

Research of the Training Program for Rural Order Directed Medical Students based on the Competence Model

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Abstract. Objective competency model based on primary health care staff positions, orders directed to develop rural medical students training program to provide a basis. Methods 145 primary care health personnel questionnaire, exploratory factor analysis, combined with expert advice, build rural health staff positions Competency Model, oriented medical students training program based on the model developed by the Rural orders. Results competency-based primary health care staff positions feature seven feature group total 25, respectively professionalism, professionalism, achievement characteristics, management features, service features, impact characteristics and personal characteristics, to develop realistic "3.5 + 1.5" Rural Order directed training program for medical students. Conclusion Primary health care staff positions Competency Model and the corresponding job duties associated with height, can be directed medical students training program for rural development of the order to provide theoretical guidance.

Introduction

Currently, competency research is increasingly widely used in human resource development and evaluation of them. Although the country will also start on the competence of health professionals to study, but the primary care health personnel competency has not been systematically studied. Therefore, this article attempts to construct basic medical and health staff positions our competency model, competency model based on primary health care staff positions, orders directed to develop rural medical students training program to provide a basis.

Materials and Methods

First, the object. Ganzhou in Jiangxi Province is under the jurisdiction of eighteen counties (cities, districts) in the post-service primary care health workers.

Second, the method. Homemade "primary health care staff positions Competency Questionnaire", under the jurisdiction of the Ganzhou City eighteen counties (cities, districts) into primary health care units suburban community health centers, hospitals, town centers, rural hospitals three levels according to the principle of stratified random sampling, were selected 29 primary health care units of 145 health workers conducted a questionnaire survey, according to the survey to rate the importance of each item in the questionnaire score at 1-5 between very important 1 point, 2 points is not important, usually 3 points, 4 points is important, very important 5 points.

Third, the survey content. Participated in the survey questionnaire contains a primary care health workers age, sex, education, job title, work experience in rural work departments and other basic items of information.

According to primary health care workers job requirements, combined with literature review and expert consultation method to establish the "primary health care staff positions Competency Dictionary", contains 38 and job-related competency project, including: Q1 (human spirit) ; Q2 (realistic spirit); Q3 (adventurous); Q4 (life values); Q5 (Medical Ethics spirit); Q6 (dedication); Q7 (expertise and relevant knowledge); Q8 (basic clinical skills); Q9 (thinking ability); Q10 (clinical observation); Q11 (health Promotion and disease prevention); Q12 (the basic public health service

capacity); Q13 (medical service capacity); Q14 (achievement orientation); Q15 (initiative); Q16 (career interests); Q17 (learning); Q18 (innovation capacity); Q19 (focus on medical quality); Q20 (information management); Q21 (Scholastic); Q22 (time management); Q23 (team leader); Q24 (teamwork); Q25 (clinical decision-making skills); Q26 (sense of service patients); Q27 (patient); Q28 (interpersonal skills); Q29 (interpersonal skills); Q30 (interpersonal skills); Q31 (principle); Q32 (confidence); Q33 (love); Q34 (compassion); Q35 (responsibility); Q36 (frustration ability); Q37 (adaptability); Q38 (adaptability).

Fourth, data analysis. The results of the survey, the use of SPSS 14.0 for data entry, statistical analysis.

Fifth, establish competency model. Based on the analysis result, competency assumptions, definitions and descriptions of competency, factor analysis, to build grass-roots health care staff positions Competency Model.

Result

First, data compilation. Issued a total of 145 questionnaires were sent out 145, the recovery rate of 100%. The vacancy rate of over 50%, or obvious logic errors questionnaire as invalid, a total of 140 valid questionnaires, the effective rate was 96.6%.

Primary health workers Basic information: Age 30 years of age dominated (66.3%); no gender differences (men 50.3%, women 49.7%); college education to mainly (56.8%), supplemented by secondary school (31.1%), undergraduate accounting for only 12.1%; junior titles in the main (61.7%), senior titles only 3.6%; rural work experience to 10 years mainly (72.3%), more than 30 years was only 5.8%; work with departments internal medicine, pediatrics mainly (78.2%). The statistical analysis showed that the basic situation of the respondents had no correlation with subsequent options.

Second, the statistical results. Competency Dictionary 38 entries based on the quality of primary health care staff positions. Using a five-point Likert scale way to prepare a "basic medical and health personnel competency Checklist." 5-stage scoring system, asked respondents according to their engaged position to answer for the quality of the degree of importance of each entry. Primary health workers score each competency in Table 1.

