

Differences on financial performance and life satisfaction in genders and university types of Chinese college students

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Abstract: Despite the strong interest in financial performance and well-being (life satisfaction), there is no consensus in the literature about differences on financial performance and life satisfaction of college students in genders and university types. A fundamental proposition is that individuals' financial performance and well-being are different from the performance of college students in developed countries. Yet there is little agreement as to the performance differences of college students in developed countries, and there is little research on the performance differences of college students. On the basis of a survey of 1,233 undergraduates or postgraduates from 25 public higher education institutions offering degree programs in Guangxi Zhuang Autonomous Region, it was found that there were significant differences between genders for the sampled university students in regard to their composite scores in financial satisfaction and comfort, financial security, and life attitude. Moreover, there were also significant differences between genders in regard to their composite scores in financial intention, financial well-being, and life satisfaction. Finally, a statistically significant difference was found among four types of Chinese college students in regard to composite scores on financial literacy, investment behavioral intention, financial well-being. The authors also discuss the research and managerial implications of these findings. **Key words:** differences; financial performance; life satisfaction; Chinese college students

1 Introduction

In this study, financial performance is composed of financial literacy, investment behavioral intention, and financial well-being. Life satisfaction, an important component of subjective well-being, is likely to reflect the fulfillment of individual values and goals [1]. In this study, life satisfaction of Chinese college students is regarded as subjective values and goals about their quality and circumstances of life from now to future. Also, life satisfaction of Chinese college students is regarded as attitudes, choices and goals about their quality and circumstances of life from now to future. And financial literacy can be conceptualized as a measure, that is, the individual has an understanding of major financial

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concepts and applies them to the management of their personal finances [2][3]. Financial literacy is defined as a combination of financial knowledge, attitudes towards money, financial self-efficacy, and financial behavior, including cash, credit, saving and investment behaviors [4][5]. Also, individual financial literacy is composed of financial knowledge, ability and values, which has an impact on individual financial behavior, enhances individual financial well-being, and explains individual overall well-being when participating in financial activities. College students with financial knowledge need to form positive financial behaviors to improve their quality of life. Positive financial behaviors contribute to financial satisfaction and financial well-being [6]. In addition, this study also focuses on the investment behavioral intention in stock marketing, entrepreneurship and house-purchasing of Chinese college students. Financial well-being refers to the ability to sustain current and anticipated living standards and financial well-being includes current financial satisfaction and comfort, financial security, and financial aspiration. Life satisfaction, an important component in subjective well-being, is likely to reflect the fulfillment of individual values and goals. In this study, life satisfaction of Chinese college students is regarded as subjective values and goals about their quality and circumstances of life from now to future. At the same time, life satisfaction of Chinese college students is also regarded as attitudes, choices and goals about their quality and circumstances of life from now to future.

2 A brief review on financial performance and life satisfaction

2.1 Current situation of Chinese college students' financial literacy, investment intention, financial well-being, and life satisfaction

Financial literacy of college students has become a hot issue in education [8]. At present, few universities in China incorporate financial literacy education into their daily teaching system or offer general courses in finance and economics. Generally speaking, as a special group, Chinese college students depend on their parents' financial support, and their ability of economic behavior, decision-making, and desire for wealth, consumption, investment and financial management are enhanced, but they are weak in the concept of wealth creation, reasonably controlling wealth, and security awareness.

In the new era, Chinese college students are gradually becoming the mainstream consumer group in China, and the level of their fund management and financial literacy is of great significance to the economic development. Based on the survey data of 313 college students, it was found that most Chinese college students spend the extra money on immediate recreational consumption rather than long-term consumption after investment [9]. With the continuous improvement of per capita income level of China's residents, investment management has gradually become a trend of social concern [10]. College students, as well-educated and high-quality talents, are also bound to become potential customers and backbone of investment. Chinese college students began to contact some personal financial products, or go to the securities market for investment management hoping to obtain more income to meet consumer demand. More Chinese college students can reflect the consumption concept and life state. Research shows that Chinese college students have weak awareness of investment, and their investment ways are not diversified enough, and their investment guidance is insufficient. In view of the above mentioned problems existing in the investment management of Chinese college students, some researchers have proposed to enrich their investment and financial management knowledge, create a good investment and financial management atmosphere, learn financial knowledge independently, and improve their financial literacy [11]. It is found that the investment intention of college students has attracted the attention of researchers.

