



Multivariate logistic regression analysis of the influencing factors of legal awareness under the viewpoint of ideological education

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SUMMARY: *Ideology and politics is an important discipline to cultivate students' legal awareness and rule of law thinking, which has a greater value of nurturing. In this paper, under the threshold of ideology and politics education, a questionnaire survey is conducted on the current situation of students' legal awareness and its influencing factors, and a multivariate logistic regression model is set up to investigate the influencing factors of students' legal awareness with the elements of ideology and politics education as the independent variable and the level of legal awareness as the dependent variable. At present, students' legal awareness is more general, students have certain legal knowledge, most of the related test questions are correct at more than 50%, but they still lack in legal application and legal psychology. The curriculum, teaching methods, teacher level and campus culture of Civic Education are positively correlated with the level of students' legal awareness, in which the curriculum and teaching methods have significant differences on the level of legal awareness of the investigated students with statistical significance ($p < 0.05$), and there are partially significant effects on the level of teachers and campus culture. In order to effectively cultivate students' legal awareness, schools should improve the curriculum and teaching methods of Civics and Political Science, strengthen the construction of faculty, and emphasize the construction of campus culture.*

KEYWORDS: *multiple logistic regression analysis; questionnaire survey; influencing factors; legal awareness*

1 Introduction

In recent years, with the integration of Internet technology and society, the student population has been exposed to the network environment at an earlier and earlier age, however, the network environment is mixed, coupled with the fact that students' ability to distinguish between right and wrong is still relatively weak, and it is easy to go astray [1]. According to the data of the 2024 Work Report of the Supreme People's Procuratorate, according to the principle of maximum education and probation, saving minors involved in crimes accounted for 68.1% of the total number of juvenile criminal suspects concluded by the procuratorial organs, and the decision to prosecute minors who committed more serious crimes amounted to 31,000 people, a year-on-year increase of 7.6% [2]. The data shows in an intuitive way that the juvenile crime rate has increased and is gradually showing a trend of lower age. Whether it is from the perspective of the climbing juvenile crime rate, or the age of crime generally presents a trend of underage level, can be found that the youth rule of law is not enough to understand, the concept of the rule of law is still weak and the rule of law consciousness is not

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strong and other problems are still prominent, which also reflects the side of the youth rule of law education still needs to be strengthened [3-6]. Students as the future builder of the country and an important participant in the rule of law society, pay attention to cultivate their learning the law, respect for the law, abide by the law, the use of consciousness, the youth group of the correct outlook on the world, outlook on life, the shaping of values has a pivotal and important significance [7].

With regard to the rule of law consciousness, it is widely recognized in the academic community that it refers to the rule of law consciousness of modern citizens, who are mainly civic consciousness, rule consciousness and constitutional consciousness [8]. The premise of studying the cultivation of rule of law consciousness is to understand scientifically and deeply grasp the connotation of rule of law consciousness. For example, Wang, J from the current situation of the rule of law consciousness of students in higher vocational colleges and universities, puts forward the rule of law consciousness cultivation model that is more adaptable to the psychological characteristics of contemporary higher vocational students [9]. Xu, S et al. found that college students' positive legal awareness can directly negatively predict aggressive behavior or indirectly have an effect through social alienation, while negative legal awareness not only directly positively predicts aggressive behavior, but also partially works through social alienation [10]. Husnutdinovna, A explored the intertwined picture of legal awareness and cultural integration among adolescents and revealed the complex interaction between legal knowledge, cultural influences and developmental strategies, the study found differences in the level of legal awareness among adolescents from different educational backgrounds and confirmed the positive association between legal awareness and confidence in legal institutions [11]. Actoty, E and Muratbaevna, K believe that legal awareness goes hand in hand with the rule of law behavior and sometimes even works independently of specific legal provisions; it can have a normative effect on the adjustment of social relations when there is a legal gap or the law allows discretion [12].

