

# The 'Zero consumption' phenomenon of elderly people's sports and leisure in the Yangtze River delta region

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**Abstract:** This study investigates the current status of the "zero consumption" phenomenon in sports and leisure activities among elderly individuals in the Yangtze River Delta region, analyzing its characteristics and underlying causes. Data related to the consumption of sports and leisure activities among the elderly in this region were obtained through methods such as questionnaires and interviews. The results indicate that "zero consumption" in elderly sports and leisure activities is a common social phenomenon in the Yangtze River Delta region of China. It is not only a result of economic income constraints but also a consumption trend formed under the influence of various factors such as aging and declining physical fitness. While "zero consumption" does not significantly affect the elderly's participation in sports and leisure activities, it may to some extent impact the diversification of these activities. Given the current participation status of elderly individuals in sports and leisure activities in China, it is still unable to play a crucial leading role in the development of the leisure industry as seen in developed countries.

**Keywords:** Yangtze River Delta, elderly, sports leisure, zero consumption

## 1. Introduction

The experience of Western countries that were among the first to enter an aging society demonstrates that the elderly are an important group in sports and leisure consumption, with higher participation and consumption levels compared to other age groups. Since China entered an aging society at the beginning of the 21st century, the issue of elderly sports and leisure consumption has attracted the attention of many scholars. They hope that the consumption of the elderly can stimulate the development of related industries and promote economic growth. However, the fundamental difference between China and Western aging countries is that China's aging is characterized by "growing old before becoming wealthy," meaning that the population has aged before the economy has reached a higher level of development. Due to long-standing urban-rural disparities and the "dual-track system" for retirement pensions from enterprises and institutions, there is a significant difference in income levels among the entire elderly population. Although some elderly people have certain consumption capabilities, overall, the elderly still belong to a group with relatively low consumption levels. Especially in terms of sports and leisure consumption, the level remains low, and there may even be characteristics of "zero consumption." This article takes the elderly in the relatively economically developed Yangtze River Delta region of China as the subject, investigates the current status of "zero consumption" in elderly sports and leisure activities, and analyzes its causes.

## 2. Data sources

The research data for this article were derived from a questionnaire survey conducted from October 2010 to June 2011, targeting 1,885 elderly individuals aged 60 and above residing in Nanjing, Jin tan, Yancheng, She yang of Jiangsu Province, Hangzhou, Jia Shan, Qu Zhou of Zhejiang Province, and urban and rural areas of Shanghai, as well as interviews with the elderly and workers in the field of elderly care in the aforementioned regions.

### **3. Overall status of elderly sports and leisure consumption in the Yangtze River delta region**

For the convenience of categorical analysis, this study divides the consumption of elderly sports and leisure into three aspects: 1) consumption on physical exercise; 2) consumption on other sports and leisure activities; 3) expenditure on tourism. Regarding monthly expenditure on physical exercise, 91.6% of the elderly responded with "no expenditure," 6.2% spent within the "1–100 yuan" range, and only 2.2% spent over 100 yuan. Other sports and leisure activities include traditional folk activities such as fishing and playing diabolo, as well as attending sports events at venues. In these categories, apart from a few urban elderly participating in fishing activities (with monthly expenditures mostly under 200 yuan), few people participated in other activities, and all had no expenditure, especially for attending sports events at venues, which was rarely reported. Out of the 1,885 surveyed individuals, only 3 responded "frequently attend," and 83 (4.4%) responded "occasionally attend," with tickets mostly being complimentary, thus the costs were mostly zero. In terms of tourism expenditure, only 27.9% of the elderly participated in tourism and had expenditures within three years, with an average amount of 5754 yuan, while 72.1% of the elderly had no tourism expenditures.