The happiness index of college students has become one of the topics that people care about, and also become a research hotspot [12]. According to the 2020 Global Happiness Survey, a survey of nearly 20,000 people aged 16 to 74 in

27 countries showed that the global happiness index averaged 63 percent in 2020 with China having the highest happiness index. As many as 93 percent of Chinese are either very happy or relatively happy. Based on the survey, the paper analyzes the present situation of Chinese college students' life satisfaction, finding that the overall well-being of college students tends to the above-average level, and nearly 60 percent is full of hope for future employment and financial investment. However, little focuses on Chinese college students' financial well-being.

A sample survey of 690 Chinese college students from 11 universities in Beijing found that the overall life satisfaction of college students is in the middle and slightly above level. Meanwhile, a sample study of 2,801 Chinese college students from 29 universities in China showed the life satisfaction of Chinese college students is higher. It can be found that the life satisfaction of Chinese college students had got an important research variable.

2.2 The difference in financial performance and life satisfaction between genders and universities types

Previous studies have shown that individual characteristics such as gender, cognitive level or abilities, socialeconomic and demographics will influence an individual's level of financial literacy, financial behavior, financial wellbeing, and satisfaction [13][14][15]. It was pointed out that one of the important factors of financial literacy was gender and education level. Previous research shows that higher levels of schooling lead to higher levels of financial literacy and financial performance [16], which means that college students with less professional education are less likely to answer questions correctly and more likely to say that they do not know the answer. There are conclusions that men's financial literacy is increasing faster than women's [17], and women generally have lower rates of financial literacy than men. In addition, women find it more difficult to perform financial calculations and have lower level of financial knowledge, which makes financial literacy difficult. Previous studies have shown that individuals with cognitive abilities are more financially literate. Some social-economic and demographic factors are associated with financial literacy, but a few studies have analyzed the social-economic and demographic factors, such as gender and education, which affect financial literacy. These studies were conducted in developing areas like the Middle East. Moreover, a growing body of previous literature primarily focuses on the developed world [18], few studies have been conducted on the implications of gender and socialdemographic factors on financial performance and life satisfaction in China. Thus, it seems essential to analyse the differences of gender and social-demographic factors on financial performance and life satisfaction in China. This study explores the differences between gender and university types in financial performance and life satisfaction.

3 Data collection

In China, Higher Education Institutions (HEIs) are composed of government and non-government ones, including institutions providing postgraduate programs, regular HEIs, adults HEIs, and other non-government HEIs, of which the number of government HEIs with strong students and teachers is dominant. According to the data released by the Department of Education, Guangxi Zhuang Autonomous Region, as of September 30, 2021, there are 38 universities, Higher Education Institutions in Guangxi Zhuang Autonomous Region offering degree programs, including 25 public universities, accounting for 66%. It can be found that the number of public universities is more than that of private universities in terms of students and teachers, and that public universities are favored by the society, parents and students, representing the level of higher education in China. Thus we focus on 25 public universities, Higher Education Institutions offering degree programs in Guangxi Zhuang Autonomous Region.

The list of 25 public universities is as follows: Guangxi University, Guangxi University of Science and Technology, Guilin University of Electronic Technology, Guilin University of Technology, Guangxi Medical University, Youjiang Medical University for Nationalities, Guangxi University of Chinese Medical, Guilin Medical University, Guangxi Normal University, Nanning Normal University, Guangxi Normal University for Nationalities, Hechi University, Yulin Normal University, Guangxi Arts University, Guangxi University for Nationalities, Baise University, Wuzhou University, Guangxi Science & Technology Normal University, Guangxi University of Finance and Economics, Beibu Gulf University, Guilin University of Aerospace Technology, Guilin Tourism University, Hezhou University, Guangxi Police College, and Guangxi Vocational Normal University. Data are collected from undergraduates and postgraduates in 25 public Higher Education Institutions offering degree programs and located in Guangxi Zhuang Autonomous Region.

An invitation letter is sent to managers of student affairs offices of 25 universities in Guangxi Zhuang Autonomous Region, asking them to help organize their undergraduates and postgraduates to fill out online questionnaires. To ensure that the survey is broad and representative, administrators of student affairs offices need to balance the proportion of their undergraduate students in terms of grade, gender, age and major to fill in the online questionnaire. The managers of student affairs offices of 25 public universities in Guangxi Zhuang Autonomous Region, offering degree programs, have distributed emails or Wechat to invite their undergraduates and postgraduates to complete a web-based survey. The website of the Web Survey Questionnaire or the QR code are given to their undergraduates and postgraduates by managers of student affairs offices in 25 public universities offering degree programs in Guangxi Zhuang Autonomous Region. Participants also received Web Survey Questionnaires, including instructions on how to complete the survey, a consent form, and items. The online survey was conducted in 25 public universities from Guangxi Zhuang Autonomous Region in April 2022 on a popular web site (www.wjx.cn). A total of 1,235 responses were received, 2 of which were dropped because they rated their agreement on each statement with the same scale. This yielded a sample size of 1,233.

