

Research on Factors Influencing the Service Ability of Family Doctors in China

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Abstract

Under the current situation, medical and health system reform has entered a deeper level, while family doctor system is an indispensable part of deepening medical and health system reform, as well as key point, difficult point and hot point in the current reform of primary health care. In this context, the research on the factors affecting the service ability of family doctors can not only enrich the existing researches, but also provide scientific reference for policy making. Firstly, this paper sets up a theoretical model influencing the family doctor service ability from the aspects of relationship, active personality and work enrichment sense; then, questionnaire is designed to obtain the sample data; finally, with the help of regression analysis model, the causal relationship between variables is verified. Research shows: career goals have a significant positive impact on improving service capabilities, the job enrichment sense plays a partial mediating role between relationship quality and service ability, and the proactive personality has a positive moderating effect on the relationship between residents and service ability.

Keywords: Family doctor; service capability; regression model; mediating effect; moderating effect.

1 Introduction

Currently, medical and health system reform has entered a deeper level in China, while family doctor system is an indispensable part of deepening medical and health system reform, as well as key point, difficult point and hot point in the current reform of primary health care. For examples, in 2009, the *Opinions of the CPC Central Committee and the State Council on deepening the reform of the medical and health care system* had put forward clear opinions on establishing family doctor system, carrying out community public health service model based on family doctor, and gradually realizing the first appointed medical and referral system of family doctor (He Xiaolin, Liang Hong, 2012; while in 2010, the *Guiding opinions of the State Council on establishing the system of general practitioners* had put forward a package of proposals to establish family doctor system; and in 2016, Medical Reform Office and other seven departments of the State Council had issued the *Notice on the issuance of guidelines for the promotion of family doctors signing services*, therefrom, family doctor system had become an important content and direction of deepening medical reform (Medical Reform Office of the State Council, 2016).

Carrying out family doctor service is the inevitable trend of deepening medical and health system reform, from the formal proposal to establish the family doctor system, dozens of cities like Shenzhen, Beijing, Chengdu, Shanghai had actively carried out a family doctor signing service pilot for useful exploration, and accumulated some practical experience (Chen Bihua, et al, 2013). However, under the background of the aging of population, the high incidence of chronic diseases and the difficulty of seeing a doctor, family doctor service faced great challenge (Tan Linglin, 2014). What's more, in the promotion process of family doctor system, there existed the phenomenon of being signed but not contracted, it also showed that the blind pursuit of the signing rate had little actual effect on institutional reform. The experience in Shanghai, Beijing and other pilots also showed that if the family doctor service capacity could not be raised, the quality of service could not let satisfy the contracted residents, thus, the renewal rate in some communities dropped a lot.

Meanwhile, the promotion of the family doctor system needs to form a positive cycle system. Family doctor service ability, residents' willingness to sign and execute contracts, government investment in primary health care, and the establishment of grading diagnosis and treatment system are mutually influenced. Only the family doctor service ability improved to meet the needs of residents, can allow residents to satisfy after after initial signing because of various reasons, and increase the willingness of the residents to renew the contract. And only the residents signing rate, and the number of people seeking medical care in the community increased, will the government continue to increase investment in the grassroots. The increase in government investment, will be able to improve the service ability of the grassroots, so as to achieve the primary diagnosis, two-way referral grading diagnosis and treatment system in grass-roots unit.

In such a closed loop with mutual dynamic interaction, the most important thing is to change the current medical thinking and health management awareness or residents. The establishment of family doctor system is to achieve the purpose of health care reform by changing the behavior of residents. Many empirical studies had shown that the service ability and service quality of family doctors were the final decision variables that affect the residents' willingness and behavior (Teng Li, 2016). Therefore, the improvement of the service ability of

family doctors will be the most important research topic after the establishment of macro operation mechanism of family doctor. The existing empirical studies on the family doctor service ability mainly focus on the outcome variables, such as the positive impact on service capacity for residents signed intention, signing rate, renewal rate, first attending choice, but, there are rare researches on the antecedents influencing the improvement on the service ability of family doctors. In this context, the research on the factors affecting the service ability of family doctors can not only enrich the existing research, but also provide scientific reference for policy making.

