

How on-the-job training improves general practice service teams' understanding of GPs' roles in China: A qualitative case study

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Research article

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Abstract

Background:

China has introduced series of policies to improve the professional self-image of GPs, however, Chinese general practitioners (GPs) generally have a low professional identity. This study evaluated the effects of on-job-training for medical health professionals that focuses on the recognition of GPs' roles.

Methods

At a representative training base in Guangdong Province, the most economically developed province in Southern China, 62 workers from community health service centers underwent training for 6 months according to a before-after self-controlled design. A specific module related to professional value recognition was integrated into the training course. Trainees were invited to participate in the open-ended self-questionnaire survey. Thematic analysis was used to explore themes within the data. Kappa test was used to compare consistency of career prospects before and after the training.

Results

Before training, participants generally lacked a full and clear understanding of the professional responsibilities of GPs. After the training, participants showed increased awareness of six aspects of general medical practice including a broad understanding of the term, disease treatment, disease prevention, service mode, role of general services in promoting public health, and role of GPs in a service team. Moreover, 84% of participants had a positive opinion of GPs' career prospects and 90.3% preferred general practice to specialization as a career choice after the training. Current GPs preferred to become a specialist mainly for the higher salary, but current specialists preferred to be a GP for self-growth and sense of community.

Conclusions

These results demonstrate that appropriate on-the-job training can improve GPs' professional identity in China, and should therefore be included in policies and integrated into programs for medical health professionals.

Background

Since the 1980s, the health service system in China has emphasized medical care while ignoring disease prevention. One reason for this is the expansion of specialized medical services; with the increasing size and influence of top medical centers, highly competent doctors are constantly being recruited from smaller local hospitals, thereby diminishing service capacity at the latter. To address issues such as

congestion of medical services at high-level hospitals, tense doctor-patient relationships, and the increasing economic burden associated with the support of medical services, in 2009 the Chinese government implemented a series of health system reforms with the aim of establishing an extensive, high-quality network of community health services and changing the mode of health services from disease- to health-centered.

The government thus strengthened the training of general practitioners (GPs) and promoted the development of general practice services in communities. In 2010, the National Development and Reform Commission and six other ministries and commissions issued the Plan for The Construction of Community-level Medical and Health Teams Focusing on General Practitioners, which proposed that 300,000 GPs be trained through various channels by 2020, with the goal of having two to three GPs per 10,000 urban and rural residents.

The government adopted two major approaches to training GPs. One approach, known as “5 + 3”, consisted of 5 years of university study plus 3 years of standardized hospital training. Under this system, it took years for students to become qualified GPs. The second approach was the post transfer pattern, in which specialists from community health service centers were sent to a specific training base for a 2-year training course. After passing the examination and assessment, they would be qualified to practice general medicine. The latter was the main strategy used to increase the number of GPs and by April 2019, the total number of GPs trained in this manner had reached 150,000 ^[1].

In order to consistently improve the capabilities of GPs, various on-the-job training programs were implemented; by April 2019, an average of 130,000 GPs were being trained per year^[2]. However, despite the rapid increase in their numbers, GPs in China continue to exhibit low professional identity, as evidenced by the high turnover and job burnout rate. A survey conducted in Hubei province in 2015 showed that 78.35% of GPs had a moderate or high intent to resign^[3], and a national cross-sectional survey conducted from October 2017 to February 2018 showed that 41.19% of GPs experienced a high level of job burnout^[4]. Studies conducted in many provinces including Zhejiang, Shanxi, Jilin, and Anhui reported similar findings^[5-10].

Intent to resign and job burnout are related to professional identity^[11, 12]. However, there has been little research on the professional identity of GPs in China; it has been suggested that this is dynamic and depends on social context. A GP may have self-awareness with respect to his/her professional identity and a strong desire to consistently provide primary medical service to patients as well as public health and health management services^[13]. The low professional identity among Chinese GPs has been deduced from studies on job satisfaction, turnover, job burnout, professional reputation, professional development potential, work environment, salary, public opinion, and personal accomplishment^[4,14-16].

In order to improve the professional self-image of GPs, the government has introduced policies to increase opportunities for title promotion, remuneration, and other aspects pertaining to career advancement^[2]. However, there is no evidence that these policies have achieved broad effects.

