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Verifying the validity of the whole person model of mental health education activities in colleges based on differential equation

Sha Liu^{1†}, Khaled H. Alyoubi²

¹ School of Medical Humanities, Xinxiang Medical University, Xinxiang 453003, China

² Department of Information Systems, Faculty of Computing and Information Technology, King Abdulaziz University, Jeddah, Saudi Arabia

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Abstract

Based on the differential equation verification method, this study explores the characteristic model of mental health education activities for all employees and provides further research basis for constructing the competency characteristics for all employees in mental health education colleges. The results show that (1) the competence characteristics of all psychological teachers in mental health education colleges include interpersonal understanding and communication, respect for students, student service orientation, self-regulation and control, self-confidence, desire for achievement, influence, promotion of student development, organisation and coordination, 12 characteristics of professional knowledge skills, analytical thinking and reflective ability, (2) these 12 characteristics can be summarised into 4 dimensions: help and service, personal effectiveness, management skills and cognitive dimensions and (3) 12 characteristics of the model. The top 5 in the ranking are interpersonal understanding and communication, self-regulation and control, respect for students, student service orientation and promotion of student development.

Keywords: differential equations, behavioural event interview method, mental health education, all-staff mentality teachers in colleges and universities

AMS 2010 codes: 97C20

1 Introduction

Mental health education is a highly professional and demanding job. With the in-depth development of school mental health education, the quality and specialisation requirements for all mental health teachers in colleges and universities for mental health education are becoming higher and higher. A high-quality team of all-staff psychology teachers in colleges and universities who are competent for school mental health education

[†]Corresponding author.

Email address: Chris19811014@163.com

has become the key to doing well in school psychological counselling. Therefore, it is particularly important to study the competency characteristics of all psychological teachers in mental health education colleges. More and more researches and practices have shown that, in order to do a good job of mental health education for students, we must attach great importance to the training of all-staff mentality teachers in mental health education colleges.

The Ministry of Education's 'Several Opinions on Strengthening Psychological Health Education in Primary and Secondary Schools' pointed out that doing a good job in the construction of the teaching staff and improving the mental health of all psychological teachers in colleges and universities is an important condition for ensuring the normal development of mental health education. To improve the mental health education level of students, it is necessary to improve the mental health education ability of all teachers in colleges and universities. However, the current situation in many mental health education colleges and universities in China is that all teaching positions are concurrently held by moral education workers. This has led to the low professionalisation of all mental health teachers in mental health education colleges and universities in China, and they have not passed strict personnel selection and professional training and hence lack relevant practical experience. Therefore, it is very important to find the key factors that lead to the effectiveness of mental health education and explore the selection and training of mental health education colleges and universities.

McClelland believes that competency refers to 'the deep-seated characteristics of individuals that can distinguish outstanding accomplisshers from mediocre performances in a certain job, including different motivational performance, personality traits, moral qualities, self-image, and social role characteristics [1]. Attitudes or values, and the level of knowledge and skills in a certain field.' From the perspective of combining theory and empirical research, this study explores the differential equations of all-employee psychological teachers in mental health education colleges and universities and provides a reference for the recruitment and selection, training, performance evaluation and comprehensive quality evaluation.

2 Materials and methods

2.1 Investigation method

The first stage: Combining the job responsibilities of all psychological teachers in mental health education colleges and universities and adopting the literature method and expert consultation method to determine the performance evaluation standards. Or all-member psychology teachers of provincial-level outstanding colleges and universities, outstanding educators, all-employee psychology teachers of model colleges and universities, advanced workers in the education system, etc. or all-member psychology teachers of colleges and universities who have been commended for outstanding achievements in mental health education at the national or provincial level 2) All college psychological teachers who have been engaged in mental health education for >4 years.