2 Literature Review

2.1 Vocational goals

The vocational goal is an individual's own setting, the career outcomes achieved by hard work (Greenhaus et al., 2009). The establishment of vocational goals is the individual's belief system on the meaning of career success, professional achievement standards (Seibert et al., 2013). The vocational goals reflect the subjective assumptions of the family doctors in the practice and service activities. The realization of the professional goal requires the individual to carry out the plan and actual action step by step. A clear career goal has an impact on the individual's job performance and professional ability. Career goals can stimulate and sustain the efforts of family doctors to achieve their goals in practice and service activities. Through the enhancement on the subjective motives for achieving goals, it can promote the family doctor to demonstrate their ability in actual work, make their actions more effective, and continuously improve service capability. A large number of research results have verified that career goals have a positive impact on individual pay increase, career advancement, job performance and career satisfaction (Locke, Latham, 2002).

Career goals can be set to the expectations for specific jobs, such as to become a general practitioner or administrator, they can also be set to the direction of career development, such as job level, salary, etc., as well as some professional attributes of individuals want to achieve in a particular job, such as power, influence, job interest, job challenge, social recognition, social contribution, etc. (Seibert et al., 2013). According to the difference of the motives involved in the targets, they can be divided into the internal and external goals. The intrinsic career goal emphasizes the individual's expectation of success in the professional activities. Correspondingly, the external career goal is the expectation of individuals on the external feedback brought by vocational activities in the career, such as promotion of status, high salary, etc...

2.2 The quality of resident relation and colleague relation

The word "relationship" has many meanings in Chinese Context, because of its important position in the social life of our country, a large number of scholars have studied the "relationship" from various perspectives. In this paper, the relation refers to an interaction formed by the family doctor with service objects and working colleagues in the working process, on the one hand, this interaction affects the mutual cognition and recognition of both sides, on the other hand, such cognition and recognition also conversely affect the attitude and behavior of family doctors in their work.

Essentially, relationship is a kind of interactive behavior in the process of interpersonal communication, this interaction is a process in which both parties participate and exchange with each other Spreitzer et al., 2005. As the quality of the relationship will affect the psychology of family doctor in practice process (Dinkel et al., 2016), as well as the behavior, therefore, in this study, we believe that the quality of relationship will affect the motivation of family doctor in improving service ability. In the working situation, the good relationship quality can promote the active behavior of the individual, and affect such outcome variables as satisfaction, innovation behavior and work performance.

There are two main relationships formed in the working situation of family doctors: one is the service relationship with contracted resident, and the overall performance of this service relationship quality can be measured with the mass acceptance; the other one is working relationship with colleagues, called as colleague relation.

2.3 Work enrichment sense

Work enrichment sense contains two parts: emotion and cognition. Emotion refers to the individual's feeling of being alive in the working situation. Cognitive part refers to the feeling of individual on the acquisition of new knowledge and skills in working process. When an individual is in an enrichment state in work, he/she will feel full of energy, and believes they can continue to learn and grow in the application process of knowledge and skills. Emotion and cognition are two dimensions to measure the sense of job enrichment, including two kinds of experience of energetic and continuous learning. These two kinds of psychological states promote each other to form a strong sense of enrichment experience.

In the positive role felt by individuals in the measurement work, self-immersion, verdure and other concepts are generally used academically. Self-immersion refers to the full input state of individuals in a specific activity, such as work, study, life, etc. The state of verdure refers to the state of being alive of individuals in

psychological and external behavior. The difference between job enrichment and this concept is that job enrichment more emphasizes the growing experience of individuals in working situation (Kaplan, Berman, 2010). This experience is reflected by the two feelings of vitality and learning.

