

## The Relationship Between Psychological Capital and Retention Intention Among Chinese General Practitioners: The Mediating Role of Professional Identity (Postprint)

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### Abstract

**Background** General practitioners mainly provide basic medical and health services, and the development of general practice talent teams is closely related to the development of primary-level medical and health services.

**Objective** To understand the current status of psychological capital, professional identity, and retention intention among general practitioners in China, and to explore the relationship among the three.

**Methods** From March to May 2021, a multi-stage stratified random sampling method was used to select 4,632 general practitioners from the eastern, central, and western regions of China for an electronic questionnaire survey. The main content included basic information, psychological capital, professional identity, and retention intention. Pearson correlation analysis, multiple hierarchical regression, and structural equation modeling were used to explore the relationship among professional identity, psychological capital, and retention intention.

**Results** A total of 4,376 general practitioners were included (effective questionnaire response rate was 94.47%). The total psychological capital score of general practitioners was  $(102.89 \pm 16.94)$  points, the total professional identity score was  $(33.93 \pm 8.95)$  points, and the total retention intention score was  $(1.89 \pm 0.45)$  points. Pearson correlation analysis showed that psychological capital and professional identity, professional identity and retention intention, and psychological capital and retention intention were all positively correlated among general practitioners ( $r=0.402, 0.459, \text{ and } 0.236$ , respectively, all  $P<0.001$ ). Multiple hierarchical regression analysis indicated that psychological capital and professional identity had positive predictive effects on retention intention ( $b=0.079$  and  $0.361$ , respectively, both  $P<0.001$ ), and professional identity had a mediating effect on the influence of psychological capital on retention intention. Structural equation modeling showed that psychological capital

and professional identity could positively predict retention intention ( $b=0.032$ ,  $P<0.05$ ;  $b=0.446$ ,  $P<0.001$ ), and professional identity played a partial mediating role between psychological capital and retention intention.

**Conclusion** The retention intention of general practitioners in China is at a moderate level. There is a positive correlation among psychological capital, professional identity, and retention intention. Psychological capital can influence retention intention through professional identity. Enhancing the psychological capital and professional identity of general practitioners is beneficial for improving their retention intention.

## Full Text

### Relationship between Psychological Capital and Intention to Stay among General Practitioners in China: The Mediating Role of Professional Identity

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## Abstract

**Background:** General practitioners (GPs) provide essential primary healthcare services, and the development of the GP workforce is critical to advancing primary care systems.

**Objective:** To investigate the current status of psychological capital (PsyCap), professional identity, and intention to stay among GPs in China, and to explore the relationships among these three constructs.

**Methods:** From March to May 2021, a multi-stage stratified random sampling approach was used to select 4,632 GPs across eastern, central, and western China for an electronic questionnaire survey. The survey collected basic demographic information and assessed psychological capital, professional identity, and intention to stay. Pearson correlation analysis, hierarchical multiple regression, and structural equation modeling were employed to examine the relationships among professional identity, psychological capital, and intention to stay.

**Results:** A total of 4,376 GPs were included (effective response rate: 94.47%). The mean total scores were ( $102.89\pm 16.94$ ) for psychological capital, ( $33.93\pm 8.95$ ) for professional identity, and ( $1.89\pm 0.42$ ) for intention to stay. Pearson correlation analysis revealed significant positive correlations between psychological capital and professional identity ( $r=0.402$ ),

professional identity and intention to stay ( $r=0.459$ ), and psychological capital and intention to stay ( $r=0.236$ , all  $P<0.001$ ). Hierarchical multiple regression showed that both psychological capital and professional identity positively predicted intention to stay ( $b=0.079$  and  $0.361$ , respectively, both  $P<0.001$ ), with professional identity mediating the relationship between psychological capital and intention to stay. The structural equation model confirmed that psychological capital and professional identity positively predicted intention to stay ( $b=0.032$ ,  $P<0.05$ ;  $b=0.446$ ,  $P<0.001$ ), with professional identity serving as a partial mediator between psychological capital and intention to stay.

**Conclusion:** Chinese GPs exhibit a moderate level of intention to stay. Positive correlations exist among psychological capital, professional identity, and intention to stay, with psychological capital influencing intention to stay through professional identity. Enhancing GPs' psychological capital and professional identity may improve their intention to stay.

**Keywords:** General practitioner; Psychological capital; Professional identity; Intention to stay; Mediation analysis

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## Introduction

The “14th Five-Year Plan for National Health” proposes continuous improvement in primary healthcare service capacity by 2025, emphasizing the strengthening of primary care workforce development and clinical training for general practitioners [1]. As gatekeepers for residents' health and healthcare cost control, GPs provide comprehensive services including prevention, treatment, and rehabilitation to individuals, families, and communities, playing a vital role in basic medical and health services. Strengthening GP training and improving incentive mechanisms are essential for enhancing the quality of general practice, promoting primary healthcare system development, and safeguarding public health.

