Analysis on the Causes and Influence of College Students’ Occupational Gender Stereotypes

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Abstract. Based on the sampling survey data of ten universities in Wuhan, this study uses binary Logistic regression and Stereotypic Explanatory Bias (SEB) quantitative method to explore the influencing factors of college students’ occupational gender stereotypes and analyze the influence of college students’ occupational gender stereotypes on their employment choices from the point of occupational gender stereotype. The results show that: Wuhan college students have significant occupational gender stereotypes, but will consciously suppress external stereotypes; Occupational concept affects occupational gender stereotype; Occupational gender stereotype affects college students' career choice. Combined with the research results, the end of This study puts forward some suggestions to change the stereotype of college students' career gender and optimize the employment field. Respectively, colleges and universities set up relevant courses to correctly shape college students'view of occupation and gender; Mass media guide society to establish a correct occupation concept; The state and society strengthen the institutional building, introduce policies and regulations; The enterprise establish es fair, impartial and open employment and promotion systems, breaking down gender barriers in various industries and eliminating "hidden discrimination".

Keywords: Occupational Gender Stereotype; Graduates Employment; Employment Field Optimization.

1. Introduction

Employment is the greatest livelihood of the people, the foundation of social stability, and the key to development. As the main group of employed people in China, the employment of college students is closely related to social innovation and development, social harmony and stability, and is a social focus issue. Occupational gender stereotypes, as a major interference factor in college students' employment, have attracted attention from academia and society. Occupational gender stereotypes refer to the phenomenon that individuals classify occupations by rigid, fixed and over-simplified gender factors (Yang, Shi, & Guo, 2019), which not only deprives college students of potential career opportunities and affects their career planning and subsequent career development, but also has a negative impact on the development of various industries (Zhou & Zhang, 2018; Han, 2019; Lan, Liu, Cheng, Y.Lin, & B.Y. Lin, 2020).

For a long time, college students have been influenced by traditional concepts and gender stereotypes such as ‘Men and women are suitable for different occupations’ in the social environment, and have formed specific career expectations and requirements for different genders, which greatly limited their career choices., artificially reduce its employment opportunities. For example, most male college students only consider occupations labeled as "masculine work" such as engineers, but do not consider occupations labeled as "feminized work" such as nurses and kindergarten teachers; similarly, most female college students only consider secretaries and other occupations labeled as "feminized work", but do not consider occupations labeled as ""masculine work", which have greatly influenced their career development. According to the data, in 2016, female employees in electrician occupation accounted for 2%, and male employees in nurse occupation accounted for only 4%. Therefore, college students' occupational stereotypes not only affect the development of college students' personal careers, but also dislocate the job market and create an imperfect employment environment.

This paper is draw on previous research findings to further understand the factors influencing occupational gender stereotypes and to analyse the impact of occupational gender stereotypes on the employment choices of university students.
At present, academics have mainly explored the causes of occupational gender stereotypes in terms of external factors and subjective factors of college students. As far as external factors are concerned, the research believes that society, colleges and universities, family situation, and mother's gender role attitude (Jennifer, & Fiebig, 2003(2); Zheng, 2004; Zhou and Feng, 2013) are all factors that affect the occupational gender stereotypes of college students. As far as the main body of college students is concerned, the current research mainly focuses on the influence of five aspects of college students' gender, subject, major, educational level, and source of students on the occupational gender stereotype of college students. It is found that different subjects and different origins of college students have no significant impact on the occupational gender stereotypes of college students (Wang, 2010; Wang, 2019), but there are significant differences in occupational gender stereotypes among students of different genders and majors. Among them, male college students have stronger occupational gender stereotypes, and are more easily affected by occupational gender stereotypes, and are less likely to choose the so-called 'feminized work', while female college students are less affected by occupational gender stereotypes (Wang, 2010; Zuo, & Wen, 2011). In terms of majors, there are significant occupational gender stereotypes in science and technology, medicine and nursing specialities.(Zheng, 2004; Lu, 2017; Han, 2012). Among all the influencing factors, the educational level is the most controversial, and different scholars have drawn diametrically opposite research results. Liu believes that educational level has a significant impact on occupational gender stereotypes (Liu, 2006), while Wang believes that educational level is not related to occupational gender stereotypes (Wang, 2019).

This paper will absorb the previous research results, further understand the influencing factors of occupational gender stereotypes, and analyze the impact of occupational gender stereotypes of college students on their employment choices.

2. Research Methodology

2.1 Hypotheses

Hypothesis 1. Gender stereotypes of university students' careers are influenced by 8 factors: gender, Major type, school, Source of students, family income, whether they come from a single-parent family, family background, and the degree of parental influence on career choice.

Hypothesis 2. Gender stereotypes of college students' careers are influenced by college students' career perceptions.

Hypothesis 3. Gender stereotypes of university students' careers influence their choice of employers.

Hypothesis 4. Gender stereotypes of university students' careers influence their choice of employment industry.

