Introduction. As China enters the aging population society, there is a higher demand for the quantity and quality of elderly care services, and further triggers the continuous demand for elderly care service talents in China. Some Chinese higher vocational colleges have set up majors in elderly care service management, and continuously transfer students to elderly care service institutions, but the mobility is still relatively high by survey. In this case, analyzing the factors affecting interns’ retention has become a major issue.

Study participants and methods. Students who majored in elderly care services at a local higher vocational college in Wenzhou, China, and had internship experience in nursing institutions were chosen as the study's subjects. Students must complete an 8-month internship program, which includes a post-internship and a graduation internship. Non-probability sampling was utilized to extract the sample. For the questionnaire survey on internship duration, 100 higher vocational graduate students majoring in elderly care services were chosen, and 15 interns were chosen for interviews, and then they were analyzed using a qualitative comparative analysis method (QCA).

Results. The analysis results for QCA: The personal psychological capital of the interns was the first core factor in any case. At the same time, even if there was no family support and high workload factors, the interns could stay as long as they can get a satisfactory internship salary and satisfactory accommodation & diet; Or even if there was no satisfactory internship salary and satisfactory accommodation & diet factors, as long as they had family support and low workload design, interns also could stay. While according to the data survey, 67% of students did not finish their internships, and 37% of those students departed their positions before the mandatory four months had passed. This is sufficient evidence that internship retention rates are quite poor among higher vocational students in China who major in senior care services.

Practical significance. Good psychological capital, family support, and a moderate workload were all necessary for the internship to be successful. The internship requires an environment that cater the full supports intern. The ministry human resource management, needs to play a significant role in enforcing the policy to monitor the system that supports the internship process, ensuring that the business community is informed about internship-related concerns, and support the internship support system.

Keywords: Higher vocational colleges, Internship, Retention, Elderly care service, Pension industry, QCA
INTRODUCTION

UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training (TVET) in achieving TVET for apprenticeship training, vocational education, technical education, technical-vocational education (TVE), occupational education (OE), vocational education and training (VET), career and technical education (CTE), workforce education (WE) and workplace education (WE). The Chinese government is currently exploring options to establish a National Qualifications Framework (NQF).

In 1993, China adopted the National Vocational Qualification (NVQ) system, which is overseen by the Ministry of Human Resources and Social Security. According to the population forecast report of China in 2023, the population over 65 years old accounted for 14.2% in 2021, entering the deep aging society; the proportion of the population over 65 years old further increased to 14.9% in 2022 [1]. The report also presented us with data on some specific development trends, such as the aging degree of the population is increasing, with the proportion of the elderly population accounting for 26.3%, ranking first in the world. In this aging process, the proportion of over 80 years old has exceeded 10%, and will reach 14.4% in 2025. In this context, this brings double pressure to China’s social and economic development and the pension burden of many families. According to the proportion of internationally recognized three elderly people who need a professional care service talent, the demand for talent is about 10 million in future, and the supply and demand are in a serious imbalance [2]. In order to solve the contradiction between supply and demand of talents, many higher vocational colleges in China have opened related majors to meet the needs of the pension industry. At present, there are only more than 200 higher vocational colleges in China, and the number of students in some colleges with small scale is very few, which cannot meet the social needs of the pension industry in China [3]. Moreover, the turnover rate of elderly care service graduates of higher vocational college is huge, which further causes the lack of talents in this industry. For this point, the relevant reports also give evidence, China Philanthropist [4] report, a care service and management teacher of Beijing Labor and Security Vocational College has conducted a follow-up survey, that the loss of students in related majors in Beijing from the elderly care industry, mainly within three years of graduation, and the loss rate is about 70% [5]. Additionally, a Chinese researcher conducted a survey on the retention rate of 461 graduates majoring in the elder care service, found that a total of 229 students stayed in the industry, with a retention rate of 50.55% and a turnover rate reaching 49.45% [6]. It can be seen from the above that the social and academe are very concerned about the issue of graduates’ retention majoring in elderly care service major. In fact, the student turnover rate not only occurs in the post-graduation stage, but also occurs in the internship process, just as a Chinese scholar Qian et al. [7] stated, in the process of internship, some students cannot insist, leave their internship without authorization and frequently, which directly affects the normal operation of institutions, leads to low satisfaction of institutions, and brings a certain impact on the colleges-institutions cooperation to cultivate talents. If students leave the internship, it will not only affect the education quality of students majoring in elderly care service, but also affect the improvement of students’ personal skills and their future career development. Many scholars have argued the internship’s benefits to students such as D’Abate et al. [8], Tse [9], Kipreos and Dimitropoulos [10], Chen et al. [11], Gourgiotou [12] all proposed
that internship is the link of theoretical learning and educational practice, it will enhance students’ skills and adaptability to job, promote students’ employment ability and have a preparation of future careers for students. Similarly, Chinese educational researchers have launched a series of studies on the internship field of higher vocational colleges in China, such as Pan et al. [13] mentioned internship is the key link of education and teaching in higher vocational colleges, and its management quality has an important influence on the quality of talent training in higher vocational colleges. Based on this, it is necessary for us to pay attention to the retention problem of interns majoring in elderly care service of higher vocational colleges in China. Research into this topic, a researcher has given similar answers, but the analysis of the retention rate and the retention’s factors is not targeted. For example, the large mobility of pension-related professionals and the turnover rate are high, and the reasons are mainly caused by the low salary and social status in the pension industry, and the relatively large work intensity [3]. So, this is definitely a virgin land to be developed for this study. Accordingly, the objectives of this study are going to examine the retention rate of interns majoring in elderly service care in Chinese higher vocational colleges in the internship process, to examine the main factors of interns’ retention and corresponding countermeasures. Ultimately, the research can attract the attention of colleges and institutions, and corresponding measures are put forward based on factors’ analysis to improve the retention’s willingness of interns majoring in elderly care service, promote the development of personal professional skills and career development, and strengthen the construction of China’s pension talent team, so as to alleviate the contradiction between supply and demand of pension talents.