### **4. The "Zero Consumption" phenomenon in sports and leisure and characteristics of the demographic**

#### **4.1. The "Zero Consumption" phenomenon in sports and leisure**

This article defines "zero consumption" in sports and leisure as "a tendency towards zero monetary expenditure in sports and leisure activities." Since some sports and leisure consumption that is difficult to quantify individually is not included, the so-called "zero consumption" is a relative concept. Among the elderly population, "zero consumption" in sports and leisure can be mainly divided into two categories: one is not participating in any sports and leisure activities, hence no consumption; the other is participating in sports and leisure activities but with no consumption, which is the focus of this analysis. Among the three categories of physical exercise, other sports and leisure, and tourism, physical exercise has the most participants, and many elderly people only engage in physical exercise and not in the other two categories. Therefore, the "zero consumption" group in sports and leisure activities is primarily concentrated here. Typically, sportswear and shoes are considered the main expenses for the elderly in physical exercise, but this study found that, in reality, most elderly people do not purchase clothing and sports shoes specifically for physical exercise and only wear everyday clothing for exercise. The shoes worn during physical exercise are also the same ones worn when going out in daily life. Since the shoes are worn much longer in daily life than during physical exercise and a pair of shoes is usually worn for several years, the cost of purchasing shoes is not considered as consumption for physical exercise. Looking at the venues where the elderly exercise, most are free venues such as communities, squares, and parks, with no expenditure on venue usage. These factors lead to 91.6% of the elderly having "zero consumption" in physical exercise. The number of participants in other leisure activities outside of physical exercise (such as fishing, live sports event viewing, etc.) is relatively small and has little impact on the overall "zero consumption" rate. Therefore, the consumption of the elderly in sports and leisure mainly comes from tourism. When the elderly have no tourism expenditure, they are likely to become "zero consumers" in sports and leisure. Statistics show that those who participate in sports and leisure activities but are "zero consumers" account for approximately 61.8% of those who participate in sports and leisure activities. Adding those who do not participate in sports and leisure activities, "zero consumers" in sports and leisure account for 70.2% of the entire surveyed population. It can be seen that "zero consumption" in sports and leisure among the elderly is a relatively common phenomenon.

## 4.2. Analysis of characteristics of the elderly demographic with "Zero Consumption" in sports and leisure

### 4.2.1. Age and gender

Among the elderly participating in sports and leisure activities, the average age of "zero consumers" is  $72.3 \pm 8.1$  years, while the average age of consumers is  $68.9 \pm 7.6$  years, with the former being significantly higher than the latter ( $P < 0.01$ ). In terms of gender distribution, among male elderly participants in sports and leisure, approximately 59.7% are "zero consumers," and the same rate for females is 63.2%, slightly higher than for males, but the difference between the two is not statistically significant.

### 4.2.2. Education level, professional experience, and income status

Looking at the "zero consumption" rates among different elderly groups in sports and leisure, the rate for those with education levels of junior high school and above is significantly lower than for those with education levels of elementary school and below (44.4%, 76.4%,  $P < 0.01$ ), the rate for those with non-agricultural professional experience is lower than for those with agricultural professional experience (55.4%, 77.9%,  $P < 0.01$ ), and the rate for those with retirement wages is lower than for those without retirement wages (52.3%, 78.7%,  $P < 0.01$ ).

### 4.2.3. Place of residence

Among elderly sports and leisure participants living in urban communities, the "zero consumption" rate is 58.4%, while the same rate in rural areas is 88.3%, with the latter being significantly higher than the former ( $P < 0.01$ ). Although the rate of zero consumers among urban residents is relatively lower compared to rural areas, it still exceeds 50%. It is evident that even among urban elderly, "zero consumption" in sports and leisure is also a relatively common phenomenon.