The second stage: According to the above evaluation criteria, 5 excellent performers and 5 ordinary performers are selected from all primary and secondary schools in Chongqing as interview subjects. The gender composition is 4 females in the excellent group and 1 male; and 4 females in the general group and 1 male. The school category is composed of 4 psychological teachers in the excellent group of middle schools and colleges, 1 psychological teacher in the elementary schools; and 4 psychological teachers in the general middle schools and colleges, and 1 psychological teacher in the primary schools. Then, the researchers conducted behavioural event interviews with the subjects, that is, the interviewees were asked to narrate their key cases in the mental health education work, including 3 successful events, unsuccessful events or negative events. The participants described in detail the cause, process, result, time, relevant people, the scope of the incident, level of influence and their own thoughts or feelings at the time and recorded the content of the interview [2].

The third stage: Organising the interview recordings into manuscripts and using Spencer's competency coding dictionary to encode the interview data. A coding team composed of two people respectively coded an interview recording manuscript. After the independent coding was completed, a comparative discussion was conducted to ensure that the two coders reached a consensus on the coding of the interview manuscript. After

unifying the opinions, modify the competency rating scale to form a mental health education feature rating scale for all-staff mental health education activities, and then code and score all recorded texts, and use SPSS12.0 to analyse the data obtained by coding deal with.

2.2 Differential equation verification method

Introducing the fractal space-time distance of the differential equation of one-dimensional space and time

$$\begin{cases} \Delta t = \Delta t^\alpha \\ \Delta x = \Delta x^\beta \end{cases} \quad (1)$$

where α is the fractal dimension of time and β is the fractal dimension of one-dimensional space. Obviously, the non-Euclidean distance defined by Eq. (1) is obtained based on two assumptions of fractal in deformability and fractal equivalence. Balankin et al. further gave the general three-dimensional fractal distance, and the differential equation fractal distance is a special case.

$$\begin{cases} \Delta t^\alpha = t^\alpha - t_0^\alpha \\ r^\beta = \sqrt{(x^\beta - x_j^\beta)^2 + (y^\beta - y_j^\beta)^2 + (z^\beta - z_j^\beta)^2} \end{cases} \quad (2)$$

where β is the fractal dimension of three-dimensional isotropic space. When $\beta = 1$, the fractal space distance of the differential equation of Eq. (2) reverts to the classic 3-dimensional Euclidean distance. If the initial time $t_0 = 0$ is set and the one-dimensional problem source point coordinate $x_j = 0$ is set, then the fractal distance definition Eq. (2) of the differential equation is simplified to Eq. (1). The derivative of the differential equation is defined as

$$\begin{cases} \frac{du}{dx^\beta} = \lim_{x' \rightarrow x} \frac{u(x) - u(x')}{x^\beta - x'^\beta} = \frac{1}{\beta x^{\beta-1}} \frac{du}{dx} \\ \frac{du}{dt^\alpha} = \lim_{t' \rightarrow t} \frac{u(t) - u(t')}{t^\alpha - t'^\alpha} = \frac{1}{\alpha t^{\alpha-1}} \frac{du}{dt} \end{cases} \quad (3)$$

The literature gives the basic solution of the differential equation diffusion process of a one-dimensional problem. The derivative diffusion equation of the three-dimensional differential equation is

$$\frac{\partial u}{\partial t^\alpha} = D \left(\frac{\partial u}{\partial x^\beta} \left(\frac{\partial u}{\partial x^\beta} \right) + \frac{\partial u}{\partial y^\beta} \left(\frac{\partial u}{\partial y^\beta} \right) + \frac{\partial u}{\partial z^\beta} \left(\frac{\partial u}{\partial z^\beta} \right) \right) \quad (4)$$

In the formula, u is the concentration of the diffusing substance and D is the diffusion coefficient. It can be easily proved that Eq. (5) is the basic solution of diffusion Eq. (4).

$$u(t, x, y, z) = \frac{H(t - \tau)}{(a\pi D \Delta t^\alpha)^{3/2}} \exp \left(-\frac{r^{2\beta}}{4D \Delta t^\alpha} \right) \quad (5)$$