A reading of the literature reveals that current scholars generally think about the importance of cultivating students' awareness of the rule of law at the state, social, educational and individual levels [13]. For example, Bobanazarova, S and Nurmatov, B believe that an important goal at present is to continuously improve the level of legal awareness, legal culture literacy and rule of law education among citizens, and to enhance the interest of young people in the field of law, which reflects the strategic plan to comprehensively promote the rule of law and strengthen the rule of law education for all people, and to lay a solid foundation for the construction of a society governed by the rule of law and to ensure long-term peace and stability [14]. Wen, Z and Jiang, Y believe that counselors should have solid legal qualities, integrate rule of law thinking into daily student work and psychological counseling, and ensure that all behaviors are in accordance with legal norms, so as to guide students to establish correct concepts of the rule of law and to serve the overall situation of national modernization and national rejuvenation [15]. Regarding the influencing factors of rule of law awareness, Zeng, F et al. used online questionnaires and structural equation modeling and found that education, age and personal experience at the individual level, as well as media reports, peer support, school institutional norms and social factors (such as the development of socialist national politics) at the environmental level have a positive impact on the enhancement of their legal awareness [16].

Legal education is indispensable at both the individual and societal levels, and early legal education helps to “internalize” patterns of behavior and response, promoting conscious individual behavior in society and thus building a society based on the rule of law [17]. Danilewicz, W and Prymak, T pointed out that raising legal awareness is the basis for building a legal culture in society and improving the quality of life, and that the level of legal

awareness among adolescents is negatively correlated with the frequency of their violations of social and legal norms, i.e., the higher the level of legal awareness, the lower the rate of occurrence of specific problematic behaviors among this group [18]. Ma, S, on the other hand, discusses four aspects from the integration of multi-professional and multi-technology, online and offline synergistic interaction, the new dimension of counselor leadership, and the implementation of the responsibility system of legal literacy to help colleges and universities enhance the awareness of the rule of law among college students with the help of new media platforms, and shape them into qualified citizens with the concept of the rule of law [19].

Ideological and political education mainly cultivates students' ideology and value concepts, so that students consciously agree with national guidelines and policies, resolutely support the leadership of the Party, adhere to the guidance of Marxism, practice socialist core values, and grow up to be socialist successors with a sound personality [20]. The cultivation of legal awareness refers to making students consciously and actively respect the law, learn the law, abide by the law, and use the law through the dissemination of legal knowledge and explanation of legal cases, which is an inevitable requirement for the promotion of the construction of the socialist rule of law, and is an important goal of ideological and political education [21, 22]. Regarding the study of legal awareness in ideological and political education, He, Y and Pan, G, in response to the problem of heavy knowledge transmission and light awareness cultivation, especially the lack of faith in the rule of law, which exists in the current rule of law education in colleges and universities, put forward the reform paths of clarifying the positioning of ideological and political courses in the education of the rule of law, improving the teaching methods, and providing students with a practical environment of the rule of law in a bid to truly promote the internalization of the spirit of the rule of law into the students' firm beliefs [23]. Tjeppey, T, on the other hand, explored the influence of civic education on students' legal awareness, and found that students' civic education level and legal awareness level were both at a high level, and the statistical analysis confirmed that civic education had a significant positive influence on legal awareness, i.e., civic education effectively shapes students' values of complying with the school rules, and the degree of their understanding directly affects the compliance of students' behavior in school [24].

The study measures the level of students' legal awareness from three dimensions: legal knowledge, legal obedience and application, and legal psychology, and selects curriculum, teaching method, teacher level, and campus culture as the influencing factors of students' legal awareness in civic education, and designs a questionnaire on the current situation of students' legal awareness and its influencing factors. After analyzing the basic status of students' legal awareness, the method of multiple categorical variables is used to classify legal awareness into different levels and assign values to each influencing factor to establish a multiple logistic regression model. From this, the role of the selected course curriculum, teaching methods, faculty level and campus culture in influencing different levels of legal awareness is empirically analyzed.

2 Objects and methods

2.1 Questionnaire design

In order to analyze the influencing factors of students' legal awareness in the ideological and political education, the survey questionnaire was designed by ourselves. The questionnaire is divided into three parts: the basic situation of the survey respondents, the legal awareness test questions, and the situation of the relevant influencing factors, which contains single-choice questions, fill-in-the-blank questions, and matrix multiple-choice questions, of which the

matrix multiple-choice questions are all based on a Likert scale through a 5-level scoring method in order to rationally design the categorical variables.

The first part is the basic personal statistical information of the survey respondents, covering basic information such as gender, grade, and specialty.