In addition to the questionnaire Q3 (adventurous) 3.86 points and Q32 (confidence) average of 3.98 points in 4 feature two points or less, the other 4 or more, indicating that the overall index for the survey questionnaire more recognized. Competency in, Q8 (basic clinical skills) and Q7 (expertise and relevant knowledge) averages of 4.42 and 4.41, the highest of the two, indicating that respondents believe that primary health care workers to master the most important is the clinical basic skills, and well-known expertise and relevant knowledge. Good doctors can provide medicine for local grassroots residents quality services; competency, the standard deviation "consciousness serve patients," the smallest of 0.663, reflecting the consensus of competency is primary health care staff.

Table 1 primary health care personnel Competency descriptive statistical analysis (n = 140) (unit: minutes)

Characteristics		Min	Max	Min	Max	features	mean	deviation	mean	deviation
Q1	2	5	4.27	0.804	Q20	2	5	4.23	0.765	
Q2	2	5	4.02	0.850	Q21	2	5	4.26	0.780	
Q3	1	5	3.86	0.772	Q22	1	5	4.08	0.772	
Q4	1	5	4.15	0.733	Q23	1	5	4.18	0.772	
Q5	1	5	4.16	0.843	Q24	2	5	4.29	0.796	
Q6	2	5	4.19	0.800	Q25	2	5	4.19	0.754	
Q7	3	5	4.41	0.816	Q26	1	5	4.04	0.663	
Q8	4	5	4.42	0.786	Q27	1	5	4.12	0.805	
Q9	3	5	4.39	0.804	Q28	2	5	4.19	0.800	
Q10	2	5	4.03	0.835	Q29	3	5	4.30	0.799	

Q11	2	5	4.34	0.836	Q30	1	5	4.13	0.824
Q12	2	5	4.33	0.790	Q31	1	5	4.14	0.842
Q13	2	5	4.31	0.861	Q32	1	5	3.98	0.809
Q14	1	5	4.06	0.849	Q33	2	5	4.18	0.674
Q15	1	5	4.07	0.868	Q34	2	5	4.15	0.760
Q16	2	5	4.14	0.763	Q35	2	5	4.18	0.753
Q17	2	5	4.33	0.779	Q36	1	5	4.04	0.777
Q18	2	5	4.14	0.824	Q37	1	5	4.07	0.763
Q19	1	5	4.11	0.830	Q38	1	5	4.16	0.727

The results of the survey conducted exploratory factor analysis, the primary health care staff positions competency structure dimensional features of the model. Principal component analysis, the orthogonal rotation, according to the Kaiser criteria, is extracted with eigenvalues greater than 1, the factor loading factor greater than 0.45. The results showed that KMO (Kaiser-Meyer-Olkin) 0.87, greater than 0.7, Bartlett spherical test is 15640.93 x 2 degrees of freedom 140, P = -0.00 reached a significant standard assumption of independence of each variable not established between the representative of the parent population correlation matrix of common factors, suitable for factor analysis. After orthogonal rotation factor can be extracted eigenvalues greater than 1, a total of six, six factors cumulative variance contribution rate of 68.72 percent, the cumulative variance contribution factor greater than 60% is considered a high variance contribution rate, Construct Validity good, Table 2.

Table 2 Competency factor eigenvalues, variance contribution rate and cumulative variance contribution

Cl	variance	variance%	accumulation%	The total variance	variance%	accumulation %	The total variance	variance%	accumulation %
1	26.12	40.91	40.91	26.12	40.91	40.91	10.55	26.78	26.78
2	3.06	7.77	48.68	3.06	7.77	48.68	4.66	11.83	38.61
3	2.27	5.76	54.44	2.27	5.76	54.44	3.45	8.76	47.37
4	1.88	4.77	59.21	1.88	4.77	59.21	3.01	7.64	55.01
5	1.43	3.63	62.84	1.43	3.63	62.84	2.05	5.20	60.21
6	1.31	3.32	66.16	1.31	3.32	66.16	1.96	4.97	65.18
7	1.01	2.56	68.72	1.01	2.65	68.72	1.39	3.54	68.72
8	0.98	2.48	71.20						
9	0.94	2.39	73.59						
10	0.93	2.36	75.95						
11	0.90	2.28	78.23						
12	0.87	2.21	80.44						
13	0.85	2.16	82.60						
14	0.83	2.11	84.71						
15	0.78	1.98	86.69						
16	0.76	1.93	88.62						
17	0.73	1.85	90.47						
18	0.71	1.82	92.29						
19	0.66	1.68	93.97						
20	0.61	1.55	95.52						
21	0.53	1.36	96.88						
22	0.48	1.22	98.10						
23	0.42	1.07	99.17						
24	0.33	0.83	100.00						

In principal component analysis extracted factor structure as the basis, combined with the

elements of meaning and primary health care institutions work requirements for health personnel, remove some elements of the few elements were combined to give the final seven factors, including a total of 25 elements. Named for the factor obtained after the primary health care staff positions competency model (Table 3).

