory, a survey was conducted among elderly residents in Shanghai. The findings revealed that leisure motivation had a significant effect on leisure involvement, which, in turn, was related to leisure satisfaction. Moreover, leisure satisfaction had a positive impact on the well-being of elderly individuals. The study recommends developing leisure management policies that cater to the leisure needs of elderly residents and improve their well-being. Additionally, the article highlights China's policies on leisure activities for the elderly, which provide a conducive social environment for them to participate in leisure activities. The study sheds light on the importance of leisure activities in enhancing the well-being of the elderly and provides policymakers with insights to improve their quality of life.*

Keywords: *Elderly residents, Leisure activities, Well-being, China, Social support theory, Leisure management policies.*

Introduction

When a country or a region's population aged 65 years old accounts for 7% of its total population, or its population aged 60 years old accounts for 10% of its total population, it means that the country or the region enters an aging society (United Nations, 2019). China is also facing the problem of aging (Table 1). In 2018, the population aged 60 years old and above in China reached 249 million, accounting for 17.9% of the total population, among which the population aged 65 years old and above reached 167 million, accounting for 11.9% of the total population (China Ministry of Human Resources and Social Security, 2020). The elderly population aged 65 years old and above in China is characterized by large base, rapid increment, and getting old before getting rich (China National Bureau of Statistics, 2020). It is worth noting that leisure activities provide ideas for alleviating the problem of aging society. Therefore, some countries and regions encourage the development of leisure industry and formulate policies on leisure based on supply services. Various types of leisure facilities and equipment, leisure products, and services provide basic guarantee for enriching the elderly's daily life. International leisure policies can be classified into four types: protection of native leisure resources, protection of humanistic leisure resources, policies of typical tourist destinations, and services for special objects. Specifically, it

includes six aspects: outdoor recreation, art and entertainment, sports, tourism, special groups, and leisure human resource management (Wu, 2015). China's policies on leisure are mainly formulated and implemented around leisure agriculture, leisure sports, leisure fishery, leisure tourism, and leisure infrastructure construction. Since 2006, the leisure policy issued by China has advocated the active development of leisure and vacation tourism, guided the construction of leisure and vacation zones around cities, encouraged the strengthening of road construction, old-age service development, national health program, information technology, construction of traffic system, increase of national leisure time, community construction, etc. In terms of environmental protection and fishery protection, it is required to enrich the contents of national fitness activities, carry out popular, strong competitive, and widely-spread sports, extensively organize simple and easy fitness activities favored by the masses, etc. (China National Council, 2020). On the one hand, the introduction of multiple leisure policies helps enrich leisure products and services, thus stimulating the leisure motivation of the elderly in China; on the other hand, it creates a favorable social environment for the elderly to participate in leisure activities and improve their leisure life satisfaction and well-being.

Literature Review

Leisure Motivation and Leisure Involvement

Previous studies have explored the relationship between leisure motivation and leisure involvement: The study about senior wood ball activities found that when the elderly had the motivation to participate in wood ball activities, their leisure involvement would be improved, that is, leisure motivation positively affected leisure involvement (Zhang, 2014). The research taking recreational cyclists as respondents, examined the relationship between leisure motivation and leisure involvement, and concluded that leisure motivation can positively predict leisure involvement in terms of sociability and intelligence (Zhang, Shi, Hou, & Luo, 2018). Taking community sports exercisers as research objects to explore the correlation between leisure involvement, physical activity participants' efficacy and motivation, the study indicated that there was a correlation between physical activity motivation and leisure involvement (Havitz, Kaczynski, & Mannell, 2013). By exploring the sports participation of children and adolescents, it is concluded that sports motivation predicted the individual and team sports involvement of young students (Wang, Chow, & Amemiya, 2017). Accordingly, the hypothesis is proposed as follows:

H1: Leisure motivation has a positive and significant effect on leisure involvement.