When measuring the work enrichment sense, we should consider the two dimensions of dynamic experience and learning experience at the same time. Only paying attention to these two dimensions at the same time, can the immediate experience and consciousness of the individual be combined with the necessary process for the long-term development? It is just because the work enrichment sense can unify the psychological experience of the work process and the long-term development of the individual that it can be an important antecedent to enhance the ability of the individual.

2.4 Proactive personality

Work enrichment sense is the individual's experience in the work situation, such experience is in a variable state, rather than a relatively stable personality. This state of experience is temporary and subject to changes in the environment, with strong variability. While the personality is inherent in the individual, which is relatively stable, not easily affected by changes in the outside world (Wallance et al., 2013).

Different from work enrichment sense, active personality is a tendency for individuals to take action to influence their surroundings. This tendency is relatively stable, and not easily affected by the outside world. Active personality is one of the driving forces for individual to take active actions in their work. Individuals with active personality are more active and persistent in their work, and willing and brave to change their environment. Individuals with active personality traits are more likely to achieve innovative behavior (Geertshuis et al., 2014). There are also study evidences that motivated individuals may also bring losses at work due to their courage of trial and error, but, in whole, research evidences have still verified that the proactive personality has positive significance to the development of individual career.

3 Hypothesis

3.1 Hypotheses and Variables

Strong sense of work energy can better facilitate family doctors to continuously improve their service ability in actual work, for its having two dimensions of energy and learning. In contractual service, if the family doctors only have learning experience, and they cannot feel the happiness from work, they would not have sustained energy. Although learning may arouse the family doctors' motivation of working with all their energy in a short time, if they cannot be full of energy in work, long-term learning would keep this motivation, but if there is no energy, family doctors would get tired. If family doctors only have energy in work, their sense of achievement would slowly fade away in repeated and long-term, for they cannot feel the continuous progress from the work, although the energy will give them the sense of achievement in work in a short time. Only when family doctors are full of energy and feel that they are growing, can it stimulate them to continuously learn and constantly improve their service ability.

Career objectives can lead individual to determine the direction for efforts, stimulate individual to enthusiastically work and continuously keep a motivation to achieve objectives (Locke, Latham, 2002). In working situation, individual having specific objectives make achievement of career in a more planned and orderly way, and thus the individual will pay more attention to whether specific work will bring long-term benefits or not. Intrinsic career objectives can facilitate family doctors in contractual service to feel the reflection of individual value and to be more willing to accept the challenging work. Extrinsic career objectives can also make family doctors driven by expectation on the realistic benefits in the future pay more attention to attain long-term growth through practical work. Hence, family doctors with clear career objectives are stronger in the happiness given by work and the practical feedback than those of individual not having clear objectives, and the former pay more attention to the working situation to experience the strong sense of work energy.

High-quality relationship between family doctors and residents will enhance the strong sense of work energy of family doctors. High-quality relationship can improve the sense of belonging and facilitate family doctors to continuously explore and study (Cullen et al., 2015). If family doctors keep high-quality relationship with colleague in practice, it would not only promote the information sharing and exchange in their work, but also improve their exchange in technological and professional knowledge. At the same time, it will also reduce conflict, increase the mutual help behavior and strengthen the sense of belonging.

Family doctors with strong proactive personality trend can actively link the actual problems with learnt knowledge and experience in actual work so then transform specific solution to diagnosis and treatment provided for residents. During contractual service, family doctors will also actively contact residents to proactively help them to solve problems about medical health and they are be adept in initiatively establishing and maintaining relationships. Family doctors with strong proactive personality trend also accommodates easily to situation conversion and can actively and continuously strengthen and apply knowledge and professional skills in practice.