The second part is the level of legal awareness of the survey respondents. The structure of legal awareness can be analyzed differently from different perspectives, and the structure of legal awareness can be observed from different perspectives in different combinations. The analysis of the current situation of the structure of students' legal awareness can more comprehensively grasp the current situation of college students' legal awareness, which can also reflect the quality of students' acceptance of legal education to a certain extent, because legal education in colleges and universities is the main way to cultivate students' legal awareness. When designing the questionnaire, this paper transforms some abstract theories into relatively specific questions to measure, refers to different views on the structure of legal awareness, adopts the relatively reasonable structure of the above theories, and makes some changes appropriately, and summarizes the test on the level of legal awareness into three parts, namely, legal knowledge, legal obedience and application, and legal psychology, among which there are 9 questions in the legal knowledge test, and 5 questions in the test on legal obedience and application and the test on legal psychology respectively. The legal knowledge test consists of 9 questions, the legal obedience and application test and the legal psychology test have 5 questions respectively.

The third part is a survey of the influencing factors of legal awareness. Ideological and political education has become a very important course in the education of young people, which contains a lot of legal knowledge, and its main purpose is to cultivate young people's legal awareness, not only to make them obey the law, but also to be able to use legal weapons to protect themselves. From the perspective of ideological and political education, this paper divides the influencing factors of legal awareness in ideological and political education into four dimensions: curriculum, teaching methods, teacher level and campus culture.

2.2 Overview of the investigation

In order to grasp the current situation of the legal awareness of college students in X University, this paper is conducted in the form of empirical investigation, and this investigation mainly adopts the way of distributing questionnaires. In this paper, a total of 300 questionnaires were randomly distributed to the students of X University, and 266 questionnaires were recovered, with a recovery rate of 88.67%. The following is the distribution of the interviewed students by grade, gender and specialty: 117 male students and 149 female students were interviewed. There were 113 freshmen, 86 sophomores and 67 juniors. The distribution of the interviewed students' majors was 33 majors such as electrical engineering and automation, test and measurement, and communication.

The results of the valid questionnaire were tested for reliability and validity to confirm whether this survey study has reliability and validity. In terms of the reliability test, the Cronbach's coefficient (α reliability coefficient) is the commonly used reliability coefficient at present, and analyzed by SPSS, the Cronbach's coefficient value of the variables involved in the questionnaire is 0.758, which is greater than 0.70, which can be seen that the research variables have a high level of confidence and a high degree of reliability. The questionnaire was analyzed by the "Cronbach coefficient" of SPSS software. The validity of the questionnaire was examined through the "factor analysis" function of SPSS software, and the KMO value of the questionnaire was 0.843, indicating high validity.

2.3 Model and Variable Selection

2.3.1 Multiple logistic regression models

Given that legal awareness and its influencing factors are multicategorical variables (variables categorized in more than two ways), they need to be analyzed using multiple logistic regression.

(1) Basic principles of the multiple logistic regression algorithm

The dependent variable y is a sub-type variable and the independent variable x is some factor that affects the dependent variable. However, since the dependent variable is a subtype variable and the relationship between the dependent variable and the independent variable is not linear, which seriously violates the assumption condition of linear regression analysis on the data, i.e., that there is a linear relationship between the independent variable and the dependent variable, the traditional method of linear regression analysis is unable to solve the problems like this one. In the field of mathematics, no such function can be found $y = f(x)$, where the corresponding dependent variable takes only a number of finite discrete values when the independent variable changes. Thus analyzing the problem to be studied from a different perspective, instead of looking directly for the relationship between the dependent variable and the independent variable, one looks for the probability of the dependent variable taking a certain value p in relation to the independent variable, which is equivalent to solving a continuous function $p = p(x)$ such that the value of the dependent variable is in the domain of values $[0,1]$ when the independent variable changes. Such functions are very common in mathematics, and the logistic regression algorithm studied in this project is one of the functions that satisfy the above requirements. The logistic regression modeling algorithm neatly avoids the problem of distribution of subtyped variables, and complements and refines some of the shortcomings of the linear regression model as well as the generalized linear regression model.

(2) Determination of logistic regression model variables and number of regression models

Logistic regression analysis requires the dependent variable to be a categorical variable, including ordinal and nominal variables. Regardless of the type of variable, it has to be transformed into a specific number to represent its value. The independent variables can be continuous numerical variables, sequential categorical variables, and nominal variables, where nominal variables need to be converted into dummy variables.