In the formula, H is the multi-dimensional competition step function. The exponential term on the right side of Eq. (5) is the extended Gaussian distribution widely used in science and engineering. It can be seen from Eq. (5) that the basic solution of differential equation derivative diffusion Eq. (4) characterises the statistical diffusion process corresponding to the extended Gaussian distribution. The probability density function of the stretched Gaussian distribution is the kernel function of the basic solution of diffusion. When $\alpha = \beta = 1$, the basic solution of the fractal distance of the differential equation of Eq. (5) returns to the basic solution of the classical integer-order Euclidean distance diffusion equation, describing the Gaussian distribution of particle motion in the process of classical Fick diffusion (normal diffusion) feature. Below, this article considers the diffusion equation containing only the derivative of the time differential equation

$$\frac{du}{dt^\alpha} = -Du \quad (6)$$

The solution of this equation is

$$u = C \exp(-D\Delta t^\alpha) \quad (7)$$

The constant C here is determined by the initial conditions. Equation (7) is the exponential decay of extension that often appears in the literature. When $\alpha = 1$, the solution of the derivative model of the differential equation degenerates to the Debye exponential decay of the classical integer-order diffusion equation. It can be proved that the derivative Laplace equation, wave equation, Helmholtz equation, convection-diffusion equation, etc. of the differential equation also satisfy the basic solution of the fractal distance of the differential equation. In addition, substituting the structure function for the power function in the fractal distance definition of the differential Eqs. (1) and (2), the structure distance of the general fractal (structure shape) describing the non-power law function is obtained.

$$\begin{cases} \Delta G(t) = G(t) - G(t_0) \\ Q(r) = \sqrt{(Q(x) - Q(x_j))^2 + (Q(y) - Q(y_j))^2 + (Q(z) - Q(z_j))^2} \end{cases} \quad (8)$$

where G and Q are the structure functions in the derivative of time and space structure respectively. The definition of fractal distance by Balankin et al. actually includes the definition of Eq. (8). The basic solution of the local structure derivative diffusion equation can be directly obtained by using the above structure distance.

Without loss of generality, consider a particle moving along a one-dimensional curve in fractal time at a constant velocity. The relationship between movement distance and time is

$$l(\tau) = v(\tau - t_0)^\alpha \quad (9)$$

where l is the distance, v is the uniform velocity, τ is the current time, t_0 is the initial moment and α is the time fractal dimension. If the speed is not uniform, the corresponding integral of the differential equation is

$$l(t) = \int_{t_0}^t v(\tau) d(\tau - t_0)^\alpha \quad (10)$$

From Eq. (10), the corresponding derivative expression of the differential equation can be obtained

$$\frac{dl}{dt^\alpha} = \lim_{t' \rightarrow t} \frac{l(t) - l(t')}{(t - t_0)^\alpha - (t' - t_0)^\alpha} = \frac{1}{\alpha(t - t_0)^{\alpha-1}} \frac{dl}{dt} \quad (11)$$

Comparing Eqs. (3) and (11), the two differential equation derivative definitions, notice that the only difference is that the latter includes the initial time while the former assumes that the initial time is 0, and so the latter is a more general expression.

The position of the particle motion expressed by Eq. (9) at time τ can also be calculated by Eq. (12).

$$l(\tau) = v(t - t_0)^\alpha - v(t - \tau)^\alpha \quad (12)$$

where t is the end time. The first term on the right side of Eq. (12) is the total movement distance of the particle, and the second term represents the distance to be moved from time τ to the end time t . If it is not a constant velocity motion and the first-order differential operation of the τ variable to Eq. (12), there is

$$dl = -v d(t - \tau)^\alpha \quad (13)$$

The corresponding integral of Eq. (13) is expressed as

$$l(t) = \int_{t_0}^t -v(\tau) d(t - \tau)^\alpha \quad (14)$$

Note that an essential difference between Eqs. (14) and (10) is that Eq. (14) is a Volterra integral with a power function kernel.