LITERATURE REVIEW

The retention rate of interns is determined by their personal willingness to stay, and the higher the willingness to stay, the higher the retention rate. The willingness to stay is the willingness of the individual to continue to work in the relevant professional field without looking for other job opportunities [14; 15]. Many previous academic literatures contain the variables affecting retention, which basically exist in human resource management, education, social work, etc., but the variables studied entirely on the topic of this study are almost absent, which can also be said to be a research gap in this study. Therefore, this study will be based on these literature references to obtain the main variables of the paper.

There has been early research in the field of human resources such as an empirical study of knowledge workers by Sutherland and Jordaan [16], that the components of job satisfaction most related to the intention to resign is the opportunity for promotion and the nature of the work performed. It is clear that the indirect factors associated with individual retention have the opportunity for promotion and the nature of work. They also found out that high levels of individualism, the need for challenges and a focus on personal development associated with personal willingness to stay [16]. Furthermore, some researchers believe that retention factors can help the human resources of the organization, motivate employees to stay in the organization, and promote the performance of the company, the main factors include: career opportunities, healthy organizational culture, fair pay, work-life balance, performance management, supervisor support, and work independence [17; 19]. According to the review, we can summarize the above factors that affect the retention of personnel as personal and organizational factors. Personal factors include a high level of individualism,
challenge needs, and personal development; Organizational factors include the nature of the job, career opportunities, salary, organizational culture, performance management, support from supervisors, independence of work, and work-life balance. This is helpful for this study to determine the explanatory variables by different levels.

In the field of social work, some scholars have put forward many influencing factors for social workers, mainly by sorting out personal factors and organizational factors. Personal factor includes the education level of social workers [20], work experience [22], professional identity [23], personal achievement [24], fatigue, burnout and emotional exhaustion [25; 26], role ambiguity [21] soon have a positive impact on the willingness to stay. Organizational factor includes salary treatment, vacation, promotion opportunities [24], work autonomy [21], diversity of work, quality of supervision, open working atmosphere [24], flexible work arrangement [23], support from colleagues, and humanized management mode [27] have a positive impact on the willingness to stay. Furthermore, family as an influence factor may also affect the retention of people. Sun and Liu’s [28] research found that family support plays a role in ensuring that professional social workers stay behind their jobs. Also, a related study by Turner et al. [29] has shown that career-related parent support coming in the family has a predictive role for career decision-making difficulties. Researchers Hu et al. [30] combined with the theory of scholars Turner et al. [29] to propose the concept of career-related parental support. Operative definition of career-related parental support: During career exploration, parents provide support directly related to career choice, including verbal encouragement, emotional support, work model support, and career skills support. We can imagine how important parents is for interns to provide internship information sources, internship programs and evaluation criteria, as well as spiritual and emotional support and encouragement during choosing internship industry and process. Thus, the retention of interns is influenced by family support factors.