Leisure Satisfaction and Leisure Motivation

A questionnaire survey was conducted on residents in Jinan, and it was concluded that leisure motivation had partial positive impact on leisure satisfaction (Fan, 2017). Taking college students of Han, Qiang, and Yi nationality as research objects, it was concluded that the leisure motivation of the surveyed college students in

Chengdu area had a significant positive impact on their leisure satisfaction (Zhang, 2014). A survey on leisure participation of teenagers in Taiwan revealed that leisure motivation had a significant positive impact on leisure satisfaction, and indirectly influenced leisure satisfaction through leisure participation (Chen, Li, & Chenm, 2013). Taking dental tourism as the research content to explore the pull factors of inbound tourism in Malaysia, the research classified the pull factors of tourists'

motivation as dental care information access, dental care quality and cost-saving, and it argued that the three factors of tourism motivation all had a positive and significant impact on tourists' satisfaction (Jaapar, Musa, Moghavvemi, & Saub, 2017). Accordingly, the hypothesis is proposed as follows:

H2: Leisure motivation has a positive and significant effect on leisure satisfaction.

Leisure Involvement and Leisure Satisfaction

An empirical analysis of Xi'an Music Festival indicated that backpacker tourists' involvement in music festival had a significant positive impact on the satisfaction of music festival tourists (Liu & Chen, 2017). The survey of leisure activities of elderly residents in Chongqing showed that leisure involvement of elderly residents in this area had a positive impact on leisure satisfaction (Guo, Sang, & Luo, 2018). The English literature classified involvement as attraction, self-expression, and life centrality (Mcintyre, 1989). An empirical study conducted on the sports involvement, place attachment, and satisfaction of London Olympic Games, revealed that the sports involvement had a positive impact on the overall satisfaction of the event (Brown, Smith, & Assaker, 2016). Accordingly, the hypothesis is proposed as follows:

H3: Leisure involvement has a positive and significant effect on leisure satisfaction.

Well-Being and Leisure Satisfaction

Research on leisure satisfaction and well-being has attracted extensive attention in the academic circle (Tan, Zhao, & Song, 2011). A survey on the leisure and well-being of urban residents in Guangzhou showed that residents' leisure satisfaction was positively correlated with residents' well-being (Wang, & Sun, 2019). Research on the leisure satisfaction, well-being, and life satisfaction of Chinese immigrants in Canada drew a conclusion that leisure satisfaction of Chinese immigrants has a significantly positive impact on their well-being (Gordon & Ito, 2017). Through the investigation of Taiwan students' personality, leisure experience, and satisfaction, it is concluded that both leisure participation and leisure satisfaction were positively correlated with college students' well-being (Lu & Hu, 2017). Accordingly, the hypothesis is proposed as follows:

H4: Leisure satisfaction has a positive and significant effect on well-being.

Research Design

Data Collection

This study investigated the relationship among leisure motivation, leisure involvement, leisure satisfaction, and well-being among elderly residents in Shanghai aged 60 and above. Shanghai is the first city in China to enter the aging society, and it is listed as the largest aging city in China. The aging of Shanghai is characterized by a large population size and a fast increment of the aging population (Shanghai Bureau of Statistics, 2020a). The elderly population in Shanghai has reached 3.448 million in 2017, accounting for 14.3%, which indicates the aging is especially striking (Shanghai Bureau of Statistics, 2020b). In view of current aging situation, Shanghai government has actively implemented relevant policies with local characteristics, emphasizing the construction of old-age service system, the establishment of overall planning, the pilot of long-term care insurance, the construction of livable communities for old-age care, rural old-age care, elderly comprehensive allowance, old-age service subsidy, nursing talent evaluation system, pension regulation system, etc. (Information Office of Shanghai Municipality, 2020).

Besides, Shanghai attaches great importance to the creation and upgrading of leisure and entertainment space, and vigorously carries out related leisure projects, such as Cultural and Leisure Gas Station in Changning District, rural leisure, and tourism project in Zhujing Town, Jinshan District, and ecological leisure agriculture in Jinshan District, etc., which provide convenient conditions for the elderly to participate in leisure activities.

In this study, the field random sampling method was adopted, and the investigation was conducted in several parks, communities, elderly activity centers, plazas, and senior citizens clubs in Shanghai from June 27 to July 26, 2019 during two periods of 6:00-11:00 am and 4:00-7:00 pm. In order to inspire the elderly interviewees to fill in the questionnaire and guarantee the quality, etc., the interviewees were given a small gift as a token of appreciation after the survey. For the elderly with vision problems, one-to-one reading was adopted to collect data. A total of 370 questionnaires were sent out in this survey. After eliminating 25 invalid questionnaires in which most of information was missed or most questions had the same answers, 345 valid questionnaires were finally collected with an effective recovery rate of 93.2%. Among the elderly respondents, the proportion of female was a little higher (53.0%); The highest proportion of respondents with spouses was 76.8%; The proportions of respondents aged 60-64, 55-59, and 65-69 were 36.5%, 25.2%, and 20.3% respectively; The educational background was dominated by university, high school, or technical secondary school (43.8%); The monthly income (RMB) of interviewees was mainly in the range of Chinese RMB Yuan ¥3,000 to ¥5,000, accounting for 56.8%; The majority of respondents were employees of state-owned enterprises before retirement, accounting for 37.7%; The majority of respondents lived together with their children and their spouses, accounting for 38.3% and 37.1% respectively; 59.1% of respondents took care of themselves and 34.2% were taken care of by their spouse. In general, the sample proportion distribution was relatively balanced.