The improvement of service ability of family doctors depends on the common effect and influence of

external objective factors and the internal factors of family doctors. Existing researches show external factors, including government increasing financial investment and developing general medical practitioner training can strengthen the service ability of family doctors. In fact, only those external factors are converted into the experience of family doctors in actual work, can they facilitate family doctors to strengthen the motivation of improving their service ability and action of improving their service ability from themselves? Based on said analysis, the following hypotheses are proposed.

Hypothesis 1: intrinsic career objectives can improve the service ability through the strong sense of work energy of family doctors.

Hypothesis 2: extrinsic career objectives can improve the service ability through the strong sense of work energy of family doctors.

Hypothesis 3: resident relationship can improve the service ability through the strong sense of work energy of family doctors.

Hypothesis 4: the quality of colleague relationship can improve the service ability through the strong sense of work energy of family doctors.

Hypothesis 5: strong sense of work energy plays a positive role in improving the service ability of family doctors.

Hypothesis 6: proactive personality plays a positive-regulation role in the experience that career objectives and relationship quality influence the strong sense of work energy of family doctors.

3.2 Research Sample

Data were collected through questionnaires and interviews, the respondents were family doctors and staff of the Community Health Centers in Shushan district and Baohe District of Hefei city. A total of 117 questionnaires were issued, and a total of 102 copies were taken back. In order to ensure the reliability of the data, the non-compliance questionnaires were rejected. Finally, 80 valid questionnaires were retained as the study sample.

Table 1 Descriptive statistics of the overall sample (Study sample for family doctor, N=80)

Name	Type	Number of people	Percentage
Gender	M	52	65.0%
	F	28	35.0%
Age	<25 years old	2	2.5%
	25-35 years old	34	42.5%
	35岁-45 years old	26	32.5%
	>45 years old	18	22.5%
Highest education	High school / technical secondary school and below	4	5.0%
	Junior College	29	36.3%
	Undergraduate college	37	46.2%
	Master	10	12.5%
	PHD	0	0%
Title	No title	14	17.5%
	Primary	36	45.0%
	Intermediate	16	20.0%
	Deputy senior	12	15.0%
	Senior	2	2.5%
Employment form	On regular payroll	38	47.5%
	Labor dispatch system	12	15.0%
	Temporary contract system	16	20.0%
	Others	14	17.5%
General practitioner qualification	Qualified	47	58.8%
	Unqualified	33	41.2%
Average working hours per day	8 hours and below	46	57.5%
	9-10 hours	32	40%
	11-12 hours	0	0%
	12 hours and above	2	2.5%
The proportion of the average daily working hours to total working hours per day	<20%	12	15.0%
	20%-40%	27	33.8%
	40%-60%	30	37.5%
	60%-80%	10	12.5%
	80%-100%	1	1.2%
Family doctor service model	Family doctor + community nurse	56	70%
	Family doctor + Information Assistant		
	Family doctor + community volunteer		
	Family doctor studio	9	11.2%
	Family Physician Consortium		
	Others	15	18.8%

According to the descriptive statistical analysis of sample data, the majority of respondents were male, the proportion was 65%. The age distribution of respondents was more concentrated, mainly at 20-45 years old, accounting for 75%. Of these respondents, there were some family doctors neither had titles, nor payroll, at the same time, there were some not passing general practitioner certification. In terms of working hours, nearly half of the family doctors spent more than 40% of the time every day engaging in family doctor related matters, which meant that they worked every day for nearly 10 hours.

3.3 Variables measurement

In addition to the diversified problem measurement used for variables reflecting the basic characteristic information about the residents and family doctors, the measurement of all variables adopts Likert Five-point Scale. "1-5" represents "in full disagreement-in full agreement". The measurement of variables is as follows:

Dependent variable

Service ability. Due to currently lack of the empirical research and scale for the service ability of the family doctors, for the research in combination with literature review and Delphi Method and in combination with the main service contents of the family doctors, the scale has been developed and revised. The scale includes four parts: 1. you feel that your health management ability is improved; 2. you feel that your basic diagnosis and treatment ability is improved; 3. you feel that your public health service ability (including the management of chronic disease) is improved; 4. You feel that your ability of two-way communication with residents is improved.