There are also some studies in the field of higher vocational education in China of research on the factors affecting the retention of graduates. According to Yan’s [31] Study on the intention to stay in hotels of tourism management majors in high vocation colleges. By sorting out, there are main factors for students to stay that are professional identity, career psychology, students’ comprehensive quality, compensation and benefits, management systems, and promotion opportunities [31]. Moreover, according to Wu’s [32] empirical study, found that the factors affecting the retention of hotel management graduates includes organization culture, students’ working skills, effective work, acquisition of professional knowledge and skills, industry development prospects, relationship with colleagues, supervision, choice of internship unit, internship position choice, internship time choice, workload choice, accommodation and diet, internship income and benefits. Students’ internship time, position selection and other aspects will be influenced by the policies of Chinese colleges. Because China’s higher vocational colleges formulate corresponding internship management policies according to the regulations of the Ministry of Education and eight other government departments [33]. The specific policy can be seen in the notice of the Ministry of Education and other eight government departments on the issuance of the Regulations on the Administration of The Internship of Students in Vocational Schools in 2021. It includes the requirements of the internship time, place, content, requirements and conditions, accommodation, working hours, rest and vacation arrangement, internship remuneration and payment method, etc. [34]. Therefore, we believe that these factors should accurately belong to the colleges’ supporting factors to interns. Previous studies have found that satisfaction, as a measure
of attitude, is a significant predictor of willingness to stay, and high internship satisfaction promotes interns to stay after graduation [35]. In existing studies, the main factors significantly affecting the satisfaction of hotel interns are work remuneration, leadership level, training opportunity [36], school support and teacher guidance in practice [37]. It can be seen that these factors can influence the retention of higher vocational interns through the intermediary variable of satisfaction, and these variables mainly include organizational factors and college factors. In another empirical study, it was found that the psychological capital of higher vocational interns had a significant positive impact on their retention in the internship [38]. Psychological capital (PC) is a positive psychological state shown in the process of individual growth and development. It is a concept constructed on the basis of people’s positive psychological ability — confidence, optimism, hope and resilience, which It is a core psychological element beyond economic capital, social capital and human capital [39].

According to the work matching theory, the stronger the “degree of compatibility” or compatibility between employees’ individual resources and organizational environment or work requirements, the higher the dependence of employees to the organization, which further affects their willingness to stay. Therefore, we believe that interns with good psychological capital are more likely to obtain the fit and ‘compatible’ experience brought by the elderly care work, so as to promote their willingness to stay in the organization.

In the previous studies, none of them has focused on the retention’s influencing factors of higher vocational interns majoring in elderly care service in China, and there has not been a unified theory or analytical framework as guidance in this field. According to the previous research experience of scholars and their views, if all of the above factors are included in the analysis, this method is dispersing the study and analysis because of its many variables; As the researchers have stated this method is ineffective in dispersing research and analysis due to its many variables, which further leads to a deep and effective explanation of some specific reasons or the reasons of competitive relationships [28]. Accordingly, based on the above literature review, we can classify the factors affecting students’ retention, mainly divided into 4 categories: individual factors, family’s factors, college’s factors and organizational factors as shown in Table 1.

<table>
<thead>
<tr>
<th>Category</th>
<th>Influencing factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td>Individualism, Challenge Needs, Personal Development, Education Level, Marital Status, Professional Identity, Personal Achievement, Fatigue, Burnout and Emotional Exhaustion, Role Ambiguity, Psychological Capital.</td>
</tr>
<tr>
<td>Family (Family Support)</td>
<td>Spiritual and Emotional Support and Encouragement.</td>
</tr>
</tbody>
</table>
Study subjects and sampling

The subjects of this study selected students who majored in elderly care service in a local higher vocational college in Wenzhou city, China, and had internship experience in nursing institutions. Note that the internship period of students is 8 months (4 months post-internship, 4 months graduation internship). On sample extraction, non-probability sampling was used, a total of 100 higher vocational graduation students majoring in elderly care service were selected for the questionnaire survey about internship duration, and 15 interns were selected for the interviews. Of the 15 in-depth interviews, 5 were male and 10 were female, 21 years minimum and 23 years maximum.