The number of values taken by the dependent variable determines the number of Logistic regression models to be trained. Since the logistic regression model describes the relationship between the probability p of y taking each value and x , there is a corresponding logistic model for each value of y . Also because the sum of the probabilities is equal to 1, the dependent variable of a K -valued variable only needs to train $K-1$ regression models. The Logistic regression model is given in the following equation:

$$p = p(y=1|x) = \frac{\exp(\alpha + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k)}{1 + \exp(\alpha + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k)} \quad (1)$$

The logit transformation (also known as log unit transformation) of the probability p for a logistic regression model is given in the following equation:

$$\log it(p) = \ln\left(\frac{p}{1-p}\right) \quad (2)$$

An alternative form of the logistic regression model is obtained, which gives a linear function of the variable $z = \log it(p)$ on the independent variable X :

$$\log it(p) = \ln\left(\frac{p}{1-p}\right) = \alpha + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k \quad (3)$$

Extension to a logistic regression model with multiple-valued variables is given in the following equation:

$$\log it(p_j) = \ln\left(\frac{p_j}{1-p_j}\right) = \alpha_j + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k \quad (4)$$

$P_j = p(y \leq j|x)$, which represents the cumulative probability of the dependent variable y taking the first j values. Where the cumulative probability function is given in the following equation:

$$p_j = p(y \leq j|x) = \begin{cases} \frac{\exp(\alpha_j + \beta x)}{1 + \exp(\alpha_j + \beta x)} & 1 \leq j \leq g-1 \\ 1 & j = g \end{cases} \quad (5)$$

Model I (Eq. 3) defines the probability p_1 of the dependent variable taking the first value in relation to the independent variable, and Model II (Eq. 4) defines the cumulative probability p_j of the dependent variable taking the first j values in relation to the independent variable. The constant terms in Models I and II are different (α vs. α_j), while the regression coefficients β are identical. When the dependent variable takes the first value, the probability $p(1) = p_1$. When the dependent variable takes the second value, the probability $p(2) = p_2 - p_1$. Since the probability sum is 1, the probability $p(3) = 1 - p_2$ when the dependent variable takes the third value. The above analysis shows that the above model is a family of several $(K-1)$ parallel lines with different intercepts and the same slope. It is important to note here that the multi-valued dependent variable Logistic regression modeling algorithm must be tested for parallelism in the training data.

(3) Parameter estimation

In the logistic regression algorithm studied in this topic, the regression coefficients are estimated using the maximum likelihood (ML) method. When estimating parameter values using the maximum likelihood method, the regression coefficients of the model are estimated using the repeated weighted least squares recursive method in order to obtain an unbiased estimate, and the maximum likelihood estimate is constantly revised.

The regression coefficient of the Logistic regression algorithm model is essentially a numerical measure of the magnitude of the effect of the independent variable on the dependent variable. However, because the units of the independent variables are not identical,

the estimate of the regression coefficients does not determine which independent variable has the greatest effect on the dependent variable. Therefore standardized regression coefficients are estimated for comparison. In the standard regression coefficient estimation results, the larger the absolute value of the standard regression coefficient, the larger the effect of its corresponding independent variable on the dependent variable.

(4) Model Test

The methods commonly used for the overall test of logistic regression model are:

1) AIC test. Used to compare different models derived from training under the same training dataset, with different numbers of independent variables counting as different models. The smaller the value obtained by this test, the more appropriate the trained model. The calculation formula is as follows:

$$AIC = -2\log(L) + 2(g + k) \quad (6)$$

2) SC test: similar to the AIC test. The formula is as follows:

$$SC = -2\log(L) + (g + k)\log(n) \quad (7)$$

3) Likelihood ratio test: used to test the joint effect of all independent variables (including constant terms) on the dependent variable. The formula is as follows:

$$G = -2\log(L) \quad (8)$$

4) Score test: used to test the joint effect of all independent variables (excluding the constant term) on the dependent variable.

The multiple logistic regression model in this paper can be implemented on Clementine 12.0. Multiple logistic regression models were built separately using legal awareness level as output variable, which resulted in the multiple logistic regression model parameter estimation table. Observe the significant level in the table, if the significant level $sig < 0.05$, it means that the variable is significantly related to the corresponding output variable option. The second step is to observe the dominance ratio (OR). The dominance ratio (OR) examines the ratio of the probability of occurrence and non-occurrence of a certain outcome, with the formula $OR = Exp(B)$, and the value of $Exp(B)$ represents the difference between the two output variable takes on the values taken by that independent variable.