The effectiveness of the post transfer model in training GPs has been questioned, because training bases were located in modern, specialized hospitals and nearly all trainers were specialists who had limited understanding of the services provided by GPs. Moreover, the rank of specialists at a high-level hospital is superior to that of grassroots GPs. Thus, lack of professional validation and disparity in status and salaries could contribute to the diminished enthusiasm of GPs with respect to their career even after training. In light of this problem, the notion of GPs training other GPs has been proposed. Some local governments have opened high-quality community health service centers that offer general practice. In Guangdong Province, the government has selected a small number of directors of community health service centers in Guangzhou and Shenzhen—the most developed cities—to study GP services in the United Kingdom, United States, and other developed countries, who when they returned to their respective centers applied the knowledge they had accrued. Communities in which implementation was successful served as models for other communities and training bases. This was not intended to replace but to compensate for the shortage of post transfer training.

As pilot programs of team service were shown to be feasible and effective, the government issued administrative directives for such programs to be expanded so that in each community health service center, GPs work with nurses and public health staff for disease prevention and treatment and patient rehabilitation.

In 2015, the Health and Family Planning Commission of Guangdong Province formally initiated the Family Doctor Service Team Backbone Training Program, in which each city sends a group of students to the training base. Qualified trainees return to their workplaces and use their newly acquired knowledge to train their colleagues. The training period for the first group of trainees is a total of 6 months, divided into three stages, including 1 month of theory, 2 months of clinical practice, and 3 months of community practice. Each month, trainees must study at the training base for 5–7 days, and in the remaining time study independently while working.

The program has been running for several years, but there have been no systematic assessments of its effectiveness. To this end, the present study evaluated the impact of the program on the professional recognition of GPs and their services.

Methods

Research field

This study was carried out at the Shayuan Street Health Service Center in Guangzhou, Guangdong Province, the most economically developed province in Southern China. The center serves 72,000 inhabitants living in an area of 1.44 km² and has 175 employees, of which 16 (9%) are senior and 59 (34%) are mid-level health professionals. In 2019, the center ranked 29th among the top 100 community health service centers in China. As an example of successful implementation of the Family Doctor

Service Team Backbone Training Program, the center is often visited and studied by officials and health professionals of all levels from every part of the country.

Procedure

Shayuan Street Health Service Center organized two training classes in 2018 that recruited 30 participants in March and 33 in July from 21 prefecture-level cities of Guangdong. Two senior researchers with PhD degrees who had experience in qualitative and questionnaire-based research designed the questions, and a graduate student composed the electronic questionnaire and followed the survey process.

The training module related to professional value recognition was designed by the course development team and supervised by the director of the training center. The courses were: 1) Introduction to policies pertaining to GPs; 2) GPs' self-confidence training; 3) Clinical thinking mode of GPs; 5) Health transmission mode within the community; and 6) Doctor-patient communication and humanistic care.

From March to December 2018, data were collected before and after the training program using an open self-administered questionnaire. Participants could freely express their thoughts for each question. All questions were open-ended and no answers were suggested. The main questions were:

- 1) How do you understand the professional responsibilities of GPs?
- 2) What are your views on the career prospects of GPs in the next decade?
- 3) If you had not chosen your current position, would you choose to be a GP? Why?
- 4) What factors in the training influenced your opinion about the service of GPs?

The pre- and post-training surveys were completed within the first and last weeks of training, respectively.

Data analysis

Views on career prospects of GPs were compared with the Kappa test. Statistically significant level was 0.05. Answers to open questions were coded using NVivo 11 (QSR International, Burlington, MA, USA) and analyzed for their themes.

Results

Demographic characteristics

Of the 63 study participants, 62 completed surveys and one was excluded for failing to complete the post-training survey. There were 23 GPs, 8 specialist doctors, 21 nurses, and 10 public health personnel (Table 1). Females accounted for 61.3% of the group; 50% of participants were between the ages of 30

and 40; and 59.7% had a bachelor's-level education. Clinical medicine (43.5%) and nursing (37.1%) were the most frequent academic majors. Most participants had a primary professional title of Junior (82.3%).

Understanding the responsibilities of GPs

Responses in the questionnaires were summarized as six categories: meaning of the term “general”, disease treatment, disease prevention, GP service mode, effect of GPs’ services on residents’ health, and GPs’ role in a team.

For the meaning of the term “general”, before the training five participants understood “general” as “having all types of clinical skill”; two as “proficient in internal and external gynecology and pediatrics”; one as “panacea”; one as “comprehensive”; and the remaining participants did not know. After the training, seven participants responded with “Five ‘Wholes’”—ie, the whole process, whole person, whole family, whole team, and whole community; 20 mentioned the whole person; and eight gave whole family and whole process as answers.

The second category was an understanding of disease treatment—that is, that GPs are doctors whose primary responsibility is to treat diseases. This view was held by 31 participants before and by 25 after the training.