Introduction of data analysis method

This study will take a different approach from the previous qualitative data analysis, using the Ragin’s [40] QCA (Qualitative Comparative Analysis) method to analyse the qualitative interview data. Qualitative comparative analysis is a case study-oriented (case oriented) research method, which is a research method that goes beyond both qualitative and quantitative research method [28]. Qualitative comparative analysis (QCA) is an analysis strategy to construct the causal relationship of scientific research topics from the data information of small sample, in terms of case sample size, QCA also made certain restrictions, preferably a small number of cases, between 10 and 60 [41]. Researchers Sun and Liu [28] both summarized the characteristics of the method based on the ideas of Ragin [40], the Qualitative Comparative Analysis Method (QCA) has the following characteristics.

First, in the qualitative comparative analysis method, the variable value of 1 indicates the occurrence or existence of a condition, with upper case letters; the variable value of 0 indicates that a condition does not occur or exist, with lower case letters; ‘*’ means ‘and’, ‘+’ means ‘or’, and ‘=’ means the cause. We can get an example from researchers Huang and Gui [42] to deepen our understanding such as A * B=Y indicates that the presence of both A and B will lead to the occurrence of Y.

Second, the unit of analysis for the qualitative comparative analysis is a combination of conditions rather than a case study. In the process of analysis, the researcher first determines the explanatory variables, and then summarizes the data in case units to obtain all combinations of interpreted variables and the explained variables (configurations), which are expressed in the form of a table called the truth table. The investigator used all combinations as the starting point of the analysis to simplify the conditional combinations according to the Boolean algebra method. The most basic operational logic is: if two different combinations (A * B and A * b) result Y at the same time, and there are only one condition for different values (here B and b), the different values are redundant. In other words, if A * B + A * b=Y, A=Y can be obtained according to the Boolean algebra method. Huang and Gui [42] believes that the process can be seen as a common denominator in finding different combinations, which can help us to understand the operational process more easily.
Specific operation steps of data analysis

At the specific operational level of data analysis, this study mainly has the following steps: step 1, the researchers first determine the case according to the research questions. The study focuses on “Retention factors of higher vocational internship students majoring in elderly care service in China”. This study guided case selection based on the results of four levels summarized in the literature review section. Step 2, to determine the explanatory variables. The explanatory variables for this study were determined according to the four levels summarized by the literature review. That is, this study selected one of the four levels of factors influencing the retention of internship students majoring in elderly care service in China. Step 3, construct the fact table according to the explanatory variables (for the fact table of this study, see Table 3 and Table 4 later). In this process may encounter a contradictory combination of conditions, that is, the same combination of conditions has different results. When faced with a combination of contradictory conditions, this study cleaned them according to the qualitative interview data. Step 4, simplify the fact table according to the Boolean algebra method to obtain a causal combination of different variables that can explain the retention of professional social workers.

Variables

According to the practice proposed by previous scholars, according to the sample of moderate size (10~40), the number of explanatory variables is best four to six or seven [42; 43]. Therefore, on the basis of previous research literature, this study selected variables based on the most concerned issues of current interns.

Individual-level variable selection: This study selected psychological capital to be included as the main independent variables. One reason for this choice is that this variable has been empirically analyzed to have a significant impact on interns’ retention intentions. That is, a positive psychological state shown by individual interns in the process of internship, which is based on the interns, positive psychological ability--four abilities of self-confidence, optimism, hope and resilience.

Independent variable at the family-level: Previous studies have found that the family support factor can have an impact on the retention rate of personnel, so this factor was selected as the independent variable for the retention factor of interns.

Independent variable at the institutional level: According to the survey, monthly income was the primary factor affecting the willingness of nursing staff to leave in China [30]. Therefore, satisfaction with internship salary was included as an independent variable at the institutional level.