2.3.2 Selection of variables

In order to rationally utilize the survey results and better explain the variables, this study adopts the method of multiple categorical variables to classify students' legal awareness level into three categories: good, average and poor. The influencing factors of legal awareness selected in this paper are curriculum, teaching method, teacher level and campus culture, and in order to carry out multiple logistic regression analysis, it is necessary to discretize the influencing factors, in which the largest serial number is the reference category, and the specific processing rules of the variables in this study are shown in Table 1. Curriculum is categorized as having or not covering legal knowledge, teaching method is categorized as traditional teaching method, case teaching method and project teaching method, teacher level is categorized as good, average and poor, and campus culture is categorized as having a cultural atmosphere of rule of law and having a cultural atmosphere of no rule of law.

Table 1: Discrete processing of variables

| Influencing factor | Type | Value specification |
|--------------------|---------------|--|
| Course setting | Discrete type | Covering legal knowledge=1, Uncovering legal knowledge=2 |
| Teaching method | Discrete type | Traditional teaching=1, Case teaching=2, Project teaching method=3 |
| Faculty level | Discrete type | Good=1, General=2, Bad=3 |
| Campus culture | Discrete type | Have=1, No=2 |

3 Findings and analysis of influencing factors

3.1 Basic state of legal awareness

3.1.1 Legal literacy

Legal knowledge is an important content of legal awareness, and also an important basis for measuring the level of legal awareness, therefore, this paper designed 9 questions (Q1~Q9) about legal knowledge to examine students' mastery of legal knowledge. Specifically, Q1 What is China's fundamental political system, Q2 What is China's legislature, Q3 The age at which one becomes a Chinese citizen, Q4 Are people deprived of their political rights according to the law still citizens of China, Q5 The minimum age of criminal responsibility under the criminal law, Q6 Whether people who are drunk are criminally responsible for committing a crime, Q7 What is the legal age of marriage under China's marriage regulations, Q8 The maximum length of the labor law's Q9 Who is liable for financial compensation if a married person commits suicide after intentional homicide.

The statistics of the “knowledge of law” section are shown in Figure 1, where ‘0’ and ‘1’ indicate the distribution of students who answered incorrectly and correctly, the same below. Two-thirds of the legal knowledge test questions have a correct rate of more than 50%, and students have mastered a certain amount of legal knowledge and have a certain legal foundation, but there are some problems: First, the correct rate of Q3 about civic knowledge is only 41.35%, and the civic awareness of most students is not high. Second, the correct rate of Q8 about Labor Law is only 30.08%, students do not know enough about Labor Law, a law that is closely related to their employment after graduation. Third, the deeper knowledge of criminal law is also not well grasped, only 27.82% in Q5 know the minimum age of criminal responsibility.

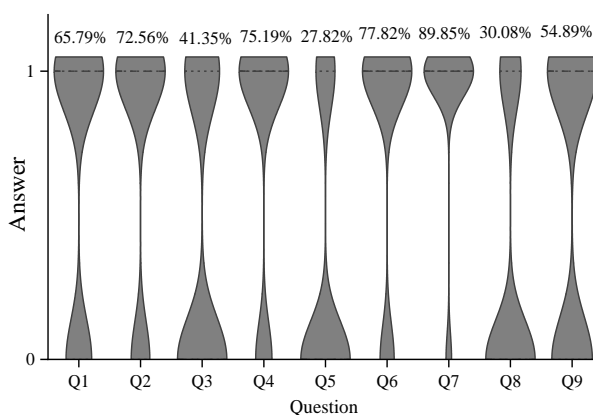


Figure 1: Statistics on the "legal knowledge" section

3.1.2 Compliance with and application of the law

Legal obedience refers to judging whether an act is illegal or criminal, as well as the interviewee's attitude towards the event and the behavior shown when he/she knows that the act is illegal or criminal, and legal application refers to the interviewee's attitude and the way to apply the law when he/she is faced with an illegal act that infringes on his/her legal rights, and so on. In this paper, five questions (Q10~Q14) were designed in the section of legal obedience and application: Q10 How to deal with the theft of goods, Q11 Whether to ask for an IOU when lending property to a friend, Q12 What would you do if your classmate's bicycle is stolen and then you also steal a bicycle, Q13 What would you do if a relative breaks the law, and Q14 What would you do if your legal rights and interests are infringed upon during your working life.

The statistics of the part of “Obedience and Application of Law” are shown in Figure 2. 42.86% of the students in Q11 were able to recognize the rights and obligations, and more than 77% of the students in Q12 and Q13 were able to show a positive side after knowing that their relatives or friends had committed a crime. For the damage of their legal rights, 66.54% of students in Q14 chose to take legal weapons to defend their rights. However, only 36.09% of students chose to report the crime to the public security authorities in the Q10 question and answer of items being stolen.