Questionnaire Design

On the basis of literature review, this study designed the questionnaire, in which the question items of leisure motivation referred to Deci and Ryan (1980), Huang and Gao (2005), et al.; the question items of leisure involvement referred to Kyle Graefe, Manning, and Bacon (2004) and Lu (2018); the question items of leisure satisfaction referred to Beard and Ragheb (1980); the question items of well-being referred to Diener and Emmons (1984), and Diener, Emmons, Larsen, and Griffin (1985). The initial questionnaire was revised after discussion by nine professionals with market research experience. After that, 50 elderly interviewees over 60 years old were interviewed with depth and pretesting, and the formal questionnaire was finalized after repeated revision for four times. The first part of the questionnaire measured leisure motivation, leisure involvement, leisure satisfaction, and well-being. The instrument used a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The second part of the questionnaire was the sociodemographic characteristics of elderly respondents, including gender, marital status, age, education, pre-retirement occupation, personal monthly income, daily caregivers, living mode, leisure time, leisure spending, leisure frequency, leisure partners, leisure type, etc.

Data Analysis**Exploratory Factor Analysis**

In this study, leisure motivation, leisure involvement, leisure satisfaction, and well-being all belong to multidimensional variables. Therefore, exploratory factor analysis was used to explore the dimensions of the above variables. Principal component analysis was used to select the common factors of each variable when the characteristic root exceeds 1 and the factor load value exceeds 0.4. First, the KMO measure and Bartlett Test of Sphericity were conducted on leisure motivation of elderly residents, and the KMO measure value was 0.876. Bartlett Test of Sphericity showed that the significance of the correlation coefficient matrix was different from 0 (i.e., the chi-square value was 3240.389, degree of freedom was 190, significance $p = 0.000 < 0.001$). The data showed that there was a significant correlation between the factors, which could be used for factor analysis.

Four principal component factors of leisure motivation were obtained through factor analysis, and the variance ratio of cumulative explanation was 60.84%. The Cronbach α coefficient of the four leisure motivation factors were all greater than 0.4, which indicated that there was a good internal consistency among the observation indexes of the four leisure motivation factors.

On the basis of the three common factors of leisure involvement obtained from factor analysis, leisure involvement was named as self-expression, centrality, and attraction according to the load value of leisure involvement factor. The first common factor included items like "I contact with relatives and friends through leisure activities", "I actively tell others before participating in leisure activities", "I often talk about leisure activities with others", and so on. The identity generated by participating in leisure activities satisfied the need for personal self-expression, so the first common factor was named as self-expression, including six items. The second common factor contained "I like the feeling of participating in leisure activities", "my life is arranged around leisure activities", "leisure activities make me feel satisfied", and other items, reflecting the importance of leisure activity in respondents' daily life. The respondents' daily lives were related to leisure activities, so the second common factor was named as centrality, including five items. The third common factor included three items that leisure activities were very important, very interesting, very plentiful to me, which indicated that leisure activities had a strong attraction for elderly residents in Shanghai and leisure activities brought them a sense of pleasure, so the third common factor was named as attraction, including three items. The cumulative variance contribution rate was 62.802%. The self-expression variance contribution rate was 25.803%, which was the highest. The variance contribution rates of centrality and attraction are 20.955% and 16.044% respectively, which also had important representativeness.

The KMO measure value of leisure motivation factor of elderly respondents in Shanghai was 0.902, and Bartlett Test of Sphericity of leisure satisfaction showed that the correlation coefficient matrix was significantly different from 0 (i.e., chi-square value was 5402.316, degree of freedom was 231, significance $p = 0.000 < 0.001$). Six principal component factors of leisure satisfaction were obtained through leisure satisfaction factor analysis, and the cumulative variance ratio of explanation was 75.349%. The Cronbach α coefficients of the six leisure satisfaction factors were all greater than 0.4, which indicated that there was a good internal consistency among the observation indexes of these six leisure satisfaction factors. The six leisure satisfaction factors were named

aesthetic satisfaction, physical satisfaction, psychological satisfaction, relaxation satisfaction, social satisfaction, and education satisfaction.