According to the above analysis, it can be seen that the differential equation calculus and fractional calculus are intrinsically quantitatively related to the fractal dimension, that is, the order of the time differential equation calculus and fractional calculus is the time fractal dimension α of the research object.

From the perspective of time fractal analysis, differential equation calculus and fractional calculus are opposite processes. The former advances gradually from the initial moment, while the latter recursively from the end moment. From the time history analysis, there is a certain reverse correspondence between the two [3].

On the other hand, differential equation calculus is a local operator and fractional calculus is a non-local operator. Therefore, even if both are used to describe the fractal process, the corresponding statistical process is completely different. They are two different calculus operators. In addition, the geometric basis of the derivative equations of differential equations is the non-Euclidean differential equation fractal distance, while the geometric basis of the fractional calculus is still the Euclidean distance. The statistical mechanics background of the two is also completely different. The differential equation derivative diffusion equation model describes the spreading Gaussian distribution and the spreading exponential attenuation diffusion, while the fractional derivative diffusion equation describes the Levatich steady-state distribution and the ML attenuation diffusion. The comparison of exponential decay, stretch exponential relaxation and ML decay is shown in Figure 1.

Fig. 1 Comparison of exponential decay, stretch exponential relaxation and ML decay.

3 Results

3.1 Interview length analysis

The interview lengths of 10 interview texts were analysed and statistically compared. Among them, 5 were in the excellent group and 5 were in the ordinary group. The results are shown in Table 1.

In order to ensure that the differences in the competency characteristics between the excellent group and the ordinary group are not caused by the length of the interview, the number of words and interview time between the excellent group and the ordinary group was tested for significance. The results are shown in Table 2.

The average word count of the excellent group interview was 4035 words and the average time was 2304 s; and the average word count of the ordinary group interview was 3281 words and the average time was 2040 s. The difference between the excellent group and the ordinary group in terms of interview text and interview time

was not significant at the 0.05 level. It can be seen that the number of words and the length of time did not affect the difference in competency between the excellent group and the ordinary group.

Table 1 The length of the interview.

	Interview words/words		Interview time/s	
	Excellent group	Normal group	Excellent group	Normal group
1	5290	3766	3000	2100
2	4048	2454	2220	1740
3	2842	4382	1800	2340
4	4514	3104	2580	2280
5	3480	2701	1920	1740

Table 2 Interview length difference analysis.

	Excellent group		Normal group		df	t	p
	M	SD	M	SD			
Interview words/words	4034.8	940.2	3281.4	790.42	8	1.372	0.207
Interview time/s	2304	492.22	2040	287.75	8	1.035	0.331

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3.2 Thematic analysis of interview coding

After discussing and analysing the pre-coded text, the two coders agreed that they can learn from interpersonal understanding and communication, respect for students, sense of responsibility, student service orientation, enthusiasm, relationship establishment, self-regulation and control, self-confidence, initiative, desire for achievement, flexibility, influence, honesty and integrity, promotion of student development, career preferences, organisational coordination, professional knowledge and skills, information collection, analytical thinking, reflective ability, challenge and support, innovation and adaptability. These are 23 competency characteristics. It depends on whether all the psychological teachers of the mental health education colleges and universities have these competent characteristics [4].

3.3 Coding consistency analysis of competency characteristics

The two coders formally coded and scored the interview recordings according to the coding dictionary of mental health education activities for all employees. The coding and scoring were performed independently, back to back. The degree of consistency of independent coding results for the same text is an important factor affecting the reliability of the competency evaluation method, and an important indicator of the reliability and objectivity of the coding results. In order to test whether the scores between the two coders are consistent, this study conducted the scorer reliability test which is shown in Table 3.

In Hay's classic research, three indicators, frequency, average grade score, and highest score, are used for statistical analysis. Among them, the average grade score is the best. Research by Shikan and others in China has also confirmed this result. This study mainly used two coders to test the average grade score of the text. The test results show that the two coders have a high degree of consistency in each competency, with an overall consistency of 0.979, which is higher than that in previous studies.