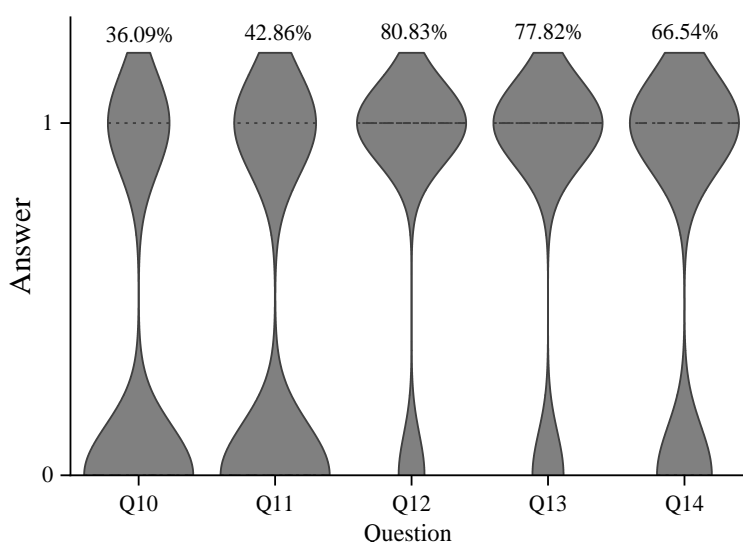


Figure 2: Statistics on the "legal obedience and application" section

3.1.3 Legal psychological situation

Legal psychology is people's feelings, emotions, desires and demands for law based on their own interest needs and experiences, and it is the perceptual stage of legal consciousness. In this paper, five questions (Q15~Q19) were designed in the legal psychology part of the questionnaire: Q15 The relationship between power and law in China, Q16 The essential attributes of law, Q17 Attitude towards public, prosecution and law, Q18 Do you think the law can protect your own interests, and Q19 Do you think that criminal defendants should be defended by lawyers.

The statistics of the “legal psychology” section are shown in Figure 3. Most of the students have a negative attitude towards the law because only 45.11% of the students in Q15 think that the law is greater than power, and only 13.16% of the students in Q16 think that the law represents the interests of the general public, and similarly, only 38.35% of the students in Q18 have confidence in the law, but 71.80% of the students in Q17 believe in law

enforcement agencies.

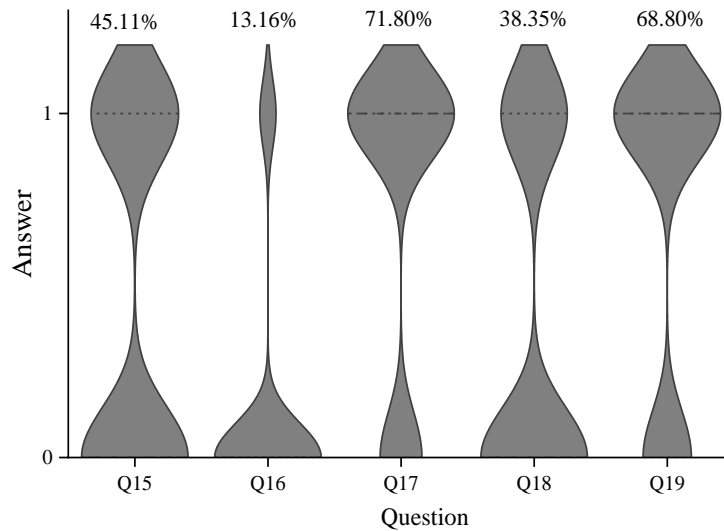


Figure 3: Statistics on the "legal psychology" section

3.2 Analysis of Impact Factors

After building and running the multiple logistic regression model of the factors influencing legal awareness, the results of the model run were obtained. The fit information test of the model can determine the validity of the multiple logistic regression model established in this study. In the likelihood ratio test of the model, the significance level sig value is 0.000, which is less than 0.05, indicating that the model is overall valid and the fitting effect is ideal. Next, the regression analysis of individual factors can be carried out.

3.2.1 Impact of the curriculum

Table 2 shows the multivariate logistic regression of curriculum on legal awareness. From the significant level columns and the dominance ratio, it can be seen that, in general, the effect of whether or not legal knowledge is covered in the Civic Education curriculum on students' legal awareness is very significant, and the sig value is less than 0.05, which means that the level of students' legal awareness is higher under the Civic Education curriculum that covers legal knowledge.