The KMO measure value of well-being factor of elderly respondents was 0.924, and Bartlett Test of Sphericity showed that the correlation coefficient matrix was significantly different from 0 (i.e., the chi-square value was 6264.991, degree of freedom was 171, significance $p = 0.000 < 0.001$), so it was suitable for factor analysis. Six common factors were obtained through factor analysis, and the cumulative explanatory variance ratio was 74.34%. The Cronbach α coefficients were all greater than 0.4, which indicated that there was a good internal consistency among the three common factors of well-being. The three common factors of well-being were named as life satisfaction, positive emotion, and negative emotion. The cumulative variance contribution rate was 74.34%.

Model Fitting Test

Table 1

Structural Equation Model Fitting Test of the Relationship Between Leisure and Well-Being for Elderly Residents in Shanghai

X ²	df	X ² /df	RMSEA	CFI	NFI
122.745	48	2.557	0.067	0.966	0.945

Through data analysis, the structural equation model of leisure motivation, leisure involvement, leisure satisfaction, and well-being of elderly residents in Shanghai all performed well (Table 1), in which X^2/df was $2.557 < 3.0$ ($X^2 = 122.745$, $df = 48$), RMSEA was $0.067 < 0.08$ (CFI = 0.966, NFI = 0.945, close to 1), indicating that the theoretical model of this study had a good fitting.

The good fitting of the model enabled it to estimate the statistically significant parameters. Table 2 showed the coefficient estimation results of the structural equation model for the relationship among leisure motivation, leisure involvement, leisure satisfaction, and well-being of Shanghai elderly residents. The probability associated with the null hypothesis of leisure and well-being of Shanghai elderly residents where the test was zero were displayed in the p column values. When $p < 0.001$, it was significant, indicating that there was a positive/negative significant relationship between the non-observable variables of elderly residents' leisure and well-being. The results showed that leisure motivation of elderly residents had a significant positive effect on leisure involvement ($t = 12.322$, $p < 0.001$), so H1 was supported; the leisure satisfaction of elderly residents had a significant positive effect on well-being ($t = 12.516$, $p < 0.001$), so H4 was supported. However, the elderly residents' leisure involvement had a significant positive effect on leisure satisfaction ($t = -5.871$, $p < 0.001$), so leisure satisfaction had a negative effect on leisure involvement. Thus, H3 was not supported; the elderly residents' leisure motivation had no significant effect on leisure satisfaction ($t = -0.723$, $p > 0.5$), so H2 was not supported (Figure 1).

Table 2

Hypothesis Testified Results

Paths	Unstandardized path coefficients estimate	S.E.	C.R.	Sig.	Standardized path coefficient estimate
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Leisure motivation → Leisure involvement	0.768	0.062	12.322	***	0.858
Leisure motivation → Leisure satisfaction	-0.104	0.143	-0.723	0.470	-0.118
Leisure involvement → Leisure satisfaction	1.065	0.181	-5.871	***	1.084
Leisure satisfaction → Well-being	0.866	0.069	12.516	***	0.747

Note. *** $p < 0.001$.



residents to exercise emotional regulation and to build a harmonious relationship in the neighborhood.

Secondly, leisure motivation of elderly residents has no significant effect on leisure satisfaction, in that the leisure motivation has not been transformed into leisure behavior and the leisure content of the elderly residents is monotonous, etc. Based on the research results, the suggestions are as follows: Increasing the publicity of leisure benefits for elderly residents and meeting the leisure expectations of elderly residents with different characteristics in order to improve the transformation of leisure motivation to leisure behavioral intention. In addition, leisure involvement of elderly residents has a significant negative effect on leisure satisfaction. The reason is that leisure involved more leads to high attention to the leisure activities, but due to the restriction of the objective environment, the types of leisure activities, leisure products, leisure services, and other aspects of the elderly cannot meet the expectations of the elderly, leading to a lower degree of satisfaction. Based on the research results, it is suggested to pay attention to the leisure participation and experience evaluation, reasonable layout of leisure facilities, improvement of leisure products, service, and environment for the elderly.