Table 3 Scorer reliability analysis results.

Competency name	Coefficient of consistency	Competency name	Coefficient of consistency
Interpersonal understanding and communication	0.851**	Honesty	0.997**
Respect students	0.69*	Promote student development	0.745*
Sense of responsibility	0.876**	Career preference	0.874**
Student service orientation	0.737*	Organisation and coordination	0.992**
Enthusiasm	0.88**	Professional knowledge and skills	0.843**
Relationship establishment	0.848**	Collect message	0.865**
Self-regulation and control	0.795**	Analytical thinking	0.991**
Self-confidence	0.884**	Reflective ability	0.851**
Initiative	0.955**	Challenge and support	0.819**
Desire for achievement	0.963**	Innovation	0.911**
Flexibility	0.751*	Resilience	0.934**
Influence	0.985**	Overall consistency	0.979**

3.4 Analysis of the difference between the excellent group and the ordinary group

Using the average grade score as an indicator, the average scores of the two coders on each competency feature are calculated and then the average scores of the excellent group and the ordinary group on each competency feature to test the significance of the difference are compared. The results are shown in Table 4.

Table 4 Characteristics of mental health education activities for all employees in mental health education.

Dimension	Competency
Personal effectiveness	Self-regulation and control, self-confidence, desire for achievement, influence
Management skills	Promote student development, organise and coordinate
Cognitive dimension	Professional knowledge and skills, reflective ability, analytical thinking
Help and service	Interpersonal understanding and communication, respect for students, student service orientation

From the test results, it can be seen that the excellent group and the ordinary group have extremely significant differences in interpersonal understanding and communication, desire for achievement, influence and reflective ability. They are in respect of students, student service orientation, self-control and adjustment, self-confidence and there are significant differences in the promotion of student development, organisation and coordination, professional knowledge and skills, and analytical thinking; but there are no significant differences between the two groups in other competency characteristics. Therefore, the 12 competence characteristics of all psychological teachers in mental health education colleges are interpersonal understanding and communication, respect for students, student service orientation, self-regulation and control, self-confidence, desire for achievement, influence, promotion of student development, organisation and coordination, professional knowledge skills, analytical thinking and reflective ability. The test results also show that the average grade scores of excellent and ordinary people are not high in the competence of analytical thinking. Researchers believe that, on the one hand, it may be caused by the coder's scoring standards. On the other hand, in the key events described, the descriptions of outstanding performers and ordinary performers did not show the higher-level behaviours in the competency coding dictionary characteristics, and so the score is not high [5].

3.5 Any feature model system

According to the test results of the difference of interview data, find out the competencies with significant differences, and determine the competencies of all psychological teachers in mental health education colleges as: interpersonal understanding and communication, respect for students, student service orientation, self-regulation and control, self-confidence 12 competency characteristics: heart, desire for achievement, influence, promotion of student development, organisation and coordination, professional knowledge and skills, analytical thinking and reflective ability. According to Spencer's classification of competency characteristics, many competency characteristics contained in the mental health education activity characteristic model of mental health education for all employees are divided into four competency characteristics dimensions. See Table 5.

Table 5 Competency score difference test between excellent group and ordinary group.