Independent variables

Career objectives. Such variable measurement includes internal and external dimensions. By reference to and with adaptation from the career objective scale developed by Seibert et al. (2013), including nine topics totally: 1. Family doctors can make me economically successful; 2. Family doctors can make me occupationally successful; 3. Family doctors can make me be considered as powerful individual; 4. Family doctors can make me obtain a high position in society; 5. Family doctors can make me continuously learn and grow during my occupational career; 6. The work of family doctors is very interesting; 7. Family doctors can make me obtain experience through various challenging tasks; 8. The occupational career of the family doctors can improve my different abilities; 9. The work of family doctors can make me have a positive effect on others or the society.

Resident relationship. Such variable measurement is by reference to and with adaptation from the client relationship scale developed by SUfrake-Jien (2013), including seven topics totally: 1. Residents in the jurisdiction and I have close relationship; 2. I spend much time in communicating with residents in the jurisdiction; 3. The signing object and I communicate with each frequently; 4. The signing object and I have good private relationship; 5. Residents in the jurisdiction will help me when I am in trouble; 6. The signing object will initiatively contact me; 7. The signing object highly recognizes my work.

Colleague relationship. Such variable measurement is by reference to and with adaptation from the colleague relationship scale developed by Ufrake-Jien (2013), including six topics totally: 1. Colleague and I have close relationship; 2. Other members from the family doctor service team and I can mutually support in work; 3. Other members from the family doctor service team and I support each other emotionally. 4. I am willing to help colleague to solve working problems; 5. Colleague will help me when I am in trouble; 6. Colleagues highly recognize my work.

Moderating variable

Proactive personality. Such variable measurement is by reference to and with adaptation from the scale prepared by Seibert et al. (1999) and Wu Wei (2015), including ten topics totally; for instance, no matter where I am, I can actively change the surrounding environment; once I firmly believe something, I will spare no effort to achieve it; I am always looking for better solutions and so on and so forth.

Mediating variable

Strong sense of work energy. Such variable measurement is by reference to and with adaptation from the scale of strong sense of work energy developed by Porat et al. (2012), including eight topics totally; 1. I often study in service work; 2. My knowledge and ability will increase through work; 3. I think that I am continuously improving in work; 4. I have learnt many new things through work; 5. I expect the coming of work on a new day and so on and so forth.

4 Analysis of influence factors

4.1 Quantitative analysis

Inspection on data reliability. The reliability and validity are important assessment indices for the quality measurement by the scale. They are many ways to measure the reliability, but Cronbach's α Coefficient is a reliability measurement method most commonly used. Higher reliability factor shows that the measurement result by the scale is more consistent, stable and reliable. The validity refers to effectiveness and its result should be in combination with the survey contents. The validity of the scale is analyzed to measure the effectiveness and

accuracy degree of the scale. The scale validity has been assessed in this Research from three aspects, including the content validity, the convergent validity and the discriminant validity of the scale.

Table 2 Cronbach's α value of Variables

Variables	Cronbach's α value
Service ability	0.868
Resident relationship	0.834
Colleague relationship	0.716
Internal career goals	0.814
External career goals	0.798
Strong sense of work energy	0.919
Individual initiative	0.756

SPSS19.0 Statistical Tool is used in this Research to calculate the Cronbach's α Coefficient. The measurement result shows that the coefficient values are more than 0.7 reference value (Nunnally, 1978), which means that the variables used in this Research are of higher internal consistency, and those variables can be deemed to pass the validity inspection.

The content validity analysis is to assess whether the measurement scale truly measures the contents expected to be measured. The scales used in this Research are repeatedly revised and then formed are based on the basically matured scales verified by other scholars through empirical researches and in strict accordance with the scale design procedure to ensure the variable measurement is of good content validity.