Independent variables at the college-level support: According to the empirical study of Chinese higher vocational internship students, the most unsatisfactory part of the internship is the accommodation and diet, internship income during the internship, followed by the workload during the internship which these become the main factors [32]. These factors are considered by the colleges and should be negotiated with the internship institutions in advance into the cooperation agreement. The internship income coincides with the salary of the above institutions. Therefore, we divided the impact of college-level support on the stay of interns into two independent variables as the satisfaction of accommodation and diet, the degree of workload.
**Variable measure**

**Measure of dependent variables**

The dependent variable of this study was ‘Stay in internship or not’. In the interview, ‘Do you want to stay in the current internship until the end of the internship?’ To measure. In this study, the positive response was assigned a value of 1 (YES) (indicating the stay in the current internship until the internship expires), and the specious and negative response was assigned a value of 0 (NOT) (indicating that they will not stay in the current internship before the expiration of the internship).

**Measure of independent variables**

Measurement of psychological capital. In this study, psychological capital mainly refers to the psychological ability of the respondents to engage in pension nursing practice. According to the respondents’ responses, this study divided them into two categories: positive and negative. Among them, positive answers include: confidence, optimism, positive, etc.; negative answers include: lack of confidence, sad, negative, etc. This study assigned a value of 1 (YES) to the positive response and a value of 0 (NOT) to the negative response.

Measurement of family support. This study mainly understands the family support through the question of whether the family provides spiritual and emotional support and encouragement during the internship. According to the answers of respondents, this study divided them into positive answers (such as family approval and encouragement, family help, etc.) and negative answers (for example, my internship was not good, my family did not understand, my family lack of encouragement and help, etc.). The positive response was assigned a value of 1 (YES) (indicating the support and encouragement of the family), and the negative response was assigned a value of 0 (NOT) (indicating that the family does not understand, does not support and does not encourage the internship).

Measurement of internship salary. This study is based on the words ‘Are you satisfied with your current salary?’ Collect relevant information on this issue. During the analysis process, the present study divided the answers into two categories: positive and negative. The positive response (e.g.: satisfied, more satisfied, very satisfied, etc.) was assigned a value of 1 (YES); the negative response (e.g.: Internship treatment is general, low salary of internship, dissatisfaction, etc.) was assigned a value of 0 (NOT).

Measurement of satisfaction with the accommodation and diet. This study is based by ‘Are you satisfied with the current accommodation and diet?’ Collect relevant information on this issue. During the analysis process, the present study divided the answers into two categories: positive and negative. The positive response (e.g., satisfactory, relatively satisfactory, very good, very satisfactory, etc.) was assigned a value of 1 (YES); the negative response (e.g., generally, poor, dissatisfied, very poor, etc.) was assigned a value of 0 (NOT).

Measurement of the degree of workload. The study is based on ‘How do you feel about the burden of your current internship?’ Collect relevant information about this issue. During the analysis, this study divided the answers into two positive and negative categories. The positive response (e.g., easy, not tired, laborious, competent, etc.) was assigned a value of 1 (YES); the negative response (e.g., busy, heavy burden, tired, tired, heavy workload, laborious, incompetent, etc.) was assigned a value of 0 (NOT).
RESEARCH FINDINGS

Finding 1
A survey of 100 elderly care service graduates of higher vocational colleges with internship experience was surveyed in China, to investigate their internship duration in geriatric care service positions, and the data retained by the students was obtained, and the data was expressed as the number of students and percentage as shown in Table 2. Through the analysis found that 67% of students did not complete the internship, and even 37% left the internship within 4 months, which means students left the internship before half of the required time. This is enough to show that the retention rate of interns in higher vocational students majoring in elderly care service in China is quite low. So, what causes such a high departure rate of interns? In the next step, the study will analyze the corresponding influencing factors from different categories according on the data collected by the qualitative interview. This study tries to explore the retention’s issue of interns majoring in elderly care service of higher vocational college while considering the important influencing factors in different categories (levels).