The first group of content features include human spirit, life values. These features is the medical profession's requirements, will be named as "professionalism." The second feature of the content group including professional knowledge and basic skills, clinical thinking, clinical observation, health promotion and disease prevention, basic public health service capacity, medical service capabilities. These features are in clinical practice requires knowledge and the skills of description, named "professionalism." A third group of content features, including the orientation of achievement, career interests, learning ability, innovation, attention to quality of care, information management ability, academic ability, time management, these characteristics are the better performance of consciousness and behavior, will be named "achievements feature." Content fourth feature groups including team leadership, teamwork, clinical decision-making ability. These features reflect the health personnel leadership, management and decision-making capacity in the medical team, which was named "management features." Content fifth feature groups of patients including service awareness, patience, reflecting the health staff patient service features, will be named "service features." Content sixth feature groups for communication skills, reflecting the health personnel to communicate effectively in the work, which was named "Impact Features." Content seventh feature groups include responsibility, resilience, adaptability, these three features reflect the inherent quality of the individual, which was named "personal characteristics."

Table 3 primary health care staff positions Competency Model

Features on competency project

Professionalism human spirit, life values

Professionalism professional knowledge and basic skills, clinical thinking, clinical observation, health promotion and disease prevention, basic public health service capacity, medical services capability

Achievement Achievement Orientation feature, career interests, learning ability, innovation, attention to quality of care, information management ability, academic ability, time management

Management feature team leadership, teamwork, clinical decision-making skills

Patient service feature service awareness, patience

Impact characteristics of communication skills

Personal features responsibility, resilience, adaptability

Discussion

First, the competence and Responsibilities. Competency [2] is capable of a job (or organization, culture) in outstanding performance and average performers distinguish individual potential, deep-seated characteristics. Competency Model, refers to as the sum of the competency of a particular task roles need to possess. In this study, primary health care institutions work activities made a description and classification, the main content and clear mandate. Primary health care staff positions Competency Model and job responsibilities to build highly relevant, reflects the modern concept of medical services, highlighting the characteristics of primary health care, primary care

requires health workers not only have a solid comprehensive clinical knowledge and skills, but also have good professional quality, management capacity, service awareness, communication skills, etc., so that the people of the grassroots medical service satisfaction.

Second, the application of the competence model. Primary health care staff positions Competency Model show that can truly measure the health workers or key factors influence clinical performance not just clinical knowledge and skills and other professional quality, but also by professionalism, achievement characteristics, management features and service features, impact characteristics, personal characteristics combined effects. Primary health care staff positions Competency Model for rural Order directed the development of medical students' training program laid the foundation can provide an objective basis in primary health care personnel selection, training, etc. for primary health care units of human resource management and development to provide a species effective management methods [6].

Third, the development of rural orders directed training program for medical students. According to competent primary health care staff positions force model, combined with the actual situation of school education and regional economic and social development needs, develop realistic "3.5 + 1.5" directional Order rural medical students training program, namely three and a half in school, clinical medicine, preventive medicine and community health services internship year and a half. By working closely with local government, personnel training to establish long-term mechanism for the township (community) health units continuously transported undergraduate qualified personnel to do the people's satisfaction of Higher Education.

Cultivate all-round development of moral, intellectual, physical, and aesthetic aspects of a good professional ethics and professionalism, clinical ability, creativity, practical skills and lifelong learning ability to adapt to the township and community health development needs to master the rural health care, prevention, basics of health care and public service requirements, the basic theory and basic skills after graduation to engage in general medical and health work in rural medical institutions of high-quality application-oriented medical personnel.

Course System includes theoretical and practical teaching two parts, including ideological and political theory teaching class and human qualities, public base class, the base class professional, professional classes and elective classes five course modules. Including ideological and political theory, medical ethics, sports, English, medical chemistry, computer applications, human anatomy, histology and embryology, physiology, biochemistry and molecular biology, immunology, pathogen biology, disease pharmacology, pathophysiology, pharmacology, diagnostics, preventive medicine, internal medicine, surgery, obstetrics and gynecology, pediatrics, community health service management, grass-roots public health service capacity and methods in medicine, rural common disease diagnosis main course and treatment, primary health care and basic clinical skills of medical technology, the basis of general medicine, emergency medicine.

Including experimental teaching practice teaching (including the Medical Research Methods Introduction to medical form skills, medical skills, functional, medical analysis and testing skills, medical skills to learn basic clinical), clinical practice (including clinical recess trainee), dispersion trainee, focus trainee), basic clinical skills and basic medical treatment techniques, preventive medicine practice, graduation clinical practice, research and extracurricular skills training, school education and military training, community service and social practice.

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