In comparing age, the 1,193 samples are the ages from 18 to 25 years old, and the sample is underrepresented in 26-30 years old and over 31 years old. This is probably because it takes 16 years to graduate from primary school to university in Chinese education, when one person usually starts to go to school at the age of 6. The study focuses on the target participants of college graduates in 2022. It is reasonable that more than half of the samples are aged between 21 and 25. For genders, males and females account for 46.8% and 53.2% in the sample respectively, almost equal to the proportion of the population. For the sample information of 25 public universities, there are more than 50 participants from 20 public universities and over 36 participants from 5 public universities respectively. With regard to the provincial sample information, 1,081 participants come from Guangxi Zhuang Autonomous Region, and 152 participants are from other provinces.

As shown at Table 1, according to the official website of the Guangxi Provincial Department of Education, there are 25 public universities, which are classified into normal, medical, A and B universities. In terms of knowledge and ability of college students, it can be said that A universities are better than B Universities.

| Types of universities | Name of universities | Frequency | Percent |
|-----------------------|---|-----------|---------|
| | | | |
| Normal Universities | Guangxi Normal University, Nanning Normal University, Guangxi Normal | 295 | 23.9 |
| | University for Nationalities, | | |
| | Guangxi Science & Technology Normal University, Yulin Normal University, | | |
| | Guangxi Vocational Normal University. | | |
| | | | |
| Medical Universities | Guangxi Medical University, Guangxi University of Chinese Medical, Guilin | 216 | 17.5 |
| | Medical University, Youjiang Medical University for Nationalities. | | |
| | | | |

Table 1. Classification of 25 public universities in Guangxi Zhuang Autonomous Region

| A Universities | Guangxi University, Guilin University of Electronic Technology, Guangxi | 360 | 29.2 |
|----------------|--|------|-------|
| | University of Science and Technology, Guilin University of Technology, | | |
| | Guangxi University for Nationalities, Beibu Gulf University, Guangxi | | |
| | University of Finance and Economics. | | |
| B Universities | Guangxi Arts University, Baise University, Hechi University, Wuzhou | 362 | 29.4 |
| | University, Hezhou University, Guilin Tourism University, Guangxi Police | | |
| | College, Guilin University of Aerospace Technology. | | |
| Total | | 1233 | 100.0 |

Note: According to the official website of Education Department of Guangxi, there are 25 public universities, which are classified into normal, medical, A and B universities. In terms of knowledge and ability of college students, it can be said that A universities are better than B Universities.

4 Results

4.1 Difference on gender towards financial performance and life satisfaction

Table 2 indicates that there was not a significant difference between genders (Male versus Female) for the sampled university students in regard to their composite scores in financial value, financial aspiration, life choice, and life goal. However, there were significant differences between genders (Male versus Female) for the sampled university students in regard to their composite scores in financial knowledge [t(1148.384)=4.12, P<0.01], financial capability [t(1112.543)=2.63, P<0.01], stock investment intention [t(1152.841)=2.47, P<0.05], entrepreneurial intention [t(1136.406)=2.96, P<0.01], house-purchasing intention [t(1172.277)=2.09, P<0.05], financial satisfaction and comfort [t(1157.64)=2.92, P<0.01], financial security [t(1138.8)=2.69, P<0.01], and life attitude [t(1138.601)=3.3, P<0.01]. On average, male performed better than female. For financial knowledge because the mean difference (MD) was 0.154, d=0.24. For financial capability, because the mean difference (MD) was 0.106, d=0.15. For stock investment intention, because the mean difference (MD) was 0.136, d=0.004. For house-purchasing intention, the mean difference (MD) was 0.103, d=0.04. For financial satisfaction and comfort, because the mean difference (MD) was 0.131, d=0.15. For life attitude, because the mean difference (MD) was 0.131, d=0.15. For life attitude, because the mean difference (MD) was 0.131, d=0.15.