Regarding disease prevention, before the training only five participants mentioned that GPs should do work related to health education and disease prevention. After the training, 19 participants thought GPs should deliver preventive healthcare; six thought they should provide health education; and seven thought they should provide health management and rehabilitation.

Table 1 Demographic characteristics of the study population

		No.	%
Sex	Male	24	38.7
	Female	38	61.3
Age, years	≤30	17	27.4
	30 to ≤40	33	53.2
	41 to ≤50	12	19.4
Education	Technical secondary school	6	9.7
	College	17	27.4
	Undergraduate	37	59.7
	Graduate	2	3.2
Major	Clinical medicine	27	43.5
	Clinical Chinese medicine	5	8.1
	General medicine	1	1.6
	Preventive medicine	6	9.7
	Nursing	23	37.1
Title	Junior	51	82.3
	Mid-level	8	12.9
	Senior	3	4.8
Professional	General practitioner	23	37.1
	Specialist	8	12.9
	Nurse	21	33.9
	Public health staff	10	16.1
Work years	≤5	11	17.7
	5 to ≤10	21	33.9
	11 to ≤15	12	19.4
	>15	18	29

The fourth category was an understanding of the mode of general practice service. Before the training, door-to-door service and contract service were mentioned by one participant each. After the training, six mentioned contract service.

With respect to an understanding of the role of GPs in patients' health, before the training, one trainee used the term "health gatekeeper" and another mentioned "patient-centered". After the training, seven

people used the term “health gatekeeper”, four mentioned reducing healthcare spending, and two responded with “health-centered.”

For the position of GPs in a team, before training one participant thought GPs played the roles of handymen and archivists, and the others had no opinion on this subject. After the training, two participants thought that GPs should lead the general practice service team, with the remaining participants having no other opinions.

Views on GPs’ career prospects

After the training, 52/62 (84%) of participants reported a positive change in their views on the career prospects of GPs in the next 10 years as compared to before the training, representing a statistically significant increase ($P < 0.05$; Table 2). Of the 25 participants who thought GPs’ career prospects were “Worse than [those of a specialist]” before the training, 13 changed their responses to “Better than [those of a specialist]” and eight to “Similar to [those of a specialist]” after the training. Ten of the 11 participants who thought GPs’ career prospects were “Similar to [those of a specialist]” before the training changed their response to “Better than [those of a specialist]” after the training; and 14/18 people who answered “Do not know” before the training changed their response to “Better than [those of a specialist]” post training.

Table 2 Views on career prospects of GPs

		After training [†]			Total	P
		Worse than	Similar to	Better than		
Before training [†]	Worse than	4	8	13	25	<0.05
	Similar to	0	1	10	11	
	Better than	1	0	7	8	
	Do not know	1	3	14	18	
	Total	6	12	44	62	

[†]“Worse than”, “Similar to”, and “Better than” those of a specialist.

There were seven reasons for the change in participants’ views of GPs’ career prospects (Table 3). The most common reason was achieving a better understanding of general practice service policies during the training (93.5%), followed by recognition of the need to develop GP services (83.9%). The training base’s leadership, demonstration effect, improvement of personal skills, performance of the training base, and trainers’ enthusiasm were the other reasons.

Table 3 Reasons for the change in participants’ views of GPs’ prospects

	No.	%
During the training I better understood the general practice service policies	58	93.5
During the training I recognized the need to develop general practice services	52	83.9
Leadership of training base	43	69.4
During the training I recognized the feasibility of developing general practice services	43	69.4
During the training I improved my skills	39	62.9
I was encouraged by the performance of the training base	38	61.3
I was encouraged by trainers' enthusiasm	37	59.7

Professional preferences

To investigate their identification with GPs, participants were asked which they would choose to be—a GP or a specialist—if they did not hold their current position. Before the training, 19/62 participants chose GP, 10 chose specialist, and the others chose neither. After the training, 56/62 participants (90.3%) chose GP and 6/62 (9.7%) chose specialist.

Of the 56 participants who chose GPs, 38 gave reasons (9 in total) for their selection (Table 4). The top three were sense of self-worth, future trends in society, and patients' needs. Of the six participants—all current GPs—who chose specialist, three gave a reason, which was a higher *salary*. Seven of eight current specialists chose GPs, for which the following reasons were given:

1. "A GP can better help and advise the patient because he/she thinks more broadly and has fewer professional constraints."
2. "There is a greater need at the grassroots level for GPs."
3. "When GPs provide primary medical services, they also engage in health management of chronic diseases. This can reduce medical expenses for the patients and promote their health, thereby improving their quality of life. This is very meaningful."
4. "After years of working as a specialist at the grassroots level, I understand the importance of GPs for patients. It will take time to change from a specialist to a GP."
5. "Because a GP has a more holistic view of health than a specialist, a skilled GP can prevent rather simply treat a disease."