Based on previous studies and personal observations, the author proposes the above hypothesis to explore the influencing factors of occupational gender stereotypes and the influence of occupational gender stereotypes on university students' choice of the industry and enterprise.

2.2 Concept Definition and Operationalization

2.2.1 Occupational Gender Stereotypes

This study defines occupational gender stereotype as "a concept that individuals rely on rigid, fixed and oversimplified gender factors to determine that different genders are suitable for different occupations" (Yang, Shi, & Guo, 2019). Occupational gender stereotypes are operationalized into three major aspects: Gender stereotypes of occupational positions, occupation type gender stereotypes, and occupation ability gender stereotypes. That is, this paper analyzes the occupational gender stereotypes of college students in whether the subjects think a certain occupation (such as miners, nurses, etc.) is only suitable for men or women; whether they think a certain type of work (such as service, technology) is more suitable for men or women.
2.2.2 Employment Unit

In this study, the enterprise are operationalized into government departments, utilities, and enterprise units.

2.2.3 Employment Industry

This study operationalizes industries into agriculture, industry, finance industry, and service industry.

2.3 Methods

2.3.1 Questionnaire

The questionnaire survey was carried out from September to October 2021. The survey first used a typical sampling method to select a total of 10 universities from 83 universities in Wuhan, including one university of Project 985, two universities of Project 211, seven private or provincial universities, one agricultural school, and one medical school. Then, by means of simple random sampling, a total of 272 fresh graduates were selected from these universities to fill in the questionnaires.

This paper used the binary logistic regression data analysis method. Eight factors are selected as independent variables: gender, major type, school, Source of students, family income, Whether from a single-parents family, family background, the degree of parental influence on career choice, and selected the dichotomous variable "Do you think some occupations are suitable for men and some occupations are suitable for women" as the dependent variable, carries out binary logistic regression analysis to explore the influencing factors of college students' occupational gender stereotypes; selected the dichotomous variable "Do you think some occupations are suitable for men and some occupations are suitable for women" as the dependent variable, respectively. Selected "enterprise units, institutions, government agencies, whether they tend to be employed in a certain type of unit" and "Industry, agriculture, service industry, financial industry and other fields, whether there is a preference for employment in a certain industry" as dependent variables, and carried out two Metalogistic regression analysis was used to explore the impact of college students' occupational gender stereotypes on the choice of different employment units and employment industries.

2.3.2 SEB Analysis Method

The Stereotypical Explanation Bias (SEB) questionnaire consists of 25 incomplete sentences, in which the subjects are required to complete according to their own ideas. In this study, eight female subjects, namely, "Zhang Jing, Zhang Min, Yu Fei, Li Hong, Wang Na, Qin Li, Zhang Feng, and Li Ying", and eight male subjects, namely, "Zhou Tao, Liu Jun, Li Ming, Zhang Yuan, Liu Peng, Wang Hu, Zhang Jian, and Wang Gang", were selected. The SEB questionnaire was developed by selecting four items that conformed to the male occupational stereotype and four items that did not conform to the male occupational gender stereotype, four items that conformed to the female occupational gender stereotype, and four items that did not conform to the female occupational gender stereotype. Fifty SEB questionnaires were distributed to senior students of Wuhan University of Technology to discuss and analyze the implicit occupational gender stereotypes of university students. The questionnaires were collected on the spot, and the database was created by double entry. spss24.0 was used for descriptive statistical analysis, Student’s t test, and chi-square test.

2.4 Theoretical Background

The theory of occupational gender segregation was first put forward by Edward Gross, which refers to the fact that "workers are assigned and concentrated in different occupational categories in the labor market because of their gender, and engage in different types of work" (Edward Gross, 1968). In the labor market, when the occupational distribution of different gender groups is quite different, we can say that there is occupational gender segregation. Occupational gender segregation not only leads to income inequality between men and women, but also has a great impact on many non-economic rewards, such as working conditions, job content, job promotion, and so on. Therefore,
the degree of occupational gender segregation has become a major indicator to measure the equality of men and women in the labor market.

This theory has important theoretical and practical guiding significance for this research. In this study, the researchers define the occupational gender stereotype of college students as "a concept that individuals rely on rigid, fixed and oversimplified gender factors to determine that different genders are suitable for different occupations". Thoughts influence actions, and the rigid, fixed, and oversimplified gender stereotypes of individuals will affect occupational choices, make gender differences in occupational distribution, artificially create occupational gender segregation, and have a negative impact on the labor market and employment field. Conversely, when the social occupational gender segregation is more serious, it will further deepen people's occupational gender stereotypes.

3. Date Analysis and Findings

3.1 Descriptive Analysis Results

The questionnaire was designed and data collected in terms of gender stereotypes of occupational positions and gender stereotypes of occupational categories.