## 5. Analysis of the causes of the "Zero Consumption" phenomenon

### 5.1. Income level and "Zero Consumption"

The income level of the elderly population is a major factor affecting sports and leisure consumption. In developed countries, the elderly have the highest participation rate in sports and leisure activities and are also a group with a relatively high level of consumption in these areas. Taking Japan, which entered the aging society earlier, as an example, with the so-called "baby boomers" born between 1947 and 1949 entering old age, a very large elderly population has been formed in Japan. Due to Japan's relatively complete pension insurance system, the elderly have a stable income. Although the average annual income of the elderly is lower than that of middle-aged and young people, they do not have the pressure of loan repayments, children's education expenses, and have higher bank savings. Therefore, the elderly spend much more on leisure activities than other age groups. In the state of long-term economic sluggishness in Japan, the leisure industry is one of the few industries that continue to grow, and the active participation of the elderly has contributed to the development of this industry. They are even considered to have replaced young people as the new leaders of the leisure market. Although China is gradually improving the social pension insurance mechanism, the payment amount is still at the level of maintaining basic life. For many elderly people, participating in leisure activities with higher consumption such as travel still has certain difficulties. Despite the fact that the subjects of this study are in the relatively economically developed Yangtze River Delta region of China, in rural areas, many elderly people's monthly income is within 100 yuan, and only 27.9% of the surveyed population has had travel consumption in the past three years. On the other hand, looking at the physical exercise projects chosen by the elderly, walking is the first choice. In addition to the convenience of participation, the almost zero cost may be one of the main reasons for being chosen. Compared with people receiving social pensions, the elderly with a fixed retirement salary are considered to have a higher income, so this group often has a wider range of choices when participating in sports and leisure activities. Among those with a retirement salary, 12.3% regularly participate in activities such as table tennis, badminton, fitness, and swimming, which require certain expenses; while only 1.3% of those without a retirement salary participate in such activities. In addition, 50.4% of those with a retirement salary have participated in travel in the past three years, while this rate is only 34.7% among those without a

retirement salary, and the proportion of travel expenses paid by individuals is 68.7% for the former and only 2.4% for the latter (mainly borne by children). In personal characteristics, education level and farming experience, which are related to "zero consumption," are actually two factors closely related to the income level of the elderly. For the current elderly, having a higher education level generally means having a more stable job before retirement, and after retirement, they can receive a fixed retirement salary. On the other hand, farmers are mostly those with lower education levels, and their income sources after entering old age mainly rely on pension insurance or government subsidies, which is far lower than those receiving retirement salaries.

American social psychologist Maslow pointed out that human needs can generally be divided into five levels from low to high: physiological needs, safety needs, social needs, respect needs, and self-actualization needs. The first four levels of needs are considered basic needs, while self-actualization needs are called higher-level needs. Maslow believed that only after the lower-level needs are met to the minimum extent will the higher-level needs emerge; from the perspective of consumption, these needs naturally reflect different consumption levels. After people's basic needs such as clothing, food, housing, and transportation are met, they tend to pursue higher-level needs such as social interaction and self-actualization, and participating in various leisure activities is an important way to meet people's higher-level needs. Participating in leisure activities can not only expand the scope of social interaction but also win respect and achieve self-actualization. For most elderly people, leaving the workplace often means greatly narrowing the scope of social interaction, and they need to establish new social circles through leisure and other activities, making leisure activities an important channel for communication with the outside world. Chinese elderly people's basic needs can be met to the minimum extent. Although the basic life of a considerable part of the elderly is hardly called high quality, it does not affect their pursuit of higher-level needs such as leisure activities. The income level more affects the way and content of the elderly's participation in leisure activities. For low-income elderly people, living within their means is a basic principle of maintaining life. When they cannot afford the costs of sports equipment, sports venues, and cannot expect to participate in higher-cost travel, they usually turn to choose some sports and leisure projects that do not require money expenditure, such as walking and running. Therefore, the income level is the main reason for the formation of the elderly group's sports and leisure "zero consumption."