Table 2. Comparison of the effect of genders on financial knowledge, financial capability, financial value, stock investment intention, entrepreneurial intention, house-purchasing intention, financial satisfaction and comfort, etc.

| | Mean | S.D. | F | Sig. | t | df | Sig. | Mean | Std. Error | 95% Confidence | |
|----------------------|------|------|--------|-------|------|----------|------------|------------|------------|----------------|-------|
| | | | | | | | (2-tailed) | Difference | Difference | Interval of | f the |
| | | | | | | | | | | Difference | e |
| | | | | | | | | | | Lower | Upper |
| Financial Knowledge | | | 16.217 | 0 | 4.12 | 1148.384 | 0.000 | 0.154 | 0.037 | 0.081 | 0.228 |
| Male | 3.20 | 0.70 | | | | | | | | | |
| Female | 3.04 | 0.61 | | | | | | | | | |
| Financial Capability | | | 22.261 | 0 | 2.63 | 1112.543 | 0.009 | 0.106 | 0.040 | 0.027 | 0.184 |
| Male | 3.23 | 0.77 | | | | | | | | | |
| Female | 3.13 | 0.62 | | | | | | | | | |
| Financial Value | | | 4.469 | 0.035 | 0.53 | 1187.014 | 0.598 | 0.020 | 0.037 | -0.053 | 0.093 |
| Male | 3.64 | 0.67 | | | | | | | | | |

| Female | 3.62 | 0.63 | | | | | | | | | |
|----------------------|------|------|--------|-------|------|----------|-------|-------|-------|--------|-------|
| Stock Investment | | | 0.074 | 0.002 | 2.47 | 1152 941 | 0.014 | 0.126 | 0.055 | 0.028 | 0.244 |
| Intention | | | 9.074 | 0.003 | 2.47 | 1132.041 | 0.014 | 0.130 | 0.033 | 0.028 | 0.244 |
| Male | 2.52 | 1.02 | | | | | | | | | |
| Female | 2.38 | 0.89 | | | | | | | | | |
| Entrepreneurial | | | 2 75 | 0.052 | 2.06 | 1126 406 | 0.002 | 0.144 | 0.049 | 0.040 | 0.220 |
| Intention | | | 5.75 | 0.055 | 2.90 | 1130.400 | 0.005 | 0.144 | 0.048 | 0.049 | 0.239 |
| Male | 3.02 | 0.91 | | | | | | | | | |
| Female | 2.88 | 0.77 | | | | | | | | | |
| House-purchasing | | | 0.6 | 0.420 | 2.00 | 1172 277 | 0.027 | 0.102 | 0.040 | 0.006 | 0.100 |
| Intention | | | 0.0 | 0.439 | 2.09 | 11/2.2// | 0.037 | 0.105 | 0.049 | 0.000 | 0.199 |
| Male | 2.96 | 0.90 | | | | | | | | | |
| Female | 2.86 | 0.82 | | | | | | | | | |
| Financial | | | | | | | | | | | |
| Satisfaction and | | | 4.186 | 0.041 | 2.92 | 1157.64 | 0.004 | 0.139 | 0.047 | 0.045 | 0.232 |
| Comfort | | | | | | | | | | | |
| Male | 3.07 | 0.88 | | | | | | | | | |
| Female | 2.94 | 0.77 | | | | | | | | | |
| Financial Security | | | 11.443 | 0.001 | 2.69 | 1138.8 | 0.007 | 0.131 | 0.049 | 0.035 | 0.227 |
| Male | 3.09 | 0.91 | | | | | | | | | |
| Female | 2.96 | 0.78 | | | | | | | | | |
| Financial Aspiration | | | 12.976 | 0 | 0.80 | 1134.442 | 0.427 | 0.033 | 0.042 | -0.049 | 0.115 |
| Male | 3.36 | 0.79 | | | | | | | | | |
| Female | 3.33 | 0.67 | | | | | | | | | |
| Life Attitude | | | 2.201 | 0.138 | 3.30 | 1138.601 | 0.001 | 0.146 | 0.044 | 0.059 | 0.233 |
| Male | 3.03 | 0.83 | | | | | | | | | |
| Female | 2.88 | 0.71 | | | | | | | | | |
| Life Choice | | | 22.193 | 0 | 1.69 | 1107.75 | 0.092 | 0.069 | 0.041 | -0.011 | 0.149 |
| Male | 3.41 | 0.78 | | | | | | | | | |
| Female | 3.34 | 0.63 | | | | | | | | | |
| Life Goal | | | 12.98 | 0 | 0.20 | 1150.845 | 0.845 | 0.008 | 0.041 | -0.072 | 0.088 |
| Male | 3.80 | 0.76 | | | | | | | | | |
| Female | 3.79 | 0.66 | | | | | | | | | |

Table 3 indicates that there were significant differences between genders (Male versus Female) for the sampled university students in regard to their composite scores in financial literacy [t(1109.035)=2.89, P<0.01], investment behavioral intention [t(1134.455)=2.95, P<0.01], financial well-being [t(1122.181)=2.41, P<0.05], and life satisfaction [t(1091.815)=2.19, P<0.05]. For financial literacy, because the mean difference (MD) was 0.093, d=0.17. For investment behavioral intention, because the mean difference (MD) was 0.127, d=0.17. For financial well-being, because the mean difference (MD) was 0.074, d=0.13. In sum, it can be found that the effect size was small.