Currently, China faces instability in its general practice workforce, with high turnover intention among GPs [2,3], which severely constrains primary care development. Intention to stay refers to employees' willingness to remain in their current position rather than seek alternative employment opportunities [4]. Previous research indicates that psychological capital, as a key determinant of individual productivity, significantly and positively predicts intention to stay [5,6]. Additionally, multiple studies have demonstrated that higher professional identity correlates with stronger intention to stay [7-9]. Attending to employees' psychological states and strengthening professional identity can enhance intention to stay and stabilize the workforce [8].

Existing research on psychological capital, professional identity, and intention to stay has primarily focused on nurses, with limited studies targeting GPs and scarce investigation of professional identity's mediating role between psychological capital and intention to stay. Therefore, this study aims to examine the

current status of intention to stay among GPs and explore the relationships among psychological capital, professional identity, and intention to stay, providing evidence for GP workforce management and stability.

## Methods

**1.1 Study Subjects** From March to May 2021, we employed multi-stage stratified random sampling. First, five provinces/municipalities/autonomous regions were randomly selected from each of China's eastern, central, and western regions. Second, 40 community health institutions were randomly chosen from each selected region. Finally, 40% of GPs who had practiced general medicine for  $\geq 1$  year and were on duty on the survey day were randomly sampled from each institution [11,12]. This study was approved by the Medical Ethics Committee of Tongji Medical College, Huazhong University of Science and Technology [Approval No.: 伦审字 (S099) 号], and all participants provided informed consent.

**1.2 Research Instruments** Based on literature review and expert consultation, we designed a questionnaire comprising eight sections. For this study, we utilized:

- 1. Basic Information:** Including age, gender, education level, overtime frequency, home visit frequency, workload, work pressure, and career development opportunities. Items measuring overtime frequency, home visit frequency, workload, work pressure, and career development opportunities used single-item questions with Likert scales, later recategorized for analysis.
- 2. Professional Identity Scale:** Developed by Tyler et al. [12], this 10-item scale uses a 5-point scoring system from “completely disagree” (1) to “completely agree” (5), with higher scores indicating stronger professional identity. Cronbach's  $\alpha=0.942$  demonstrated good reliability. Confirmatory factor analysis indicated acceptable construct validity: GFI=0.966, AGFI=0.929, RMSEA=0.083, NFI=0.977, IFI=0.978, CFI=0.978.
- 3. Psychological Capital Scale:** Developed by Luthans et al. [13] and translated by Li Chaoping [14], this 24-item scale comprises four dimensions: self-efficacy, hope, resilience, and optimism (6 items each). Items are scored from “strongly disagree” (1) to “strongly agree” (6), with higher scores indicating greater psychological capital. Cronbach's  $\alpha=0.947$  indicated good reliability. Confirmatory factor analysis showed acceptable construct validity: GFI=0.860, AGFI=0.829, RMSEA=0.081, NFI=0.926, IFI=0.928, CFI=0.928.
- 4. Intention to Stay Scale:** Developed by Turnley et al. [15] and revised by Tao Hong et al. [16], this 6-item scale uses a 5-point scoring system from “absolutely impossible” (1) to “very likely” (5), with higher scores indicating stronger intention to stay. Cronbach's  $\alpha=0.764$  indicated acceptable

reliability. Confirmatory factor analysis demonstrated good construct validity: GFI=0.983, AGFI=0.950, RMSEA=0.084, NFI=0.964, IFI=0.966, CFI=0.966. Total scores were calculated by summing items, and mean scores by dividing total scores by item count.

**1.3 Data Collection** Using the Wenjuanxing platform, we generated an electronic questionnaire link and distributed it anonymously to GPs through the Chinese Community Health Association, provincial community health associations, and community health institution managers. Data were stored in the Wenjuanxing system and exported directly to Excel upon survey completion.

**1.4 Quality Control** We developed the questionnaire and research protocol through literature review, expert consultation, and group discussion. A pilot survey of 30 GPs in Wuhan community health institutions was conducted to refine the instrument. Before formal data collection, we trained community health institution managers and participating graduate students on procedures. Each device or account could submit only one completed questionnaire, and participants received a small monetary incentive upon completion. Exported questionnaires were reviewed by researchers to ensure data reliability.