## **5.2. The reduction of leisure activity space and "Zero Consumption"**

The time and space choices of the elderly when participating in sports and leisure activities may be another reason for the formation of "zero consumption." Sociologists and economists usually associate the time available for leisure with leisure space when analyzing the characteristics of leisure activities. They believe that an increase in leisure time can lead to an expansion of leisure space and an increase in consumption levels in leisure activities, such as increased transportation and accommodation expenses. Therefore, the economic community generally believes that the increase in leisure time and the resulting expansion of leisure space are important factors in promoting leisure consumption. Indeed, this theory can be verified in some elderly people. Due to the abundance of time, the freedom of choice for leisure space for the elderly is increased, and they can actively participate in tourism, outings, photography, fishing, watching sports competitions on site, and other sports and leisure activities that require a certain amount of time, and participating in these activities can also increase consumption to a certain extent. However, the actual situation of a considerable part of the elderly is not entirely the same. The extension of leisure time does not necessarily lead to the expansion of leisure space. Under the constraints of economic, age, physical strength, and environmental factors, the increase in leisure for many elderly people is more of a burden and helplessness they have to face, rather than providing more leisure opportunities. To this end, a considerable part of the elderly may adopt a behavior pattern different from the conventional leisure theory in the choice of leisure space to solve the life problems they have to face. German developmental psychologist Baltes once used the selection compensation optimization (selection, optimization, compensation) model to explain the development issues of all stages of human beings, including the elderly period. Baltes believes that with the increase of age, the body will experience a decline in physical activity ability, a gradual reduction in available resources, and a decline in the ability to obtain resources. Therefore, the elderly will make adjustments in goal setting according to the actual situation, choose new goals, and compensate for the

deficiencies brought about by functional decline by optimizing the combination of resource allocation and taking compensatory measures to obtain life satisfaction. Taking sports and leisure activities as an example, when factors such as insufficient sports facilities, physical decline, and economic conditions appear, the elderly will set more realistic goals when participating in sports and leisure activities, and the main performance is to further narrow the scope of activities, restricting their activities to a smaller radius centered on the home (such as communities, nearby parks, squares, etc.). Since the level of consumption is directly proportional to leisure space, the reduction of leisure activity range to the space centered on the home will inevitably lead to a decrease in consumption, thereby increasing the number of "zero consumers" in sports and leisure. The survey results of the leisure activities of the elderly in Beijing by Sun Ying and others show that the average time the elderly spend on leisure at home is 4.3 hours per day, and 50% to 60% of outdoor activity time is used for various activities near the residential area. The elderly in the Yangtze River Delta region also show the same tendency.

### 5.3. Choice of leisure activities and "Zero Consumption"

This study was conducted in the Yangtze River Delta region, which has relatively good economic development in China. Among the elderly living in the cities of Shanghai, Nanjing, and Hangzhou, there are quite a few who have good economic conditions. However, even among these elderly people, there is still a phenomenon of "zero consumption" in sports and leisure activities, which requires a deeper analysis. Meer once used the "contraction and convergence" model to summarize the characteristics of Dutch elderly people's participation in leisure activities. He divided leisure activities into three concentric circles, representing three different types of leisure activities from the inside out: core activities, low-threshold activities, and high-threshold activities. The further away from the center of the circle, the higher the physical and skill thresholds required for the activities, such as sports, tourism, fishing, etc.; the closer to the core, the simpler the activity, such as watching TV, listening to music, etc., and the space tends to be centered on the home. Younger people's leisure activities are often at the edge of the circle, and the activities are diverse. However, as age increases, leisure activities tend to contract and converge towards the core of the circle, and complex high-threshold activities are more likely to be gradually eliminated from the list of leisure activities. Strain and others conducted a longitudinal tracking survey on Canadian elderly people and found that on-site viewing of dramas, movies, sports competitions, and tourism and other leisure activities are less likely to last more than 8 years, while watching TV and reading and other leisure activities are more likely to be maintained for a long time. They used logistic regression analysis and found that the main reason for the reduction in participation in various leisure activities was the increase in age. In response to the reduction in participation in leisure activities in old age, Strain believes that no matter whether this reduction comes from the elderly's conscious choice or is the result of unfortunate events or changes in life patterns, it can make the elderly re-examine their situation, verify whether their decisions are the most suitable for the environment they are in, and ultimately benefit themselves. It can be seen that as age gradually increases, the elderly always make adjustments according to their own physical, life, and environmental changes to obtain better life satisfaction. Reducing the number of high-threshold activities in sports and leisure activities is actually also a result of the elderly's self-adjustment, and in some cases, it is not entirely dependent on economic income. This study found that among the elderly who participate in leisure activities, the average age of those who have consumption expenditure is significantly lower than that of "zero consumers". Since complex high-threshold activities are often accompanied by a certain degree of consumption expenditure, such as the purchase of leisure equipment, venue fees, and transportation, accommodation fees, etc., the more the leisure activities spread to the edge of Meer's circle, the greater the consumption expenditure; on the contrary, the consumption level decreases. As age increases, the elderly's leisure activities gradually contract towards the center of Meer's circle, and low-threshold activities that are easy to operate, easy to understand, and easy to participate in are more likely to be chosen, and these activities often do not require too much consumption. This may be the main reason for the emergence of "zero consumption" in sports and leisure among some elderly people with relatively good economic conditions.