Table 3 Composite Reliability and Average Variation Extraction of Variables

Variable	Measuring item	Factor loading	Composite reliability	Average variation extraction
Career objectives	9	0.732-0.902	0.925	0.646
Service ability	4	0.724-0.930	0.958	0.619
Resident relationship	7	0.732-0.902	0.925	0.646
Colleague relationship	3	0.775-0.977	0.885	0.664
Individual initiative	4	0.709-0.927	0.928	0.607
Strong sense of work energy	10	0.717-0.901	0.942	0.682

Convergent validity analysis is to assess the relational degree of multiple measurement indices of variables. The factor load, composite reliability and the value of average variation extraction of the measurement indices are used to measure whether the convergent validity reaches the standard or not. As shown in Table 3, the factor loadings of all measurement indices exceed 0.7 and even up to 0.977, showing good significance (standard value is 0.50); the composite reliability of related variable is between 0.876 and 0.942, higher than the standard value, 0.70; the value of average variation extraction (AVE) is between 0.646 and 0.682, higher than the critical value, 0.50 (Bagozzi & Yi, 1988; Fornell & Larcker, 1981). The analysis of convergent validity for each variable shows that the convergent validity of measurement indices in this Research is better and the measurement result is reliable.

Table 4 Correlation coefficient of variables

Variables	Mean	S.E.	1	2	3	4	5	6
Career objectives	5.236	0.586	(0.888)					
Resident relationship	5.381	0.565	0.581**	(0.887)				
Colleague relationship	5.256	0.561	0.688**	0.667**	(0.811)			
Service ability	5.268	0.575	0.606**	0.587**	0.636**	(0.888)		
Strong sense of work energy	4.732	0.660	0.601**	0.507**	0.682**	0.667**	(0.816)	
Individual initiative	5.236	0.582	0.370**	0.386**	0.351**	0.338**	0.378**	(0.888)

Note: Diagonal value is square root of AVE value *. $P < 0.05$, **. $P < 0.01$, ***. $P < 0.001$.

The square root of AVE value and the correlation coefficient between any two variables are compared to verify the discriminant validity. The result in Table 4 shows that the AVE values of all variables are more than 0.50 and more than the correlation coefficient between any two variables, which shows that the discriminant validity of all variables is satisfactory.

4.2 Mediating effect

Mediating effect analysis. In SPSS19.0, the mediating effect is tested, firstly, the mediating effect of work enrichment sense in career goals (divided into internal and external goals) to enhance service capabilities is tested. Then, the mediating effect of work enrichment sense in relationship quality (divided into residential relations and peer relationships) to enhance service capabilities is tested. According to the mediating effect three step regression method proposed by Baron and Kenny (1986), the analysis process and results are shown in table 5 and table 6.

Analysis process: firstly, the regression of career goals (intrinsic career goals and external career goals), relationship quality (resident relation and colleague relation) to service ability is made, as shown in model 1. Then, the regression analysis of career goals, relationship quality to work enrichment is carried out, as shown in model 2. Finally, the regression analysis of career goals (intrinsic career goals and external career goals), relationship quality (resident relation and colleague relation) and job enrichment to service ability is conducted, as shown in model 3.

Table 5 Mediating effect of Strong sense of work in the relationship of career goals and service ability

Variables	Model 1	Model 2	Model 3
	Service ability	Strong sense of work	Service ability
Internal career goals	0.179*	0.113 (t=1.949)	0.140*
External career goals	0.291***	0.429***	0.177*
Strong sense of work			0.243***
R ²	0.167	0.247	0.200
ΔR ²	0.167	0.247	0.046
F	26.061***	43.471***	22.717***
ΔF	26.061***	43.471***	16.141***

Note: *. P<0.05, **. P<0.01, ***. P<0.001.