Table 2
How long did you spend during an internship in elderly care institution? (N=100)

<table>
<thead>
<tr>
<th>Duration</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 month</td>
<td>9</td>
<td>9.0</td>
</tr>
<tr>
<td>1-2 months</td>
<td>11</td>
<td>11.0</td>
</tr>
<tr>
<td>2-3 months</td>
<td>17</td>
<td>17.0</td>
</tr>
<tr>
<td>3-4 months</td>
<td>8</td>
<td>8.0</td>
</tr>
<tr>
<td>4-5 months</td>
<td>7</td>
<td>7.0</td>
</tr>
<tr>
<td>5-6 months</td>
<td>10</td>
<td>10.0</td>
</tr>
<tr>
<td>6-7 months</td>
<td>5</td>
<td>5.0</td>
</tr>
<tr>
<td>7-8 months</td>
<td>33</td>
<td>33.0</td>
</tr>
<tr>
<td>Until internship’ completion</td>
<td>0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Finding 2
Construction of the fact table
According to the steps of qualitative comparative analysis (QCA), the fact table will be established after determining the variables. The facts of this study are listed below.

Facts table one

<table>
<thead>
<tr>
<th>Case number</th>
<th>Psychological capital</th>
<th>Family support</th>
<th>Internship salary</th>
<th>Accommodation and diet</th>
<th>Degree of workload</th>
<th>Stay in internship or not</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 (YES)</td>
<td>0 (NOT)</td>
<td>0 (NOT)</td>
<td>1 (YES)</td>
<td>0 (NOT)</td>
<td>0 (NOT)</td>
</tr>
<tr>
<td>2</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
</tr>
<tr>
<td>3</td>
<td>0 (NOT)</td>
<td>0 (NOT)</td>
<td>0 (NOT)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>0 (NOT)</td>
</tr>
<tr>
<td>4</td>
<td>1 (YES)</td>
<td>0 (NOT)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>0 (NOT)</td>
<td>1 (YES)</td>
</tr>
<tr>
<td>5</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
</tr>
<tr>
<td>6</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
</tr>
<tr>
<td>7</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>0 (NOT)</td>
<td>0 (NOT)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
</tr>
<tr>
<td>8</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
</tr>
<tr>
<td>9</td>
<td>0 (NOT)</td>
<td>0 (NOT)</td>
<td>0 (NOT)</td>
<td>1 (YES)</td>
<td>0 (NOT)</td>
<td>0 (NOT)</td>
</tr>
<tr>
<td>10</td>
<td>1 (YES)</td>
<td>0 (NOT)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>0 (NOT)</td>
<td>1 (YES)</td>
</tr>
</tbody>
</table>
According to the principle of QCA method, in this study, only the cases with ‘stay in internship or not’ with 1 value were selected (that is, willing to stay in the internship) for analysis. Therefore, cases 1, 3, 9, 11, 13 with a value of 0 cannot be included in facts Table two. In order to make the analysis simple, A, B, C, D, E should replace the independent variable and R for the dependent variable.

**Table 4**

<table>
<thead>
<tr>
<th>Case number</th>
<th>Psychological capital (A)</th>
<th>Family support (B)</th>
<th>Internship salary (C)</th>
<th>Accommodation and diet (D)</th>
<th>Degree of workload (E)</th>
<th>Stay in internship or not (R)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2, 5, 6, 8</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
</tr>
<tr>
<td>4, 10</td>
<td>1 (YES)</td>
<td>0 (NOT)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>0 (NOT)</td>
<td>1 (YES)</td>
</tr>
<tr>
<td>12, 14</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>0 (NOT)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
</tr>
<tr>
<td>7, 15</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
<td>0 (NOT)</td>
<td>0 (NOT)</td>
<td>1 (YES)</td>
<td>1 (YES)</td>
</tr>
</tbody>
</table>

**Analysis of data results**

In fact, Table 3, the core variables of psychological capital, family support, internship salary, accommodation and diet, degree of workload, stay in internship or not, were coded as A, B, C, D, E, and R, respectively. When the letters are uppercase, indicates that the value of each case is 1 (YES) for this variable; when the letters are lowercase, indicates that the value of each case is 0 (NOT) for this variable. According to the Boolean algebra method, the equations were obtained in this study as following.

\[
R = A*B*C*D*E + A*b*C*D*e + A*B*C*d*E + A*B*c*d*E
\]

The equation was simplified as following.

\[
R = A*B*C*E + A*b*C*D*e + A*B*c*d*E
\]

Changing the equation into a lexical expression is called as following.