	Outstanding score		Ordinary group score		t	p
	Average	Standard deviation	Average	Standard deviation		
Interpersonal understanding and communication	5.6	1.19	2.7	0.27	5.295	0.005
Respect students	3.32	0.41	2.7	0.27	2.818	0.023
Sense of responsibility	3.5	0.5	3.14	0.22	1.475	0.179
Student service orientation	5.2	1.3	3.6	0.74	2.385	0.044
Enthusiasm	3.34	0.42	2.82	0.47	1.838	0.103
Relationship establishment	3.3	0.45	2.86	0.22	1.976	0.084
Self-regulation and control	4.8	1.44	3	0.61	2.571	0.033
Self-confidence	4.9	0.82	3.5	0.5	3.255	0.012
Initiative	4.1	0.96	3.5	0.5	1.238	0.251
Desire for achievement	3.7	0.84	3.4	0.42	5.02	0.001
Flexibility	3.4	0.42	2.94	0.38	1.824	0.106
Influence	4.6	1.08	2.4	0.65	3.889	0.005
Honesty	3.5	0.5	3.2	0.27	1.17	70.273
Promote student development	5.32	0.84	4	0.35	3.226	0.012
Career preference	3.9	0.55	3.3	0.45	1.897	0.094
Organisation and coordination	3.6	0.55	2.5	0.71	2.75	0.025
Professional knowledge and skills	4.74	0.8	3.3	0.57	3.281	0.011
Collect message	4	0.71	3.4	0.55	1.5	0.172
Analytical thinking	3.02	1.1	1.5	0.5	2.821	0.022
Reflective ability	3.7	0.45	2.5	0.35	4.707	0.002
Challenge and support	2.6	0.55	2.26	0.49	1.037	0.33
Innovation	3.4	0.31	3.1	0.26	1.651	0.137

3.6 Competency frequency statistics results

The total frequency of the mental health education activities of all the mental health education activities mentioned by the 10 subjects during the interview was ranked from high to low. The results are shown in Table 6.

It can be seen from Table 6 that among the 12 features of the mental health education activity feature model for all employees of mental health education, interpersonal understanding and communication, self-regulation and control, respect for students, student service orientation, and promotion of student development appear more frequently than other features, which shows that for all psychological teachers in mental health education

colleges and universities, these 5 characteristics are more important than other characteristics.

Table 6 Competency frequency statistics.

Sort	Competency name	Frequency	Sort	Competency name	Frequency
1	Interpersonal understanding and communication	33	7	Self-confidence	22
2	Self-regulation and control	30	8	Professional knowledge and skills	20
3	Respect students	28	9	Reflective ability	19
4	Student service orientation	27	10	Analytical thinking	18
5	Promote student development	25	11	Organisation and coordination	16
6	Influence	22	12	Desire for achievement	15

4 Discussion

(1) The results of this research use the behavioural event interview method, through empirical research and analysis, to initially construct a model of mental health education activities for all employees. It includes the following 12 competencies: interpersonal understanding and communication, respect for students, student service orientation, self-regulation and control, self-confidence, desire for achievement, and influence, promote student development, organisation and coordination, professional knowledge and skills, analytical thinking and reflective ability. Comparing this result with the opinions of relevant scholars and experts at home and abroad, it is found that they have greater consistency.

For example, the main requirements of the International School Psychology Association for school psychologists include mastering the core knowledge of psychology, developing professional decision-making capabilities, strengthening interpersonal communication skills, mastering design and research skills, understanding ethical knowledge and establishing professional values, and focusing on seeking problem-solving skills required for professional practice, etc. The research shows that the differential equations of the full-staff mental teachers in mental health education colleges and universities are consistent with the characteristics of professional knowledge and skills, interpersonal understanding and communication, student service orientation and analytical thinking ability. The research of Chen Hong and Ye Yadao shows that the competence of all-staff mental teachers in school mental health education should include the following aspects: possessing school mental health education concepts, possessing professional personality traits, solid professional knowledge, and possessing professional skills or abilities, professional duties and professional ethics, professional personality tendencies and self-identity. This shows that the judgement of the characteristics of mental health education activities for all employees in mental health education is relatively consistent in terms of professional knowledge and skills, self-confidence, student service orientation, respect for students and promotion of student development. Zeng Ling Juan's research believes that the competence characteristics of all psychological teachers in mental health education colleges can be summarised as professional philosophy and professional awareness, professional personality traits, professional knowledge and skills, etc. This is basically consistent with the conclusion of this research to a large extent [6, 7].