Table 6 Mediating effect of Strong sense of work in the relationship of relationship and service ability

Variables	Model 1	Model 2	Model 3
	Service ability	Strong sense of work	Service ability
Resident relationship	0.261***	0.326***	0.177*
Colleague relationship	0.187*	0.123 (t=1.726)	0.133*
Strong sense of work			0.233***
R ²	0.186	0.236	0.200
ΔR ²	0.186	0.236	0.038
F	28.081***	33.341***	22.414***
ΔF	28.081***	33.341***	18.131***

Note: *. P<0.05, **. P<0.01, ***. P<0.001.

Results: 1, the regression coefficients of the three independent variables (the internal career goal, resident relation, and the colleague relation) to the dependent variables were all significant, while the regression coefficients of external career goals and dependent variables (service ability) were not significant. 2, the regression coefficients of the four independent variables to mediating variables reached the significant level. 3, after adding mediating variables, the regression coefficient of the colleague relation to service ability was still significant, and lower than that in model 1. 4, after adding mediating variables, the regression coefficient of the resident relation to service ability was changed from significant to insignificant. 5, after adding mediating variables, the regression coefficient of external career goal to service ability was changed from insignificant to significant.

4.3 Moderating effect

Analysis of regulating effect. In order to verify the moderating effect of the individual initiative and the service ability, the hierarchical regression analysis method is used in this research. Firstly the variables are centralized and then the result is obtained through the hierarchical regression, as shown in Table 7 and 8.

Table 7 Moderating effect of individual initiative in the relationship of goals and service ability

Variables	Service ability			VIF
	Model 1	Model 3	Model 3	
Internal career goals	0.364***	0.366***	0.331***	1.703
External career goals	0.333***	0.343***	0.334***	1.863
individual initiative		0.347***	0.373***	1.866
Internal career goals * individual initiative			0.180*	1.813
External career goals * individual initiative			-0.063	1.803
R ²	0.366	0.838	0.886	
ΔR ²	0.366	0.084	0.018	
F	67.734***	76.376***	83.773***	DW=3.083
ΔF	67.734***	31.864***	3.806*	

Note: *. P<0.05, **. P<0.01, ***. P<0.001.

Table 8 Moderating effect of individual initiative in the relationship of relationship quality and service ability

Variable	Service ability			VIF
	Model 1	Model 2	Model 3	
Resident relationship	0.365***	0.266***	0.321***	1.702
Colleague relationship	0.322***	0.253***	0.235***	1.493
Individual initiative		0.257***	0.272***	1.466
Resident relationship and individual initiative			0.140*	1.413
Colleague relationship and individual initiative			-0.083	1.402
R ²	0.386	0.434	0.448	
ΔR ²	0.386	0.045	0.014	
F	87.535***	76.279***	43.773***	DW=2.042
ΔF	87.535***	21.495***	3.408*	

Note: *. P<0.05, **. P<0.01, ***. P<0.001.

Table 7 shows that the product term coefficient of the intrinsic career objectives and the individual initiative is significant, which means that the individual initiative has obvious positive moderating effect on the relation between the intrinsic career objectives and the service ability of family doctors; the initiative does not have obvious moderating effect on the relation between the extrinsic career objectives and the service ability of family doctors. Table 8 shows that the product term coefficient of the resident relationship and the individual initiative is significant, which means that the individual initiative has obvious positive moderating effect on the relation between the resident relationship and the service ability; the initiative does not have obvious moderating effect on the relation between the colleague relationship and the service ability.

5 Conclusions and discussions

The higher the relationship quality, the better the improvement effect of service ability

It is found in discussing the influence of the resident relationship and colleague relationship on the improvement in the service ability of family doctors, that the qualities of those two relationships have positive effect on the improvement in the service ability of family doctors. The result shows, if family doctors have high-quality relationship resources, that is, good relationship with residents and colleagues, would enable family doctors to obtain the knowledge sharing and help by the colleagues, and at the same time to obtain more recognition and respect so as to stimulate family doctors to be more willing to explore and study and to improve their service ability.