Table 4 Reasons for preferring GP vs specialist

	% (No.)
Reasons for choosing to be a GP	
Sense of self-worth	18.4 (7/38)
Future trends in society	15.8 (5/38)
Meet the needs of the population	15.8 (6/38)
Improve health	13.2 (5/38)
Learn more skills	10.5 (4/38)
Have good relationship with patients	7.9 (3/38)
Save money for patients	7.9 (3/38)
Offer better service to patients	7.9 (3/38)
Less pressure	2.6 (1/38)
Reasons for choosing to be a specialist	
Higher salary than a GP	– (3/4)

Discussion

This study found that professional recognition of GPs by other medical health professionals improved after a 6-month training course. The main reasons were a better understanding of policy and awareness of the necessity of developing general practice services. The three major reasons for choosing general practice were a sense of self-worth, future trends in society, and residents' needs.

Our results also showed that training can improve GPs' professional identity. Regardless of their current position, after the training 90% of participants chose general practice courses and 10% chose specialist courses. Four of the nine reasons for the former choice were related to self-worth, future trends, skills, and mental pressure; the other five reasons were related to patients—ie, meeting patients' needs, ensuring patients' health, establishing good relationships with patients, saving patients money, and better serving patients. According to the Existence, Relatedness, and Growth theory, the first four reasons can be described as a need for growth, and the latter five as a need for community or relating to others.

We also found differences in the occupational needs of current GPs and specialists. The sole reason given by GPs for choosing a specialization was a higher salary, suggesting that being a specialist was seen as more conducive to meeting the financial requirements for survival. In contrast, current specialists who answered that they would choose to be a GP did not mention salary; instead, their responses showed a need for growth and fulfillment through relating to others. In China, low salary is the main reason for the attrition of excellent GPs in smaller communities^[15]. Academics have called for increases in GPs' salaries based on experiences in developed countries^[17]. Our findings confirm that meeting the survival needs of GPs by offering adequate salaries is critical for maintaining a stable pool of GPs.

Ignorance of policies played an important role in professional identity. The main factors contributing to the change in perceptions of GPs were a better understanding of their responsibilities and an awareness of the need to develop GP services. Through simple training and without any actual benefits, 84% of participants developed a positive opinion of the prospects of GPs in the next 10 years, believing that they will be better regarded than specialists. Guangdong province has implemented policies to promote the professional status and improve the salary of GPs^[17]. Government bodies at lower levels should make efforts to further strengthen the understanding of these policies among GPs and other health professionals.

The present results showed a discrepancy between the intentions of policies and their implementation. Erroneous perceptions—for example, that GPs are panaceas, have all types of clinic skill, and can act as handymen and archivists—existed 10 years ago. However, some of these views are still held in the most economically developed province of China, including by medical health professionals selected for participation in the Family Doctor Service Team Backbone Training Program^[17–19]. This suggests that awareness of the responsibilities of GPs has not met policy expectations; and the change in perceptions after training indicates that in the implementation of the policy, the importance of policy education was overlooked.

Training in communities with successful general practice services can promote perceptual change. In this study, leadership ability, feasibility of general practice services, achievements of the training base, and enthusiasm of the training base all had a positive impact on participants, highlighting the importance of including successful case demonstrations in the training.

Conclusions

The results of this study show that on-the-job training can change the view of GPs' role and career prospects. Training in related policies is also important, while increasing the salary of GPs can increase their professional identity. We recommend integrating policy education and success cases into all training courses for health professionals to further strengthen their understanding of the responsibilities of general medical practice, which could help to reduce burnout and attrition of GPs, especially in smaller communities.

Abbreviations

GP
General Practitioner

Declarations

Ethical approval and consent to participate

The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional commitments on human experimentation and with Helsinki Declaration of 1975, as revised in 2008. This study was approved by the Human Research Ethics Committee from Guangdong Provincial Center for Disease Control and Prevention (approval numbers: W96-027E-2016028). All participants provided written consent to participate in survey.

Consent for publication

Not applicable.

Availability of data and materials

The protocol and datasets produced and/or analysed during the current study are available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

YX designed the study, conceived the manuscript outline, and was the main author of the manuscript. XC participated in manuscript writing and editing. SL, XZ, DL, and ZH participated in on-site data collection and article revision. QH supervised the study and provided guidance, and participated in manuscript writing and revision. all authors have read and approved the manuscript.

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Authors' information

The first author and the corresponding author are committed to policy planning and implementation evaluation for the Health Administration Department of Guangdong Province.

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