Observing the advantage ratio, it is found that the advantage ratio is the highest good legal awareness. That is, compared to the curriculum setting that does not cover legal knowledge, students in the curriculum covering legal knowledge are 2.094 times more likely to have a good level of legal awareness than no legal awareness, followed by an average level of legal awareness at 1.541 times. Then comes the poor level of legal awareness at 1.074 times. Overall, the likelihood of students having a good level of legal awareness is higher than the likelihood of having an average level of legal awareness under the Civic Education curriculum covering legal knowledge.

Table 2: The multivariate logical regression of the course setting factor

| Legal consciousness level ^a | | B | SE | Wald | df | Sig. | Exp (B) |
|--|----------------------------|----------------|-------|--------|----|-------|---------|
| Good legal consciousness | Covering legal knowledge | 0.844 | 0.254 | 2.035 | 1 | 0.001 | 2.094 |
| | Uncovering legal knowledge | 0 ^b | - | - | 0 | - | - |
| General legal consciousness | Covering legal knowledge | 0.548 | 0.196 | 16.363 | 1 | 0.002 | 1.541 |
| | Uncovering legal knowledge | 0 ^b | - | - | 0 | - | - |
| Bad legal consciousness | Covering legal knowledge | 0.268 | 0.141 | 21.856 | 1 | 0.005 | 1.074 |
| | Uncovering legal knowledge | 0 ^b | - | - | 0 | - | - |
| a: The reference category is: no legal consciousness. b: Because this parameter is redundant, it is set to 0. | | | | | | | |

3.2.2 Impact of teaching methods

Table 3 shows the multiple logistic regression of teaching methods on legal awareness. Overall, the effect of the type of teaching method on students' legal awareness is very significant ($p < 0.05$), and different types of teaching methods affect different levels of legal awareness to varying degrees.

Compared with the traditional professor method, the probability of students having good legal awareness in the case teaching method is 2.691 times higher than that of no legal awareness, the probability of students having average legal awareness is 2.388 times higher than that of no legal awareness, and the probability of students having poor legal awareness is 2.039 times higher than that of no legal awareness. Compared with the traditional teaching method, the probability of students having good, average, and poor legal awareness in the project teaching method is 1.592, 1.279, and 0.956 times higher than that of no legal awareness, respectively.

To summarize, the probability of students having a good level of legal awareness is higher under the case teaching method and project teaching method of teaching.

Table 3: The multivariate logical regression of the teaching method factor

| Legal consciousness level ^a | | B | SE | Wald | df | Sig. | Exp (B) |
|--|----------------------|----------------|-------|--------|----|-------|---------|
| Good legal consciousness | Case teaching | 0.262 | 0.209 | 0.447 | 1 | 0.021 | 2.691 |
| | Project teaching | 0.182 | 0.286 | 1.491 | 1 | 0.019 | 1.592 |
| | Traditional teaching | 0 ^b | - | - | 0 | - | - |
| General legal consciousness | Case teaching | 0.224 | 0.184 | 0.881 | 1 | 0.036 | 2.388 |
| | Project teaching | 0.155 | 0.191 | 1.451 | 1 | 0.027 | 1.279 |
| | Traditional teaching | 0 ^b | - | - | 0 | - | - |
| Bad legal consciousness | Case teaching | 0.195 | 0.204 | 10.738 | 1 | 0.031 | 2.039 |
| | Project teaching | 0.113 | 0.218 | 0.764 | 1 | 0.022 | 0.956 |
| | Traditional teaching | 0 ^b | - | - | 0 | - | - |
| a: The reference category is: no legal consciousness. b: Because this parameter is redundant, it is set to 0. | | | | | | | |

3.2.3 Impact of the level of teacher qualifications

The multivariate logistic regression of teacher level on legal awareness is shown in Table 4. The effect of faculty level on students' legal awareness is not significant and only has an effect when the faculty level is good ($p < 0.05$). Students are 2.048 times more likely to have

good legal awareness than no legal awareness when the level of faculty is good compared to poor level of faculty. When the level of faculty is average, the likelihood of students' legal awareness being good is 0.308 times that of no legal awareness. The better the level of teachers in Civic Education, the higher the likelihood that students have a good level of legal awareness.