3.1.1 Gender Stereotypes of Occupational Positions

| Variable name                                                                 | Number of valid cases | Variable definitions | Frequency | Effective percentage |
|-------------------------------------------------------------------------------|-----------------------|----------------------|-----------|----------------------|
| Do you think some occupations are suitable for men and some occupations are suitable for women | 282                   | 1=Yes                | 214       | 75.9                 |
|                                                                               |                       | 2=No                 | 68        | 24.1                 |

| Variable name                                                                 | Number of valid cases | Average value | Median |
|-------------------------------------------------------------------------------|-----------------------|---------------|--------|
| female college students work as miners after graduation                      | 282                   | 2.33          | 2.00   |
| male college students work as nurses after graduation                        | 282                   | 3.28          | 3.00   |
| male college students become seamen after graduation                         | 282                   | 3.75          | 4.00   |
| female college students will do preschool education after graduation         | 282                   | 3.80          | 4.00   |

The questionnaires were designed to test the respondents' opinions on "Do you think some occupations are suitable for men and some occupations are suitable for women", "Female college students to work as miners after graduation", "male college students to work as nurses after graduation", "male college students to become seamen after graduation" and "Female college students will do preschool education after graduation". The participants' overall responses to the statement "different genders correspond to different positions" and their responses to female college students
going to "feminized work", and male college students going to "feminized work", and male college students going to "masculine work", and female college students going to "masculine work", were used to explore the gender stereotypes of the subjects' occupational positions.

For the question "Do you think some occupations are suitable for men and some occupations are suitable for women", 214 subjects chose "yes", accounting for 75.9%. The above data show that most of the subjects believe that different genders are suitable for different occupational positions, that is, there are feminized occupations and masculine occupations in the subjects' perceptions, and the occupational distribution is divided and artificially segregated according to gender, which is a significant gender stereotype of occupations.

When confronted with the statement that "female college students work as miners after graduation", 94 subjects, accounting for 33.3%, chose the "1" option, i.e., "strongly disagree" option. 62 subjects chose the "2" option, i.e., "strongly disagree", accounting for 21.9%; 80 subjects chose the "3" option, i.e., "uncertain" option, accounting for 28.3%; 31 subjects chose the "4" option, i.e., "agree", accounting for 10.9%; Fifteen subjects, accounting for 5.3%, chose the option of "5", i.e., "strongly agree".

When confronted with the statement that "male college students work as nurses after graduation", 24 subjects chose the option "1", i.e., "strongly disagree", accounting for 8.5%; 35 subjects chose the "2", i.e., "strongly disagree", accounting for 12.4%; 107 subjects chose the "3" option, i.e., "uncertain" option, accounting for 37.9%; 70 subjects chose the "4", i.e., "agree", accounting for 24.8%; The number of subjects who chose the "5", i.e., "strongly agree", was 46, accounting for 16.3%.

When confronted with the statement that "male college students become seamen after graduation", 12 respondents chose the option "1" or "strongly disagree", accounting for 4.2%. 8 subjects, accounting for 2.8%, chose the "2" option, i.e., "strongly disagree" option; 87 subjects chose the "3" option, i.e., "uncertain" option, accounting for 30.8%; 107 subjects chose the "4" option, i.e., "agree" option, accounting for 37.9%; 68 subjects, accounting for 24.1%, chose the "5" option, i.e., "strongly agree" option.

When confronted with the statement that "Female college students will do preschool education after graduation", 14 respondents chose the option of "1", i.e., "strongly disagree", accounting for 4.9%; 7 subjects chose the "2", i.e., "strongly disagree", accounting for 2.4%; 75 subjects chose the "3" option, i.e., "uncertain" option, accounting for 26.5%; 112 subjects chose the "4", i.e., "agree", accounting for 39.7%; 74 subjects, accounting for 26.2%, chose the option of "5", i.e., "strongly agree".

From the analysis of the above data, it can be concluded that the majority of the subjects have an "opposition" or an uncertain attitude towards female or male jobs that do not match their gender, and some of the data were scattered and varied greatly among different subjects. For women or men to take up positions that match their gender, most of the subjects held an attitude of "agree", and the data distribution was more concentrated.

The above analysis shows that most of the subjects in the current occupational gender segregation more serious social context, women think hard to get into seamen, miners represented as "masculine work"; while men are difficult to enter preschool education nurses, which is represented as "feminized work"; two sexes within groups think there is biggish difference distribution of professional post and there are obvious occupational stereotypes.

### 3.1.2 Occupation Type Gender Stereotypes

| Variable name                          | Variable definitions                                    | Number of valid cases | Average value | Median |
|----------------------------------------|--------------------------------------------------------|-----------------------|---------------|--------|
| jobs with a large proportion of women, | Very disagree = 1, Disagree = 2, Not sure = 3, Agree = 4, Strongly Agree = 5 | 282                   | 3.32          | 3.00   |
| generally service oriented             |                                                        |                       |               |        |
| jobs with a large proportion of men,   | Very disagree = 1, Disagree = 2, Not sure = 3, Agree = 4, Strongly Agree = 5 | 282                   | 3.50          | 4.00   |
| generally technical oriented          |                                                        |                       |               |        |
The questionnaire set up two questions: "jobs with a large proportion of women, generally service oriented" and "jobs with a large proportion of men, generally technical oriented", to explore the stereotypes of the subjects' occupations.