Strong sense of work having mediating effect on relationship quality and service ability

Strong sense of work energy has partial mediating effect on the colleague relationship and service quality. The resident relationship not only has direct effect on the service ability of family doctors, but also influences the improvement in their service ability by means of enhancing the strong sense of work energy.

Strong sense of work energy can completely mediate the relation between the resident relationship and the service ability, which means that the active effect of the resident relationship on their service ability can only be achieved by stimulating the strong sense of work energy of family doctors. That is, one of key factors to continuously improve the service ability of family doctors is that family doctors establish high-quality relationship with residents in actual work and reveal positive psychological state of energy and learning in work.

Proactive personality having moderating effect on resident relationship and service ability

For family doctors with proactive personality, the positive influence of their relationship quality on the improvement in the service ability will be magnified. Analysis shows, for family doctors with active service awareness and learning attitudes, the influence of their high-quality relationship with residents on the improvement in the service ability is stronger than that of family doctors not actively providing services.

However, the research results show that the individual initiative cannot strengthen the relation between the colleague relationship and the service ability. This result shows although family doctors with strong individual initiative enhances the colleague relationship, they do not accordingly improve their service ability possibly for spending much time on learning, resulting in the failure of synthetic matching of those two factors, and then the positive and negative effects are offset and thus the moderating effect is non-significant.

Paying attention to establishment of relationship quality during the work by family doctors to stimulate their positive psychology

The implementation of family doctor system changes the original doctor-patient relationship to contractual relationship of family doctors and changes the single visit service mode to more diversified service mode with closer relationship with residents. It focuses more on the improvement in service ability during the work practice and interpersonal interaction. Compared with improvement in visit, this single technical ability, it is more difficult for family doctors to improve their service ability and increase service experience through two-way communication. For the solution to such problem, the family doctors are required to have certain interpersonal skill. In order to improve the ability of family doctors, they need to receive special education and training when

they take their post of duty.

Paying attention to construction of career development channel for family doctors and increasing salary

Research shows that the intrinsic career objectives has positive effect on the improvement in the service ability of family doctors, but related measurement values are not high, especially for extrinsic career objectives. In working situation, individual oriented to extrinsic career objectives pays more attention to the economic income and position promotion brought by the post. Current career development, position promotion and salary increase of family doctors have not had specific expectation.

Family doctors lack expectation on the income return and satisfaction of work value, which shows that currently family doctors can still participate in the contractual services although they are not satisfied with their materials, more dependent on the spirit of sacrifice. However, in a long run, if an effective income incentive mechanism matching with the labor provided by family doctors fails to be established, the income return satisfaction as the basis of demand is difficult to realize. In the society where the occupational position is closely related to the occupational income, it will directly influence the recognition level and satisfaction with the social status of family doctors in career comparison. If current expectation on the career treatment and career development of the family doctors cannot be improved, the career recognition and self-actualization spirit stimulated by the intrinsic career objectives will gradually exhaust and finally fade away.

Balancing relation between quantity and quality to realize win-win situation of residents and family doctors

The investigation shows that the integral level of participation initiative of current general medical practitioners in community service center for the reform of family doctor system and their work is rather high, but there is very obvious difference between different individuals. More than 25% general medical practitioners show that they are eagerly looking forward to the reform of family doctor system, but there are still 10% family doctors very reluctant to participate in the reform, and 30% family doctors have selected to passively accept the reform. However, for the stability expectation on the work of family doctors, there are still 1% family doctors having the turnover intention.

The contractual service mode and service concept of family doctors are required to change greatly. In specific work, the exclusive quantity theory should be abandoned, but more attention should be paid to the improvement in satisfaction of residents and to effective contract signing related to the service quality and service effect to avoid the contract becoming paper contract or false contract.

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