Table 4: The multivariate logical regression of the faculty level factor

| Legal consciousness level ^a | | B | SE | Wald | df | Sig. | Exp (B) |
|--|---------|----------------|-------|-------|----|-------|---------|
| Good legal consciousness | Good | 1.286 | 0.728 | 2.291 | 1 | 0.022 | 2.048 |
| | General | 0.811 | 0.498 | 5.987 | 1 | 0.613 | 0.308 |
| | Bad | 0 ^b | - | - | 0 | - | - |
| General legal consciousness | Good | 0.993 | 0.566 | 2.134 | 1 | 0.039 | 1.879 |
| | General | 0.578 | 0.296 | 0.985 | 1 | 0.759 | 0.232 |
| | Bad | 0 ^b | - | - | 0 | - | - |
| Bad legal consciousness | Good | 0.574 | 0.749 | 1.428 | 1 | 0.035 | 1.329 |
| | General | 0.213 | 0.293 | 1.206 | 1 | 0.645 | 0.148 |
| | Bad | 0 ^b | - | - | 0 | - | - |
| a: The reference category is: no legal consciousness. b: Because this parameter is redundant, it is set to 0. | | | | | | | |

3.2.4 Impact of campus culture

The multiple logistic regression of campus culture on legal awareness is shown in Table 5. Overall, the effect of campus culture on students' legal awareness is not significant ($p > 0.05$), but having a rule of law cultural atmosphere is significant for students' general level of legal awareness ($p = 0.029$).

Compared with no rule of law campus culture, with rule of law campus culture, the likelihood of students having good legal awareness is 1.411 times higher than that of no legal awareness, the likelihood of students having general legal awareness is 2.176 times higher than that of no legal awareness, and the likelihood of students having poor legal awareness is 1.567 times higher than that of no legal awareness. Therefore, having a campus culture of the rule of law, students are likely to be more legally aware.

Table 5: The multivariate logical regression of the campus culture factor

| Legal consciousness level ^a | | B | SE | Wald | df | Sig. | Exp (B) |
|--|------|----------------|-------|--------|----|-------|---------|
| Good legal consciousness | Have | 0.327 | 0.272 | 2.972 | 1 | 0.356 | 1.411 |
| | No | 0 ^b | - | - | 0 | - | - |
| General legal consciousness | Have | 0.453 | 0.263 | 31.968 | 1 | 0.029 | 2.176 |
| | No | 0 ^b | - | - | 0 | - | - |
| Bad legal consciousness | Have | 0.196 | 0.212 | 22.359 | 1 | 0.435 | 1.567 |
| | No | 0 ^b | - | - | 0 | - | - |
| a: The reference category is: no legal consciousness. b: Because this parameter is redundant, it is set to 0. | | | | | | | |

4 Conclusion

Rule of law awareness is a basic ideological and political quality and an important part of students' comprehensive literacy. In this paper, the current situation of students' legal

awareness is investigated, and multiple logistic regression analysis method is used to analyze the influencing factors of legal awareness in ideological and political education. It is found that most of the legal knowledge test questions are more than 50% correct, and although students have mastered a certain amount of legal knowledge, there are certain problems with their ability to apply the law and their legal psychology, and only 38.35% of the students have confidence in the law. Regarding the influencing factors of legal awareness, the influence of curriculum and teaching methods on the level of legal awareness is significant, with sig values less than 0.05. Good teacher level has a significant influence on students' legal awareness, and campus culture has a significant influence on students' general legal awareness. In the Civic Education, the better the development of curriculum, teaching methods, teacher level and campus culture, the higher the level of students' legal awareness. The study suggests that schools should optimize the curriculum and teaching methods of Civic and Political Education, strengthen the development of faculty, and focus on the development of campus culture as a way to provide a solid guarantee for the development of legal awareness.

About the Author

Juan Xi, a faculty member at Linyi Vocational College, holds a Master of Laws degree from Ocean University of China. Her teaching portfolio includes courses such as National Security Education, Civil Code, and Marriage and Family Law. Specializing in ideological and legal studies, she has published multiple papers in national-level academic journals and contributed as a co-author to the book *A History of the Dissemination of Yimeng Spirit*. She has participated in several research projects in Linyi City and led the 2023 Linyi Association for Science and Technology project, titled *Research on High-Quality Development Pathways and Strategies for Linyi's New Energy Vehicle Industry*, which received the Outstanding Achievement Second Prize. Additionally, she has been recognized multiple times as an Outstanding Communist Party Member by her institution.

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