When confronted with the statement "jobs with a large proportion of women, generally service oriented", 21 subjects chose the option of "1", i.e. "strongly disagree", accounting for 7.4%; 35 subjects chose "2", i.e. "strongly disagree", accounting for 12.4%; 100 subjects chose the "3" option, i.e., "uncertain" option, accounting for 35.4%; 85 subjects chose "4", i.e. "agree", accounting for 30.1%; 41 subjects, accounting for 14.5%, chose the "5" option, i.e. "strongly agree" option.

When confronted with the statement "jobs with a large proportion of men, generally technical oriented", 18 subjects chose the option "1", i.e. "strongly disagree", accounting for 6.3%; 22 subjects chose the "2" option, i.e. "strongly disagree" option, accounting for 7.8%; 97 subjects, accounting for 34.3%, chose "3" option, i.e. "uncertain" option; 90 subjects chose "4", i.e. "agree", accounting for 31.9%; 55 subjects, accounting for 19.5%, chose the option of "5", i.e. "strongly agree".

This shows that the subjects mostly believe that different types of jobs are suitable for different genders, and that they have different expectations about the types of occupations for each gender, and that occupations are artificially segregated, and that workers are assigned and concentrated in different occupational categories in the labour market and perform different types of jobs depending on their gender.

In summary, there were significant occupational gender stereotypes among the subjects.

3.2 Regression Analysis Results

3.2.1 Research on the Influencing Factors of Occupational Gender Stereotypes of College Students

| Variable type | Variable name                                      | salience | Exp(B) | Standard error |
|---------------|---------------------------------------------------|----------|--------|---------------|
| Independent variable1 | Gender                                           | 0.403    | 0.772  | 0.390         |
| Independent variable2 | Major type                                        | 0.38     | 0.901  | 0.119         |
| Independent variable3 | School                                            | 0.596    | 1.078  | 0.141         |
| Independent variable4 | Source of students                                | 0.373    | 0.915  | 0.009         |
| Independent variable5 | Family income                                     | 0.338    | 0.897  | 0.113         |
| Independent variable6 | Whether from a single-parents family              | 0.279    | 0.619  | 0.443         |
| Independent variable7 | Family background                                 | 0.848    | 1.018  | 0.095         |
| Independent variable8 | the degree of parental influence on career choice | 0.610    | 1.085  | 0.161         |
| Dependent variable | Do you think some occupations are suitable for men and some occupations are suitable for women | 0.040    | 5.365  | 0.816         |
| Cox Snell (R squares) |                                               | 0.021    |        |               |

In a binary logistic analysis, eight factors, namely gender, Major type, school, Source of students, family income, Whether from a single-parent family, family background, and the degree of parental influence on career choice, were examined in relation to the gender stereotype of university students' careers.
According to the analysis data, sig.=0.634>0.05, indicating that the added independent variable has no significant effect. And the significance of each independent variable is greater than 0.05, meaning that gender, major type, school, Source of students, family income, whether from a single-parent family, family background, and the degree of parental influence on career choice were not significant factors affecting the gender stereotype of college students.

3.2.2 Result of Regression Analysis on Performance of College Students' Occupational Gender Stereotypes

Table 5. Results of regression analysis on the performance of college students' occupational gender stereotypes

| Variable type     | Variable name                                      | Salience | Exp(B)  | Standard error |
|-------------------|----------------------------------------------------|----------|---------|----------------|
| Independent variable1 | female college students work as miners after graduation | 0.00     | 0.556   | 0.155          |
| Independent variable2 | male college students work as nurses after graduation | 0.641    | 1.091   | 0.187          |
| Independent variable3 | male college students become seamen after graduation | 0.503    | 0.850   | 0.242          |
| Independent variable4 | female college students will do preschool education after graduation | 0.013    | 1.701   | 0.214          |
| Independent variable5 | jobs with a large proportion of women, generally service oriented | 0.569    | 0.895   | 0.194          |
| Independent variable6 | jobs with a large proportion of men, generally technical oriented | 0.285    | 1.226   | 0.190          |
| Dependent variable | Do you think some occupations are suitable for men and some occupations are suitable for women | 0.372    | 1.840   | 0.683          |
| Cox Snell(R squares) |                                                    | 0.086    |         |                |

In the dichotomous logistic analysis, "female college students work as miners after graduation", "male college students work as nurses after graduation", "male college students become seamen after graduation", "Female college students will do preschool education after graduation", "jobs with a large proportion of females are generally service oriented", "jobs with a large proportion of males are generally technical oriented". The six independent variables were "Do you think some occupations are suitable for men and some occupations are suitable for women" as the dependent variables to explore the influence of students' career perceptions on the gender stereotypes of students' occupations.

According to the analysis of the data, sig.=0.000<0.05, it means that the independent variables added are significant and improve the overall model, i.e., the independent variables can better reflect the gender stereotypes of university students' careers. According to further analysis shows that, in addition to "Female college students work as miners after graduation", "Female college students will do preschool education after graduation", two topic, other questions are not through the test of significance, not through the test of significance of 5 topic is difficult to explain the occupational gender stereotypes of the choice of employment units.