*Stay in internship = Good psychological capital * Family support * Satisfied with internship salary * Low degree of workload * Good psychological capital * No family support * Satisfied with internship salary * Satisfied with accommodation and diet * High degree of workload * Good psychological capital * Family support * Unsatisfied with internship salary * Unsatisfied with accommodation and diet * High degree of workload

According to the above expression, there are three combined reasons combined to keep interns majoring elderly service care stayed in institutions for internship. One is Good psychological capital * Family support * Satisfied with internship salary * Low degree of workload; Two is Good psychological capital * No family support * Satisfied with internship salary * Satisfied with accommodation and diet * High degree of workload. Three is Good psychological capital * Family support * Unsatisfied with internship salary * Unsatisfied with accommodation and diet * Low degree of workload.
Although all three expressions are B (or b), C (or c), D (or d), E (or e), none of them alone constitutes a necessary condition to guarantee the retention of interns. Therefore, it can be said that no one factor can independently affect the retention of interns stay in the current internship. To further understand the impact of the four core variables on the interns’ stay in the internship position, the three causal combinations will be understood separately in this study.

- Firstly, combination 1: \textit{Good psychological capital * Family support * Satisfied with internship salary * Low degree of workload} (A*B*C*E). In this combination, the simultaneous occurrence of four positive factors may ensure that interns stay in internship. In fact, this may be the best state, and it is also the most powerful support to ensure that the interns stay in the current internship position.

- Secondly, combination 2: \textit{Good psychological capital * No family support * Satisfied with internship salary * Satisfied with accommodation and diet * Low degree of workload} (A*b*C*D*e). In this combination, three positive factors and two negative factor may ensure that interns can stay. Specifically, in the absence of family support and high degree of workload, as long as interns have high psychological capital, satisfactory salary and satisfactory accommodation and diet, interns can still stay in internship.

- Thirdly, combination 3: \textit{Good psychological capital * Family support * Unsatisfied with internship salary * Unsatisfied with accommodation and diet * Low degree of workload} (A*B*c*d*E). In this combination, three positive factors and two negative factor may ensure that interns can stay. Specifically, when other conditions are not available, as long as the interns have high psychological capital, family support and low degree of workload, it can ensure that the students stay in the internship.

**DISCUSSION OF RESULTS**

This study examined 100 graduates of majoring in elderly service care who had previous internships and found a lower retention rate within internships. This is not good for the construction of a talent team that can meet the current development needs of China’s pension industry in terms of quantity and quality [4]. It is necessary to solve the contradiction between the supply and demand of talent training, that is, to start with the internship stability of students majoring in elderly care service in Chinese higher vocational colleges. Therefore, discussing the reasons that affect students’ stay in internship positions has become an important issue for colleges and institutions to manage the stability of interns’ internship.

This study used qualitative comparative analysis to analyze the retention factors of 15 higher vocational interns majoring in elderly care service in China, which is innovative compared with previous studies, because this method aims to go beyond qualitative and quantitative analysis techniques [40]. Moreover, there is an innovation of the research content, because previous studies did not pay attention to the retention factors of interns majoring in elderly care service in higher vocational colleges in China. According to the research results, the reasons for affecting interns to stay in their current internship position are quite complicated. Different influencing factors cannot have an impact on the interns’ retention alone, but it’s an impact under different combinations of factors. The results of this study show that, at least three combination of reasons are at work. Furthermore, the reason combination1, 2 and 3 provide important references for deeply understanding of the elderly care service interns’ retention. As well as, through in-depth analysis can give us some practical enlightenment, and provide a better reference for vocational colleges and pension institutions.
Good psychological capital (A) exists in all three combinations of reasons, and we can definitely assume that it becomes a core influencing factor that guarantees interns to stay. People with higher psychological capital have more ‘resources’ than others, have strong self-efficacy, confidence, positive optimism, resilience, resistance and frustration ability, work engagement and high work enthusiasm [44], and with the competency to deal with more complex work, and the more outstanding work performance when facing the same work content [45]. Thus, it has been proved by Jiao and Zheng [38] empirical study that psychological capital has a significant positive impact on the interns’ willingness to stay. By improving the psychological capital of interns, students can think that they have more positive psychological resources, can deal with more complex tasks, and have high competence. In this way, interns will be more likely to have the intention to stay in an organizational environment compatible with their competence. Accordingly, under the condition that interns majoring in elderly care service have psychological capital, it can bring greater sense of achievement and value embodiment, easy to obtain a positive professional attitude, and produce internship satisfaction. This plays a key role in promoting interns to stay in the institution. Thus, in the process of cultivating students, the colleges should pay attention to the shaping of students’ psychological capital, provide good teachers’ guidance resources, and constantly pay attention to the psychological growth of interns in the process of internship. In particular, the colleges should understand that in addition to the study of knowledge and skills, the psychological capital of ‘temperature’ that robots do not have is the quality that every student should have. At the same time, institutions should also provide various resources, such as creating a positive organizational culture, providing more training opportunities, and paying attention to the psychological growth of interns.