Table 3. Comparison of the effect of gender on financial literacy, investment behavioral intention, financial well-being, and

| | | | | | | | | | | 95% Co | onfidence |
|--------------------|------|------|--------|----------------------------------|-------|----------|------------|------------|------------|------------|-----------|
| | Mean | S.D. | F | F Sig. t df Sig. Mean Std. Error | | Interval | of the | | | | |
| | | | | | | | (2-tailed) | Difference | Difference | Difference | • |
| | | | | | | | | | | Lower | Upper |
| Financial Literacy | | | 23.656 | 0 | 2.886 | 1109.035 | 0.004 | 0.093 | 0.032 | 0.030 | 0.157 |
| Male | 3.36 | 0.62 | | | | | | | | | |
| Female | 3.26 | 0.50 | | | | | | | | | |
| Investment | | | | | | | | | | | |
| Behavioral | | | 5.994 | 0.014 | 2.947 | 1134.455 | 0.003 | 0.127 | 0.043 | 0.043 | 0.212 |
| Intention | | | | | | | | | | | |
| Male | 2.83 | 0.81 | | | | | | | | | |
| Female | 2.71 | 0.69 | | | | | | | | | |
| Financial | | | 16.062 | 0 | 2 414 | 1122 101 | 0.016 | 0.101 | 0.042 | 0.010 | 0.192 |
| Well-being | | | 10.902 | 0 | 2.414 | 1122.101 | 0.010 | 0.101 | 0.042 | 0.019 | 0.185 |
| Male | 3.18 | 0.79 | | | | | | | | | |
| Female | 3.07 | 0.66 | | | | | | | | | |
| Life Satisfaction | | | 18.679 | 0 | 2.199 | 1091.815 | 0.028 | 0.074 | 0.034 | 0.008 | 0.141 |
| Male | 3.41 | 0.65 | | | | | | | | | |
| Female | 3.34 | 0.52 | | | | | | | | | |

life satisfaction

4.2 Difference on types of universities towards financial performance and life satisfaction

One-way analysis was performed to identify the statistically significant differences comparing different university types in regard to financial literacy, investment behavioral intention, financial well-being, and life satisfaction.

Table 4 indicates that a statistically significant difference was found among four types of universities in regard to Chinese college students' composite scores on financial literacy [F(3,1229)=5.456, P=0.001], investment behavioral intention [F(3,1229)=3.025, P=0.029], financial well-being [F(3,1229)=3.434, P=0.016].

Table 5 indicates that the mean composite score on financial literacy is 3.24 for Normal Universities, 3.34 for Medical Universities, 3.39 for A Universities, and 3.26 for B Universities. Post hoc Tukey HSD Test from table 6 indicates that there was a significant difference between Normal Universities and A Universities (P < 0.01, d=0.28), in regard to financial literacy. Also, there was a significant difference between A Universities and B Universities (P < 0.01, d=0.23), in regard to financial literacy. Moreover, as showed at table 6, Post hoc Tukey HSD Test indicates that there was a significant difference between A Universities (P < 0.05, d=0.22) in regard to investment behavioral intention. There was a significant difference between A Universities and B Universities (P < 0.05, d=0.21) in regard to financial well-being. In sum, it can be found that the effect size was small.

Thus, It can be seen from Table 6 that the statistically significant differences were found among the four university types (Normal Universities, Medical Universities, A Universities, and B Universities) in regard to financial literacy, investment behavioral intention, financial well-being, and life satisfaction.

Table 4. One-way analysis of variance summary comparing different types of universities in regard to financial literacy, investment behavioral intention, financial well-being, and life satisfaction

| | | Sum of Squares | df | Mean Square | F | Sig. |
|-----------------------|----------------|----------------|------|-------------|-------|-------|
| Financial Literacy | Between Groups | 5.082 | 3 | 1.694 | 5.456 | .001 |
| | Within Groups | 381.626 | 1229 | 0.311 | | |
| Investment Behavioral | Between Groups | 5.102 | 3 | 1.701 | 3.025 | 0.029 |
| Intention | Within Groups | 690.922 | 1229 | 0.562 | | |
| Financial Well-being | Between Groups | 5.396 | 3 | 1.799 | 3.434 | 0.016 |
| | Within Groups | 643.658 | 1229 | 0.524 | | |
| Life Satisfaction | Between Groups | 2.272 | 3 | 0.757 | 2.219 | 0.084 |
| | Within Groups | 419.463 | 1229 | 0.341 | | |