However, the significance of "Female college students work as miners after graduation" is 0.000<0.05, which is more significant, and the significance of "Female college students will do preschool education after graduation" is 0.013<0.05, which is more significant. The Exp(B) of "Female college students work as miners after graduation" is 0.556, which means that the more subjects agree with the statement "Female college students work as miners after graduation", the more they can reflect their occupational gender stereotypes, The Exp(B) for the statement "Female college students will do preschool education after graduation" was 1.701, indicating that the more respondents agreed with the statement "Female college students will do preschool education after graduation", the more they could reflect their occupational gender stereotypes.
3.2.3 The Influence of Occupational Gender Stereotypes on the Choice of Employers

Table 6. The influence of occupational gender stereotypes on the choice of employers

| Variable type       | Variable name                                                                 | Salience | Exp(B)  | Standard error |
|---------------------|-------------------------------------------------------------------------------|----------|---------|----------------|
| Independent variable1 | Do you think some occupations are suitable for men and some occupations are suitable for women | 0.005 | 2.410 | 0.316          |
| Independent variable2 | female college students work as miners after graduation                        | 0.043 | 0.737 | 0.151          |
| Independent variable3 | male college students work as nurses after graduation                           | 0.069 | 1.369 | 0.173          |
| Independent variable4 | male college students become seamen after graduation                           | 0.060 | 1.531 | 0.226          |
| Independent variable5 | female college students will do preschool education after graduation           | 0.468 | 0.806 | 0.208          |
| Independent variable6 | jobs with a large proportion of women, generally service oriented              | 0.824 | 1.043 | 0.188          |
| Independent variable7 | jobs with a large proportion of men, generally technical oriented              | 0.507 | 0.883 | 0.188          |
| Dependent variable   | Enterprises, institutions, government agencies, whether they tend to be employed in a certain type of unit | 0.348 | 0.521 | 0.693          |

Cox Snell (R squares) 0.080

In the binary logistic analysis, set "Do you think some occupations are suitable for men and some occupations are suitable for women", "Female college students work as miners after graduation", "male college students work as nurses after graduation", and "male college students become seamen after graduation","Female college students will do preschool education after graduation", "jobs with a large proportion of women, generally service oriented", "jobs with a large proportion of men, generally technical oriented" 7 questions are independent variables, "Enterprises, institutions, government agencies, whether they tend to be employed in a certain type of unit" as the dependent variable, to explore the impact of college students' occupational gender stereotypes on the choice of employment units.

According to the analysis data, sig.=0.001<0.05, indicating that the added independent variable has a significant effect, that is, the occupational gender stereotype has a significant impact on the choice of employment unit.

According to further analysis, except for the two questions of "Do you think some occupations are suitable for men and some occupations are suitable for women" and "Female college students work as miners after graduation", all other questions have not passed the significance test, indicating that the five questions could not explain the influence of occupational gender stereotypes on the choice of employment units.

The significance of "Do you think some occupations are suitable for men and some occupations are suitable for women" is 0.005 < 0.05, which is more significant, and the Exp(B) is 2.410, indicating that subjects who agree that "some occupations are suitable for men and some occupations are suitable for women" is 2.410 times more likely than subjects who disagree that "some occupations are suitable for men and some occupations are suitable for women". The significance of "female university students work as miners after graduation" is 0.043 < 0.05, which is significant, and the Exp(B) is 0.737, which means that the more subjects agree with the statement "female university students work as miners after graduation", the more likely they were to choose a particular employment unit.
3.2.4 The Influence of Occupational Gender Stereotypes on the Choice of Employment Industry

Table 7. The influence of occupational gender stereotypes on the choice of employment industry

| Variable type   | Variable name                                                      | Salience | Exp(B)  | Standard error |
|-----------------|--------------------------------------------------------------------|----------|---------|----------------|
| Independent     | Do you think some occupations are suitable for men and some occupations are suitable for women | 0.001    | 3.042   | 0.334          |
| Independent     | female college students work as miners after graduation           | 0.302    | 1.139   | 0.126          |
| Independent     | male college students work as nurses after graduation             | 0.695    | 0.944   | 0.147          |
| Independent     | male college students become seamen after graduation              | 0.820    | 1.046   | 0.197          |
| Independent     | female college students will do preschool education after graduation | 0.981    | 1.004   | 0.180          |
| Independent     | jobs with a large proportion of women, generally service oriented  | 0.471    | 1.121   | 0.158          |
| Independent     | jobs with a large proportion of men, generally technical oriented  | 0.285    | 1.183   | 0.157          |
| Dependent       | Industry, agriculture, service industry, financial industry and other fields, whether there is a preference for employment in a certain industry | 0.001    | 0.082   | 0.725          |
| Cox Snell(R squares) |                                                                  | 0.066    |         |                |

In the binary logistic analysis, set "Do you think some occupations are suitable for men and some occupations are suitable for women", "Female college students work as miners after graduation", "male college students work as nurses after graduation", and "male college students become seamen after graduation", "Female college students will do preschool education after graduation", "jobs with a large proportion of women, generally service oriented", and "jobs with a large proportion of men, generally technical oriented" are independent variables, "Industry, agriculture, service industry, financial industry and other fields, whether there is a preference for employment in a certain industry" as the dependent variable, to explore the impact of college students' occupational gender stereotypes on employment industry choices, and explore the impact of college students' occupational gender stereotypes on employment industry choices.