Managerial Implications

First, enrich the factors affecting the leisure activities of the elderly, and carry out various group activities to stimulate elderly residents' willingness to participate, so as to improve elderly residents' leisure motivation and intention. Increase the publicity of leisure benefits for elderly residents and meet the leisure expectations of elderly residents with different characteristics in order to improve the transformation of leisure motivation to leisure behavioral intention. Secondly, it is suggested to pay attention to the leisure participation and experience evaluation, and to rationally arrange the sites and facilities for leisure activities in order to enhance the positive impact of leisure participation on leisure satisfaction. Thirdly, it is suggested that the community and the elderly service center implement the strategies to encourage elderly residents to exercise emotional regulation and to build a harmonious relationship in the neighborhood.

Limitations and Further Study

First, research sample is the limitation. This paper only took Shanghai as the survey site. However, the economic development level, aging level, and leisure industry development level vary in different regions in

China, so the elderly interviewees' perception of leisure motivation and leisure involvement level may also have great differences. In the future, empirical studies can be conducted in multi-cities (such as Shanghai, Hangzhou, Nanjing in China, etc.) and multi-regions (such as the Yangtze River Delta, the Beijing-Tianjin-Hebei region in China, etc.) to increase the number of research samples and do comparison among cities in different provinces or among different regions, in order to improve the applicability of the research model. Secondly, research depth is another limitation. This study only revealed the driving mechanism of well-being in the elderly from two perspectives: leisure motivation and leisure involvement. Future research can add variables such as leisure constraints, leisure benefit, and leisure preference. Meanwhile, it can study a certain type of leisure activities of the elderly, such as swimming, singing, dancing, calligraphies, and paintings for elderly residents, so as to improve the explanatory strength of the research model.

References

- Beard, J. G., & Ragheb, M. G. (1980). Measuring leisure satisfaction. *Journal of Leisure Research*, 12(1), 20-33.
- Brown, G., Smith, A., & Assaker, G. (2016). Revisiting the host city: An empirical examination of sport involvement, place attachment, event satisfaction and spectator intentions at the London Olympics. *Tourism Management*, 55(4), 160-172.
- Chen, Y.-C., Li, R.-H., & Chenm, S.-H. (2013). Relationships among adolescents' leisure motivation, leisure involvement, and leisure satisfaction: A structural equation model. *Social Indicators Research*, 110(3), 1187-1199.
- Chen, Y.-H. (2016). Construction of the relationship model among leisure motivation, leisure satisfaction and subjective well-being of Han, Qiang and Yi university students. *Statistics and Management*, 16(2), 36-38. (in Chinese)
- China Ministry of Human Resources and Social Security. (2020). Will the pension funds be used up in 2035? Response from the Ministry of human resources and social security: It can guarantee long-term payment in full and on time. The Website of the
- Central People's Government of the PRC. Retrieved January 7, 2019 from http://www.gov.cn/xinwen/2019-04/23/content_5385533.htm (in Chinese)
- China National Bureau of Statistics. (2020). *China statistical yearbook*. China's economic and social big data platform. Retrieved June 18, 2020 from <http://data.cnki.net/Yearbook/Single/N2018110025> (in Chinese)
- China National Council. (2020). Policies of the Central People's Government of the People's Republic of China. The Website of the Central People's Government of the PRC. Retrieved June 13, 2020 from <http://www.gov.cn/zhengce/> (in Chinese)
- Deci, E. L., & Ryan, R. M. (1980). The empirical exploration of intrinsic motivational processes. *Advances in Experimental Social Psychology*, 13(8), 39-80.
- Diener, E., & Emmons, R. A. (1984). The independence of positive and negative effect. *Journal of Personality and Social Psychology*, 47(5), 1105-1117.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49(1), 71-75.
- Fan, F. (2017). SEM-based analysis on relationship between leisure motivation and satisfaction of city residents (M.Sc. thesis, Ningbo University, 2017). (in Chinese)

Guo, Q.-G., Sang, M.-L., & Luo, J. (2019). The influence of leisure motivation and leisure involvement on leisure satisfaction of the elderly. *Chinese Journal of Gerontology*, 39(6), 1495-1499. (in Chinese)

Havitz, M. E., Kaczynski, A. T., & Mannell, R. C. (2013). Exploring relationships between physical activity, leisure involvement, self-efficacy, and motivation via participant segmentation. *Leisure Sciences*, 35(1), 45-62.