 Table 5. Means and standard deviations comparing different types of universities in regard to financial literacy, investment

 behavioral intention, financial well-being, and life satisfaction

| | | N | Mean | SD |
|---------------------------------|----------------------|-----|------|------|
| Financial Literacy | Normal Universities | 295 | 3.24 | 0.52 |
| | Medical Universities | 216 | 3.34 | 0.62 |
| | A Universities | 360 | 3.39 | 0.56 |
| | B Universities | 362 | 3.26 | 0.55 |
| Investment Behavioral Intention | Normal Universities | 295 | 2.73 | 0.69 |
| | Medical Universities | 216 | 2.68 | 0.88 |
| | A Universities | 360 | 2.86 | 0.75 |
| | B Universities | 362 | 2.75 | 0.72 |
| Financial Well-being | Normal Universities | 295 | 3.08 | 0.68 |
| | Medical Universities | 216 | 3.10 | 0.81 |
| | A Universities | 360 | 3.22 | 0.74 |
| | B Universities | 362 | 3.07 | 0.68 |
| Life Satisfaction | Normal Universities | 295 | 3.32 | 0.58 |
| | Medical Universities | 216 | 3.39 | 0.66 |
| | A Universities | 360 | 3.42 | 0.59 |
| | B Universities | 362 | 3.35 | 0.53 |

| | | | | | | 95% Confide | nce Interval |
|------------|----------------------|----------------------|------------------|------------|-------|-------------|--------------|
| Dependent | | | Mean | | | Lower | Upper |
| Variable | (I) University Types | (J) University Types | Difference (I-J) | Std. Error | Sig. | Bound | Bound |
| Financial | Normal Universities | Medical Universities | -0.105 | 0.050 | 0.153 | -0.233 | 0.024 |
| Literacy | | A Universities | -0.156* | 0.044 | 0.002 | -0.268 | -0.043 |
| | | B Universities | -0.025 | 0.044 | 0.944 | -0.137 | 0.088 |
| | Medical Universities | Normal Universities | 0.105 | 0.050 | 0.153 | -0.024 | 0.233 |
| | | A Universities | -0.050 | 0.048 | 0.718 | -0.174 | 0.073 |
| | | B Universities | 0.080 | 0.048 | 0.335 | -0.043 | 0.204 |
| | A Universities | Normal Universities | 0.155* | 0.044 | 0.002 | 0.043 | 0.267 |
| | | Medical Universities | 0.050 | 0.048 | 0.718 | -0.073 | 0.174 |
| | | B Universities | 0.131* | 0.041 | 0.009 | 0.024 | 0.238 |
| | B Universities | Normal Universities | 0.024 | 0.044 | 0.944 | -0.088 | 0.137 |
| | | Medical Universities | -0.080 | 0.048 | 0.335 | -0.204 | 0.043 |
| | | A Universities | -0.131* | 0.041 | 0.009 | -0.238 | -0.024 |
| Investment | Normal Universities | Medical Universities | 0.045 | 0.067 | 0.906 | -0.127 | 0.218 |
| Behavioral | | A Universities | -0.130 | 0.059 | 0.119 | -0.282 | 0.021 |
| Intention | | B Universities | -0.021 | 0.059 | 0.983 | -0.173 | 0.130 |
| | Medical Universities | Normal Universities | -0.045 | 0.067 | 0.906 | -0.218 | 0.127 |
| | | A Universities | -0.176* | 0.065 | 0.033 | -0.342 | -0.010 |
| | | B Universities | -0.067 | 0.064 | 0.724 | -0.233 | 0.097 |
| | A Universities | Normal Universities | 0.130 | 0.059 | 0.119 | -0.021 | 0.282 |
| | | Medical Universities | 0.176* | 0.065 | 0.033 | 0.010 | 0.342 |
| | | B Universities | 0.109 | 0.0561 | 0.209 | -0.035 | 0.252 |
| | B Universities | Normal Universities | 0.021 | 0.059 | 0.983 | -0.124 | 0.173 |
| | | Medical Universities | 0.067 | 0.064 | 0.724 | -0.097 | 0.233 |
| | | A Universities | -0.109 | 0.056 | 0.209 | -0.252 | 0.035 |

 Table 6. Multiple comparisons about different university types in regard to financial literacy, investment behavioral intention, financial well-being, and life satisfaction

Note:^{*}. The mean difference is significant at the 0.05 level.