According to the analysis data, sig.=0.008<0.05, indicating that the added independent variable has a significant effect and the overall model has a significant improvement, and the occupational gender stereotype has a significant impact on the choice of employment industry.

According to the analysis data, "Female college students work as miners after graduation", "male college students work as nurses after graduation", "male college students become seamen after graduation", and "jobs with a large proportion of women, generally service oriented" and "jobs with a large proportion of men, generally technical oriented" did not pass the significance test, indicating that these 6 questions are difficult to explain the impact of occupational gender stereotypes on employment industry choice.

Independent variable "Do you think some occupations are suitable for men and some occupations are suitable for women" and the dependent variable "Industry, agriculture, service industry, financial industry and other fields, whether there is a preference for employment in a certain industry", the significance is 0.001<0.05, which is very significant. And Exp(B) is 3.042, indicating that the subjects who agree that "some occupations are more suitable for men and some occupations are more suitable for women" are more likely to choose a certain industry, and is 3,042 times than the subjects who do not agree that "some occupations are more suitable for men, and Some are more suitable for women".

Data analysis shows that the occupational gender stereotype of the subjects significantly affects their choice of employment units and employment industries, affects the composition ratio of men
and women in a certain occupation, exacerbates the difference in occupational distribution within the male and female groups, and artificially creates occupational gender segregation. It is easy to cause more unbalanced inequality between the sexes in terms of income, working conditions, job content, job promotion, etc., and have a negative impact on the labor market and employment field.

In conclusion, the first hypothesis of the study does not hold, that is, the occupational gender stereotype of college students is not affected by 8 factors, including gender, major type, school, source of students, family income, whether from a single-parent family, family background, and the degree of parental influence on career choice. The second research hypothesis that the independent variables "Female college students work as miners after graduation" and "Female college students will do preschool education after graduation" are significantly related to the dependent variable "occupational gender stereotypes", that is, female college students work as miners after graduation" and "female college students will do preschool education after graduation" two conceptions have an impact on occupational gender stereotypes. And the relationship between the independent variables "do you think some occupations are suitable for men and some occupations are suitable for women" and "Female college students work as miners after graduation" and the dependent variable "enterprises, institutions, government agencies, whether tend to be employed in a certain type of unit" in the third hypothesis is established, that is, occupational gender stereotypes affect employment units Choice. The study hypothesizes that the relationship between the independent variable "Do you think some occupations are suitable for men and some occupations are suitable for women" and the dependent variable "Industry, agriculture, service industry, financial industry and other fields, whether there is a preference for employment in a certain industry" is established, that is, occupational gender stereotypes affect employment industry choice.

3.3 SEB Analysis Results

3.3.1 Seb Score

| Variable         | Number of cases | Score | T value(test value=0) | Salience(sig.) |
|------------------|-----------------|-------|-----------------------|----------------|
| Seb1(male)       | 50              | -8~4  | -4.905                | 0.000          |
| Seb2(female)     | 50              | -8~2  | -11.784               | 0.000          |

The seb questionnaire is designed and data collected from three aspects: gender stereotypes of occupational positions, Occupation type gender stereotypes, and occupation ability stereotypes. The overall participants' seb1 score was -8~4, and the seb2 score was -8~2. A single-sample t-test was performed on the two scores, and it was found that there was a significant difference between the seb1 and seb2 scores of the overall subjects and 0, indicating that the subjects had a significant occupational gender stereotype.

3.3.2 Seb Analysis under the Condition of Internal and External Attribution

| Attribution category | Number of cases | score | T value(test value=0) | Salience(sig.) |
|-----------------------|-----------------|-------|-----------------------|----------------|
| Male consistent attribution | 50              | 8~8   | 11.454                | 0.000          |
| Male inconsistent attribution | 50              | -1~5  | 7.829                 | 0.000          |
| Female consistent attribution | 50              | -2~8  | 11.130                | 0.000          |
| Female inconsistent attribution | 50              | -1~5  | 7.765                 | 0.000          |

The overall score of male consistent attribution was 8~8, the male inconsistent attribution score was -1~5, the female consistent attribution score was -2~8, and the female inconsistent attribution score was -1~5. A single-sample t-test was performed on the four scores, and it was found that the four scores were all significantly different from 0. The mean values of the four categories of scores are all positive, indicating that the subjects made more internal attributions to some male and female occupational behaviors, and the occupational gender stereotypes were significant.
According to SEB data analysis, it can be seen that the subjects have significant occupational gender stereotypes.