Xu Jianping's research also shows that the competencies of all psychological teachers of excellent colleges and universities include 11 features such as initiative, sense of responsibility, understanding of others, self-control, professional knowledge and skills, emotional awareness, challenge and support, self-confidence, conceptual thinking, self-assessment and efficiency. The competencies shared by all psychological teachers in colleges and universities include 11 characteristics such as organisation and management ability, integrity, creativity, tolerance, teamwork, reflection ability, professional preferences, communication skills, respect for

others, analytical thinking and stable emotions. This research conclusion is basically consistent with the competency characteristics of interpersonal understanding and communication, professional knowledge and skills, self-regulation and control, self-confidence, respect for students, analytical thinking, reflective ability, organisation and coordination in this research; student service orientation, desire for achievement, influence and promotion of student development are the unique competency characteristics of all psychological teachers in mental health education colleges. This shows that professional knowledge and skills, interpersonal understanding and communication, self-regulation and control, self-confidence, respect for students, analytical thinking and other competency characteristics are the common competence characteristics of all college psychological teachers in this profession, and they serve as mental health education. All college psychological teachers also need to have the competence characteristics of student service orientation, desire for achievement, influence and promotion of student development. These are also key elements that must be possessed to do a good job of mental health education.

(2) According to Spencer's classification of competency characteristics, this research divides the many competency characteristics contained in the differential equations of all mental teachers in mental health education colleges into help and service (interpersonal understanding and communication, respect for students and student service orientation), personal efficacy (self-regulation and control, self-confidence, desire for achievement and influence), management skills (promoting student development, organisational coordination), cognitive dimensions (professional knowledge skills, reflective ability, analytical thinking) and other 4 competency characteristics groups. This result is also similar to the research results of related experts on the characteristics of all-staff mental health education activities. For example, in June 2000, Hay caber submitted a report titled 'High-Performance University Full-Staff Psychological Teacher Model' to the U.S. Department of Education and Employment, proposing five competency groups for full-staff psychological teachers in high-performance colleges including specialisation (challenge and support, confidence, creation of trust and respect for others), leadership (flexibility, having responsible friends, managing students and enthusiasm for learning), thinking (analytic, conceptual), planning/setting expectations (Upward motivation, information search and initiative) and relationships with others (influence, teamwork and understanding of others). The management skills and cognitive dimensions in this study can basically correspond to their leadership, thinking and other dimensions. Although there are certain differences in the naming of the dimensions, the competencies corresponding to the dimensions are quite similar [8,9].

(3) This study compares the total frequency of the mental health education activity characteristics of all employees mentioned in the interview process. The results show that among the 12 characteristics of the mental health education activity model for all employees, the top 5 in terms of frequency of occurrence are interpersonal understanding and communication, self-regulation and control, respect for students, student service orientation and promotion of student development. This shows that for all psychological teachers in mental health education colleges and universities, the first thing they should have are interpersonal understanding and communication, self-regulation and control, respect for students, student service orientation and promotion of student development [10]. Comparing this conclusion with Xu Jianping's research results, it can be found that the characteristics of professional knowledge and skills, organisational management capabilities and analytical thinking are more important for general college psychology teachers. The results of this research show that interpersonal understanding and communication, self-regulation and the five characteristics of control, respect for students, student service orientation and promotion of student development are more important for all psychological teachers in mental health education colleges. This shows that all psychological teachers in mental health education colleges and universities emphasise the characteristics of promoting student development, helping and respecting students, while all college psychological teachers in other disciplines pay more attention to professional knowledge and skills, organisational management capabilities and analytical thinking. The characteristics of knowledge.

5 Conclusion

In this study, the mental health education activity characteristic model for all employees of mental health education includes four dimensions of help and service, personal effectiveness, management skills and cognition, with a total of 12 competency characteristics. The 12 competencies are interpersonal understanding and communication, respect for students, student service orientation, self-regulation and control, self-confidence, desire for achievement, influence, promotion of student development, organisation and coordination, professional knowledge and skills, analytical thinking and reflection ability. Among the 12 characteristics of the model, the top 5 are interpersonal understanding and communication, self-regulation and control, respect for students, student service orientation and promotion of student development.

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