| | | | Maan | | | 95% Confid | ence Interval |
|--------------|----------------------|----------------------|------------------|------------|-------|------------|---------------|
| Dependent | (I) University Types | (J) University Types | Difference (L.I) | Std. Error | Sig. | Lower | Upper |
| Variable | | | Difference (1-3) | | | Bound | Bound |
| Financial | Normal Universities | Medical Universities | -0.026 | 0.065 | 0.978 | -0.193 | 0.141 |
| Well-being | | A Universities | -0.144 | 0.057 | 0.054 | -0.291 | 0.002 |
| | | B Universities | 0.012 | 0.057 | 0.997 | -0.134 | 0.158 |
| | Medical Universities | Normal Universities | 0.026 | 0.065 | 0.978 | -0.141 | 0.193 |
| | | A Universities | -0.118 | 0.062 | 0.229 | -0.279 | 0.042 |
| | | B Universities | 0.038 | 0.062 | 0.929 | -0.122 | 0.198 |
| | A Universities | Normal Universities | 0.144 | 0.057 | 0.054 | -0.002 | 0.291 |
| | | Medical Universities | 0.118 | 0.062 | 0.229 | -0.042 | 0.279 |
| | | B Universities | 0.156* | 0.054 | 0.02 | 0.018 | 0.295 |
| | B Universities | Normal Universities | -0.012 | 0.057 | 0.997 | -0.158 | 0.134 |
| | | Medical Universities | -0.038 | 0.062 | 0.929 | -0.198 | 0.122 |
| | | A Universities | -0.156* | 0.054 | 0.020 | -0.295 | -0.018 |
| Life | Normal Universities | Medical Universities | -0.072 | 0.052 | 0.511 | -0.207 | 0.062 |
| Satisfaction | | A Universities | -0.109 | 0.046 | 0.081 | -0.227 | 0.009 |
| | | B Universities | -0.029 | 0.046 | 0.927 | -0.146 | 0.090 |
| | Medical Universities | Normal Universities | 0.072 | 0.052 | 0.511 | -0.062 | 0.207 |
| | | A Universities | -0.037 | 0.050 | 0.883 | -0.166 | 0.092 |
| | | B Universities | 0.044 | 0.050 | 0.817 | -0.085 | 0.173 |
| | A Universities | Normal Universities | 0.109 | 0.046 | 0.081 | -0.009 | 0.227 |
| | | Medical Universities | 0.037 | 0.050 | 0.883 | -0.092 | 0.166 |
| | | B Universities | 0.081 | 0.043 | 0.244 | -0.031 | 0.193 |
| | B Universities | Normal Universities | 0.029 | 0.046 | 0.927 | -0.090 | 0.146 |
| | | Medical Universities | -0.044 | 0.050 | 0.817 | -0.173 | 0.085 |
| | | A Universities | -0.081 | 0.043 | 0.244 | -0.193 | 0.031 |

 Table 6. Multiple comparisons about different types of universities in regard to financial literacy, investment behavioral intention, financial well-being, and life satisfaction. (continued)

Note:^{*}. The mean difference is significant at the 0.05 level.

5 Conclusion and discussion

Independent samples T-test was conducted to identify significant differences between genders (Male versus Female) for the sampled university students in regard to their composite scores in financial knowledge, financial capability, stock investment intention, financial satisfaction and comfort, financial security, life attitudes, financial literacy, investment behavioral intention, financial well-being, and life satisfaction. The results of the post hoc analysis revealed that there was a significant difference between Normal Universities and A Universities in regard to financial literacy. Also, there was a significant difference between A Universities and B Universities in regard to financial literacy. Moreover, as showed at Table 6, Post hoc Tukey HSD Test indicates that there was a significant difference between A Universities and A Universities in regard to investment behavioral intention. There was a significant difference between A Universities and B Universities in regard to financial Universities and B Universities in regard to financial Universities and A Universities in regard to investment behavioral intention. There was a significant difference between A Universities and B Universities in regard to financial Universities and B Universities in regard to financial well-being. The impact of gender and socio-demographic factors on financial performance and life satisfaction in China is rarely studied. Thus, it seems essential to analyse differences of gender and

social-demographic factors on financial performance and life satisfaction in China. The study explores the differences of financial performance and life satisfaction in genders and universities' types. The result of this study supplements evidence from the sample of Chinese college students, that is, there are significant differences between genders and university types on financial performance and life satisfaction. It is found that there are significant differences among Chinese college students about genders and cognitive ability (university types). Thus, the finding extends the existing evidences regarding financial performance, which includes financial literacy, investment behavioral intention and financial well-being, and life satisfaction including financial satisfaction and comfort, financial security, life attitudes.