Huang, Z.-L., & Gao, J.-X. (2005). A study on leisure participation motivation and satisfaction of junior college students outside Taiwan. *Journal of Junior College Physical Education*, 7(1), 51-66. (in Chinese)

Information Office of Shanghai Municipality. (2020). The Municipal Government Information Office held a press conference to introduce the relevant situation of Shanghai social elderly services. Shanghai Municipality. Retrieved December 23, 2020 from <http://www.shanghai.gov.cn/nw2/nw2314/nw2319/nw12344/u26aw45835.html> (in Chinese)

Jaapar, M., Musa, G., Moghavvemi, S., & Saub, R. (2017). Dental tourism: Examining tourist profiles, motivation and satisfaction. *Tourism Management*, 61(4), 538-552.

Kyle, G., Graefe, A., Manning, R., & Bacon, J. (2004). Effect of activity involvement and place attachment on recreationists' perceptions of setting density. *Journal of Leisure Research*, 36(2), 209-231.

Liu, D., & Chen, Z.-G. (2017). Effects of outdoor music festival on destination image—Based on tourist involvement and satisfaction. *Resource Development & Market*, 33(2), 228-232. (in Chinese)

Lu, F.-L. (2018). A study of rural tourism experience and behavioral intention based on involvement theory: A case study of

Zhuquan Village, Yinan City, Shandong Province (M.Sc. thesis, Qufu Normal University, 2018). (in Chinese)

Lu, L., & Hu, C.-H. (2005). Personality, leisure experiences and happiness. *Journal of Happiness Studies*, 6(3), 325-342.

Mcintyre, N. (1989). The personal meaning of participation: Enduring involvement. *Journal of Leisure Research*, 21(2), 167-179.

Shanghai Bureau of Statistics. (2020a). Present situation and forecast of aging population in Shanghai. Retrieved May 16, 2020 from <http://www.stats-sh.gov.cn/html/fxbg/201805/1002033.html> (in Chinese)

Shanghai Bureau of Statistics. (2020b). *Shanghai statistical yearbook*. China economic and social big data research platform. Retrieved June 18, 2020 from <http://data.cnki.net/yearbook/Single/N2019040068> (in Chinese)

Tan, C.-L., Zhao, X.-F., & Song, J.-P. (2011). Comparative study the relationship among healthy lifestyle, leisure participation, leisure satisfaction and well-being of the highly-educated single women: Case studies in Beijing and Taipei. In *2011 Tourism Tribune. Proceedings of China Tourism Research Annual Conference* (pp. 117-132). Beijing: Beijing Union University Press. (in Chinese)

United Nations. (2019). Implementation of the sustainable development goals in Asia and the Pacific: Review of social development issues and challenges in relation to the sustainable development goals. Provisional agenda of the *4th Session of*

Economic and Social Commission for Asia and the Pacific. Retrieved March 28, 2019 from https://www.unescap.org/sites/default/files/pre-ods/CSD4_1%20E.pdf

Walker, G. J., & Ito, E. (2017). Mainland Chinese Canadian immigrants' leisure satisfaction and subjective well-being: Results of a two-year longitudinal study. *Leisure Sciences*, 39(2), 1-12.

Wang, M.-T., Chow, A., & Amemiya, J. (2017). Who wants to play? Sport motivation trajectories, sport participation, and the development of depressive symptoms. *Journal of Youth and Adolescence*, 46(9), 1982-1998.

Wang, X.-R., & Sun, J.-X. (2019). Urban residents' leisure and subjective well-being: Evidences from Guangzhou, China. *Geographical Research*, 38(7), 1566-1580. (in Chinese)

Wu, C.-Z. (2015). Research on the leisure policy in foreign countries. *Wuhan University Journal (Philosophy & Social Science)*, 68(2), 109-115. (in Chinese)

Zhang, P., Shi, W.-W., Hou, G.-D., & Luo, J.-H. (2018). Relationship between leisure motivation and leisure involvement of leisure cycling participants. *Journal of Hubei Sports Science*, 37(7), 605-608. (in Chinese)

Zhang, Y.-C. (2014). The relationship of leisure motivation, leisure involvement and leisure benefits in senior wood ball participations in Taiwan (Ph.D. thesis, Fujian Normal University, 2014). (in Chinese)