We also get significant inspiration by 2 and 3 of the combined reasons. In summary, the combination of reasons 2 shows that the other two conditions are not true (the value is 0), the combination of individual psychological capital for interns, satisfactory internship salary and satisfactory accommodation & diet has become an important guarantee for interns to stay in their current internship positions. Apart from the influence of the core element of psychological capital, it will not be repeated here. Research found that in the process of the role transformation of college students from school to society, the main factors affecting their career choice are work remuneration, working hours and working environment [46]. Of course, we believe that the internship salary, accommodation conditions and diet in the above working conditions are the important factors affecting the retention of interns. As Tian and Xie’s [47] research on hotel internship students of colleges, found that working conditions are positively correlated with the willingness to stay, and the direct and indirect preconditions for resignation intention are salary and financial incentives [48]. Therefore, from the perspective of the support of the college, it is necessary to establish corresponding good agreements with the cooperative internship institutions. Within the framework of the agreement, we should set the satisfactory internship salary and good accommodation and diet requirements, so as to finally provide good conditions for interns and improve their willingness to stay for internship. In summary, the combination of reasons 3 shows that the other two conditions are not true (the value is 0), in this case, three positive factors of good psychological capital, family support and low degree of workload can ensure that the intern can stay. Equally the impact of the psychological capital factors will not be repeated here.

First, this study found that family support is one of the most important influencing factors for nursing interns to stay, which can combine family support with college support and institutional support to improve the willingness of interns to continue their internship.
For example, the relationship between students and parents, choice anxiety caused by family economy, the school can add communication measures to interact with parents, and by feeding back questions related to family factors affecting students’ internship to their parents, parents can support their children in internship, such as emotional and spiritual encouragement, oral encouragement, and financial support, according to the internship situation provided by the school. Additionally, we can be for sure that the huge workload of students’ internship will bring great pressure to individual internship, and bring negative impact on individual stay. Numerous studies have shown the relationship between work stress and the willingness to stay, such as challenging pressures negatively affect turnover tendency [49]; Podsakoff et al. [50] found through meta-analysis that challenging pressure has a positive impact on employees’ work characteristics and negatively predicts the turnover tendency. At the same time, some scholars have drawn different conclusions, such as both challenging pressure and hindering pressure have negative effects on the willingness to stay [51].

CONCLUSION

In conclusion, so a low degree of work burden will lead the interns to stay in the internship, so the college and the institution to jointly design the internship position work content and task arrangement should be based on the actual competence of the interns, to maintain a reasonable internship workload as much as possible. Additionally, we can be for sure that the huge workload of students’ internship will bring great pressure to individual internship, and bring negative impact on individual stay. Therefore, discussing the reasons that affect students’ stay in internship positions has become an important issue for colleges and institutions to manage the stability of interns’ internship. The internship required an ecosystem that cater the full supports intern’s good psychological capital, family support, and a manageable workload were all necessary for the internship to be successful. The government under the human resource management need to play their big role to enforce the policy to look out the support system for the internship process and ensure the industry alert on the internship issues and assist the internship support system. The specific policy can be seen in the notice of the Ministry of Education and other eight government departments on the issuance of the Regulations on the Administration of The Internship of Students in Vocational Schools in 2021.

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