For universities, the cultivation of college students' financial literacy should be emphasized and incorporated into the daily teaching system. The universities should carry out systematic financial education activities to help college students establish correct wealth concept, master finance-related knowledge and improve financial management ability. Moreover, it is important to pay attention to the financial literacy education to pursuit life satisfaction. For government, the Chinese government should issue a systematic financial literacy education policy to play a leading role in guiding, strengthening and standardizing financial literacy education activities. The existing studies indicate that college students' financial literacy has significantly positive effects on investment behavioral intention, financial well-being and life satisfaction. Improving financial literacy is of great significance in the era of internet consumption finance. Financial performance will seriously affect people's yearning for a better life. Therefore, based on differences of financial performance and life satisfaction between genders and cognitive, Chinese government should actively promote the construction of legal norm system of Internet, and universities should guide college students to set up financial law consciousness, study financial laws and regulations, use laws and regulations to safeguard their own interests and regulate their own financial activities.

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Conflicts of interest

The author declares no conflicts of interest regarding the publication of this paper.

References

[1] Hu J, Quan L, Wu Y, et al. 2021. Financial self-efficacy and general life satisfaction: the sequential mediating role of high standards tendency and investment satisfaction. *Frontiers in Psychology*, 12:853.

DOI: 10.3389/FPSYG.2021.545508

[2] Huston SJ. 2010. Measuring financial literacy. Journal of Consumer Affairs, 44 (2):296-316.

[3] Remund DL. 2010. Financial literacy explicated: the case for a clearer definition in an increasingly complex economy. *Journal of Consumer Affairs*, 44(2):276-295.

[4] Xiao JJ. 2008. Applying behavior theories to financial behavior. *Handbook of Consumer Finance Research*: 69-81. Springer, New York.

[5] Gutter M, Copur Z. 2011. Financial behaviors and financial well-being of college students: evidence from a national survey. *Journal of Family and Economic Issues*, 32(4): 699-714. DOI: 10.1007/s10834-011-9255-2

[6] Xiao JJ, Sorhaindo B, Garman ET. 2006. Financial behavior of consumers in credit counseling. *International Journal of Consumer Studies*, 30(2):108–121. DOI: 10.1111/j.1470-6431.2005.00455.x

[7] Brüggen EC, Hogreve J, Holmlund M, et al. 2017. Financial well-being: A conceptualization and research agenda. *Journal of Business Research*,79:228-237. https://doi.org/10.1016/j.jbusres.2017.03.013

[8] Lu G, Song Y, Pan B. 2021. How university entrepreneurship support affects college students' entrepreneurial intentions: An empirical analysis from China. *Sustainability*,13(6): 3224. DOI: 10.3390/SU13063224

[9] Wang Y, Lei X, Long R, et al. 2020. Green credit, financial constraint, and capital investment: evidence from China's energy-intensive enterprises. *Environmental Management*, 66(6): 1059-1071.

[10] Chen C. 2019. Pension and health care: the impact of social insurance participation on social justice. *Journal of the Huazhong Agricultural University*, 02: 38-45,164-165.

[11]Li XW, Liu TZ., Liu X, et.al. 2018. A study on the relationship among community participation, protective behavior and socioeconomic status. *Chinese Journal of Safety Sciences*, 28(10):1-6.

[12]Bieda A, Hirschfeld G, Schönfeld P, et.al. 2019. Happiness, life satisfaction and positive mental health: Investigating reciprocal effects over four years in a Chinese student sample. *Journal of Research in Personality*, 78:198-209. https://doi.org/10.1016/j.jrp.2018.11.012

[13] Shim S, Xiao JJ, Barber BL, et.al. 2009. Pathways to life success: A conceptual model of financial well-being for young adults. *Journal of Applied Developmental Psychology*, 30(6):708-723. https://doi.org/10.1016/j.appdev.2009.02.003

[14] Douissa IB. 2019. Factors affecting college students' multidimensional financial literacy in the Middle East. *International Review of Economics Education*, 35:100173. https://doi.org/10.1016/j.iree.2019.100173

[15] Muñoz-Murillo M, Álvarez-Franco PB, Restrepo-Tobón DA. 2020. The role of cognitive abilities on financial literacy:New experimental evidence. *Journal of Behavioral and Experimental Economics*,84:101482. https://doi.org/10.1016/j.socec.2019.101482

[16] Lusardi A, Mitchell OS. 2011. Financial literacy and retirement planning in the United States. *Journal of Pension Economics & Finance*, 10(4):509-525. DOI: 10.1017/S147474721100045X

[17] Agarwal S, Gabaix X, Laibson D. 2009. The age of reason: financial decisions over the life-cycle with implications for regulation. *Brookings Papers on Economic Activity*, 2(1): 55-117. doi:10.1353/eca.0.0067

[18] Niu G, Zhou Y, Gan H. 2020. Financial literacy and retirement preparation in China. *Pacific-Basin Finance Journal*, 59: 101262. https://doi.org/10.1016/j.pacfin.2020.1012