4. Discussion and Conclusion

4.1 Discussion

First of all, this study found that university students have significant career gender stereotypes, which is consistent with the results of existing studies. However, in terms of influencing factors, this study found that eight factors, namely gender, major type, school, source of students, family income, whether from a single-parent family, family background, and the degree of parental influence on career choice, which were originally considered to be more influential on occupational gender stereotypes, were not influencing factors on occupational gender stereotypes. This means that the gender and the family and school are not necessarily related to occupational gender stereotypes. However, the study found that the perceptions of "Female college students work as miners after graduation" and "Female college students will do preschool education after graduation", significantly influenced the occupational gender stereotypes, and this led the researcher to further consider Why these two statements, which are both female-oriented and state that female university students are in "masculine work" and female university students are in "feminized work" respectively, have an impact on university students' occupational gender stereotypes. In this era of prevalent media and online communities, is it possible that mass media and self-media at the macro level can have a more profound impact on the College students'occupational gender stereotypes? Have a more profound impact on students'world ideology, values, and outlook on life? The researcher believes that there is a need to further explore the factors influencing the gender stereotypes of university students.

Secondly, this study found that occupational gender stereotypes can affect college students' career choices and that subjects with occupational gender stereotypes are more inclined to choose their career sectors and employment units, and "construct gender barriers for themselves, so that they set limits for themselves in their career choices" (Zhou, 2018). This not only affects the career planning of college students but also creates a greater difference in the occupational distribution between male and female groups, artificially constructing occupational gender segregation barriers and exacerbating the difference between economic and non-economic returns in the job market between the two genders, which has a negative impact on the labor market and employment field.

In addition, there were unexpected results in this study: According to the data analysis - "the more women agree to work as miners after graduation, the more it reflects their occupational gender stereotypes" - this statement is actually quite different from our common conception. It is generally accepted that the one more disagrees with a female university student working as a miner after graduation, the more it reflects the gender stereotype of the profession. The reason for this, according to the researcher, is that some of the participants concealed their true thoughts when filling out the questionnaire, i.e. "conscious suppression of external stereotypes" (Hu, 2005). One participant responded privately after completing the questionnaire, "I am a computer science major, but I feel that you are investigating sexism", which suggests that although the questionnaire did not explicitly state the purpose of the questionnaire, some participants were aware of its relevance to gender issues when completing the questionnaire.

Usually, gender equality in employment is widely discussed as an important gender issue, and nowadays it is common to see "women do not lose to man", "the female auto mechanic", "the male nurse" and other related content on online platforms. More and more people are aware of the dangers of the "occupational gender segregation" barrier and are speaking out about the inequalities between the two genders in terms of working conditions and promotion post.

On this background, the idea that "employment should be gender-neutral" has gradually become a trendsetter, an important factor in determining whether a person's thinking is advanced or not, and a major indicator of whether a person is sexist or not. As a result, many subjects were particularly sensitive to the questionnaire's relevance to gender issues, and in order to maintain their inner image
of being "non-sexist" and "advanced-minded", they concealed their answers and did not fill them out according to their true intentions. Perhaps this is the reason why the respondents chose "yes" to the question "Do you think some occupations are suitable for men and some occupations are suitable for women ", an answer that reflects the gender stereotype of the respondents, while at the same time they chose "yes" to the question "Female college students work as miners after graduation", an answer that does not reflect their gender stereotype.

This is a new breakthrough in the study, and also provides experience and reference for future gender studies.

4.2 Conclusion

The following will put forward relevant policy recommendations based on the research summary and theoretical tools.

Research shows that many college students have gender stereotypes and will deliberately hide their occupational gender stereotypes. This phenomenon will not only affect the career choices of college students but also cause more "occupational segregation" in the labor market, which will have a negative impact on the employment field. The author believes that colleges, as an important factor affecting the values of college students, should set up relevant courses, and use group discussions, project-based learning, textbook analysis, literary and artistic works, and other methods to carry out "construction-reconstruction-deconstruction teaching" to guide the group of college students. Form the value concept of "male and female career choices should not be determined by biological sex, and both have equal employment rights, responsibilities and opportunities"; help students face their true thoughts instead of hiding them; help students establish the concept of gender equality and explore their own reason of "occupational gender stereotypes", understand the necessity and importance of changing one’s own cognitive system, break the shackles of occupational gender stereotypes, and rebuild a correct occupational and gender outlook.