#### 5.4. Prioritization of leisure activities and "Zero Consumption"

Typically, the elderly have a priority order when it comes to the allocation of time and money in leisure activities. Income level, physical condition, age, and other factors are not usually the main determinants of this priority order, while the fun, entertainment, sustainability, and time-killing effects of leisure activities play a more significant role. Since the elderly have a large amount of free time, they need a way to pass the time to alleviate loneliness and emptiness. Activities with strong fun and entertainment value are more likely to attract the elderly to participate, and if the activities do not require too much physical effort, they can extend the time of participation and effectively occupy their leisure time. For the elderly who are more health-conscious, sports and leisure (mainly physical exercise) are an important means of maintaining health, so they will allocate a certain amount of time in their leisure for exercise, such as scheduling physical exercise at a certain time in the morning or evening. However, due to physical limitations, sports and leisure cannot occupy the entire leisure time, so during the more complete time slots in the morning and afternoon, the elderly often prioritize other non-sports leisure activities. In the priority order of monetary expenditure, they also tend not to place spending on physical exercise at the top of the list. At the same time, since there are physical exercise options that do not require monetary expenditure, for the elderly group with lower income levels, it is natural to prioritize their limited discretionary money on leisure activities they consider necessary to spend on. This study found that among the elderly who participate in sports and leisure activities but have no consumer expenditure, about 34% of people have some monetary expenditure in non-sports leisure activities, such as card and mahjong games. Card and mahjong games meet the conditions of fun, entertainment, sustainability, and time-killing effects, and many areas in the Yangtze River Delta have a tradition of card and mahjong activities. The elderly have been influenced by these activities from a young age and are already proficient in them, without needing to spend too much effort to relearn. On the other hand, many elderly people view participation in these activities as an important opportunity to increase social interaction, making them the preferred leisure activities for some elderly people. The introduction of a monetary element in the activities (even if it is a small amount) further increases the excitement and sustainability of the activities. It can be seen that it is this prioritization of time and money allocation that further gives rise to the "zero consumption" group in sports and leisure.

In addition to the aforementioned factors, many elderly people in China hold traditional concepts of frugality and consider expenditures on sports and leisure, especially physical exercise, to be dispensable and not a necessity of life. Therefore, from a frugal perspective, they often cut back on such expenses, which is also one of the reasons for the "zero consumption" in sports and leisure.

## 6. Conclusion

The "zero consumption" in sports and leisure among the elderly is a relatively common social phenomenon in the Yangtze River Delta region of China. It is not only a result of the constraints of the level of economic income but also a consumption trend formed under the influence of various factors such as increasing age and declining physical capacity. The "zero consumption" in sports and leisure among the elderly does not significantly affect their participation in these activities themselves, but it does impact the diversified development of sports and leisure activities to some extent. At the same time, considering the current status of the elderly's participation in sports and leisure activities in China, it is still unable to play a pivotal role in the development of the leisure industry as seen in developed countries.

## 7. References

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