The research shows that subjects' occupational concepts of "Female college students work as miners after graduation" and "Female college students will do preschool education after graduation" will significantly affect their occupational gender stereotypes. Why are these two sentences both taking female as the subject, respectively explaining that female college students engaged in "masculine work " and female college students engaged in "feminized work" will have an impact on the occupational gender stereotypes of college students. The author believes that this has a certain connection with the development of we media and mass media, but the fundamental reason is related to the current awakening of "female consciousness". Since modern times, women are no longer limited to the single status of "housewives", but shoulder the burden of family and career, take care of the family while entering the workplace, and bear bilateral pressure. However, due to the traditional stereotype that "women are not as good as men" and the rigid educational qualifications and other factors, occupational gender stereotypes of hidden has formed, and female groups are almost at the low end of various industry chains. For a long time, the experience of men has obscured the experience of women, and women lack the opportunity to express their own thoughts and needs and often are forced to keep silent. In recent years, with the increase of women's educational opportunities and the increase of highly educated women, more and more women are standing at the top of the industry chain, holding the right to express their demands and seeking changes. With the development of we media and mass media, each individual can speak for himself, share his own stories, and express his own opinions. Due to the influence of these two important factors, the discussion on gender workplace issues in today's society has been valued, especially the unfair issues of women's recruitment, salary treatment, and job promotion in the workplace often arouse intense discussions. Therefore, in the questionnaire filling, the Sentences that contain a female subject is more likely to attract the attention of the subjects and evoke the association of the content related to the occupational gender stereotype. The researchers believe that the mass media, as an important factor affecting college students in the new era, should pay attention to and objectively report men and women in different occupational positions and occupational types at the same time, so as to guide people to look
at the occupation itself objectively, rather than just focus on gender as a society, which help people weaken professional gender stereotypes and establish correct professional concepts.

Research shows that occupational gender stereotypes will make college students more inclined to choose employment industries and employers, which will easily evolve into occupational gender segregation in the long run. Therefore, the author suggests that the state and society should pay attention to the phenomenon of occupational gender segregation, strengthen system construction, introduce relevant policies and regulations, break down the barriers of gender access between various industries, measure and judge individual abilities with a unified standard, and promote equality of employment opportunities, rights, treatment, and promotion of employment between men and women. All sectors of society should also work together to promote gender equality in employment, and enterprises should establish a fair, just, and open employment system and promotion system to eliminate "hidden discrimination" and optimize employment fields.

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References

[1] Yang, Shi, & Guo. (2009). The influence of college students' gender roles and occupational gender stereotypes on career decision-making self-efficacy [J]. Education Journal of Renmin University of China, (01): 31-41.
[2] Sun. (2009). A Review of Research on Occupational Gender Stereotypes [J]. Science and Technology Information, (32):364.
[3] Zhou, & Zhang. (2019). The impact of gender stereotypes on the employment of college students: representation and response [J]. Education and Teaching Research, 2018, 32(08): 28-35+126.
[4] Han. (2019). A Review of Research on Occupational Gender Stereotypes in Education [J]. Vocational Education (late issue), 18(10): 63-70.
[5] Lan, Liu, Cheng, Y. Lin, B.Y. Lin, Wang, & Hu. (2020). Correlation between professional gender stereotypes and professional identity and career planning of male nurses [J]. China Nursing Management, 20 (04):553-557.
[6] Jennifer. (2003). Gifted American and German early adolescent girls: influences on career orientation and aspirations[J]. High Ability Studies, (2).
[7] Nie, & Zheng. (2004) Research on the personality characteristics and development status of middle school students [J]. Psychological Science, (04):1019-1022.
[8] Zhou, & Feng. (2013). An Analysis of the Formation of Occupational Gender Stereotypes [J]. China Adult Education, (24):77-78.
[9] Wang. (2010). Research on the relationship between occupational gender stereotypes and occupational interests of college students [D]. Shandong Normal University.
[10] Wang. (2019). A study on the correlation between implicit occupational gender stereotypes and professional identity in nursing boys [D]. Kunming Medical University.
[11] Wang. (2010). Research on the relationship between occupational gender stereotypes and occupational interests of college students [D]. Shandong Normal University.
[12] Zuo, & Wen. (2011). Occupational stereotypes: Self-involvement and evaluation bias [J]. Chinese Journal of Clinical Psychology, 19(02): 149-153.
[13] Zheng. (2004). "Occupational Stereotypes" and Analysis of the Reasons for the Difficulty in Employment of Female Science and Engineering College Students [J]. Journal of Wuhan University of Science and Technology (Social Science Edition), (01):61-64.
[14] Lu. (2017). Analysis and Research on the Psychological Status of Girls with Engineering Background in Higher Vocational Colleges--Taking the former School of Machinery and Materials of Tianjin Sino-
German Vocational and Technical College as an example [J]. Journal of Tianjin Sino-German University of Applied Sciences, (05):92-95.

[15] Han. (2012). Research on occupational gender stereotypes of medical students [D]. Xinxiang Medical College.

[16] Liu. (2006). An Experimental Research on Implicit Occupational Gender Stereotypes [D]. Hunan Normal University.

[17] Wang. (1968). A study on the correlation between implicit occupational gender stereotypes and professional identity in nursing students [D]. Kunming Medical University, 2019.

[18] Edward Gross. "Plus? a Change...? The Sexual Structure of Occupations over Time" [J]. Social Problems, 1968 (16): 198-208.

[19] Hu. (2005). Implicit Research on Occupational Gender Stereotypes of College Students. Psychological Science.