**1.5 Statistical Analysis** We used SPSS 27.0 and AMOS 26.0 for data analysis. Continuous variables were expressed as ( $\bar{x}\pm s$ ), compared between two groups using independent samples t-tests, and among multiple groups using one-way ANOVA. Categorical variables were presented as frequencies and percentages. Pearson correlation analysis, hierarchical multiple regression, and structural equation modeling were used to explore relationships among professional identity, psychological capital, and intention to stay. Statistical significance was set at  $P<0.05$ .

## Results

**2.1 Basic Characteristics of Participants** We surveyed 4,632 GPs and obtained 4,376 valid responses (94.47% response rate). The sample included 2,016 (46.07%) from eastern regions, 1,184 (27.06%) from central regions, and 1,176 (26.87%) from western regions. Additional characteristics: 471 (10.76%) aged <30 years; 1,778 (40.63%) male; 311 (7.11%) ethnic minorities; 3,812 (87.11%) married; 299 (6.83%) with master's degree or higher; 1,984 (45.34%) with <10 years of experience; and 3,335 (76.21%) practicing in urban areas.

**2.2 Comparison of Intention to Stay Scores by Characteristics** The mean intention to stay score was ( $21.69\pm 4.04$ ). Significant differences in intention to stay scores were found across region, age, gender, ethnicity, marital status, education level, years of experience, practice location, employment type, professional title, administrative position, annual income, weekly working hours, daily patient volume, average consultation time per patient, proportion of time

spent on administrative duties, overtime frequency, home visit frequency, workload, work pressure, and career development opportunities ( $P < 0.05$ ).

**2.3 Correlation Analysis** GPs' mean psychological capital score was  $(102.89 \pm 16.94)$ , with dimensions scores from highest to lowest: *self-efficacy*  $[(26.56 \pm 5.52)]$ , *hope*  $[(26.25 \pm 5.28)]$ , *resilience*  $[(25.79 \pm 4.55)]$ , and *optimism*  $[(24.29 \pm 3.52)]$ . The mean *pr*  $(3.39 \pm 0.90)$ , and mean intention to stay score was  $(21.69 \pm 4.04)$  [mean item score:  $(3.61 \pm 0.67)$ ].

Pearson correlation analysis revealed that psychological capital and its dimensions were positively correlated with professional identity ( $r = 0.402, 0.306, 0.401, 0.344, 0.408$ , respectively, all  $P < 0.001$ ) and with intention to stay ( $r = 0.236, 0.137, 0.210, 0.217, 0.327$ , respectively, all  $P < 0.001$ ). Professional identity was positively correlated with intention to stay ( $r = 0.459, P < 0.001$ ).

**2.4 Hierarchical Multiple Regression Analysis** To examine the effects of psychological capital and professional identity on intention to stay, we conducted hierarchical multiple regression with intention to stay as the dependent variable. Model 1 included all control variables from Table 1. Model 2 added psychological capital to Model 1. Model 3 added professional identity to Model 2.

Model 2 showed that psychological capital significantly and positively predicted intention to stay ( $b = 0.201, P < 0.001$ ), explaining 3.7% of variance. Model 3 showed that professional identity made an additional significant contribution ( $b = 0.361, P < 0.001$ ), increasing explained variance by 9.2%, while the standardized coefficient for psychological capital decreased to 0.079, indicating that professional identity partially mediated the relationship between psychological capital and intention to stay.

**2.5 Structural Equation Model** We constructed a structural equation model to further examine pathways among psychological capital, professional identity, and intention to stay. Based on correlation and regression results, we hypothesized: (1) both psychological capital and professional identity positively affect intention to stay; (2) psychological capital positively affects professional identity, which in turn affects intention to stay.

Using maximum likelihood estimation, we added covariances between error terms  $e_3$  and  $e_4$ ,  $e_4$  and  $e_5$ , and  $e_4$  and  $e_6$  based on modification indices. The final model [Figure 1: see original paper] showed that psychological capital positively affected professional identity (direct effect coefficient = 0.403), professional identity positively affected intention to stay (direct effect coefficient = 0.446), and psychological capital positively affected intention to stay both directly (coefficient = 0.032,  $P < 0.05$ ) and indirectly through professional identity. All path coefficients were statistically significant ( $P < 0.05$ ). Model fit indices indicated good overall fit: GFI = 0.990 > 0.90, AGFI = 0.959 > 0.90, RMSEA = 0.077 < 0.08, NFI = 0.992 > 0.90, IFI = 0.992 > 0.90, CFI = 0.992 > 0.90.

## Discussion

### 3.1 Moderate Level of Intention to Stay Among Chinese GPs

The mean intention to stay score of  $(21.69 \pm 4.04)$  [*mean item score* :  $(3.61 \pm 0.67)$ ] indicates a moderate level of intention to stay among Chinese GPs. This finding aligns with Chang's study [9]. Under the Healthy China strategy and the spirit of the 20th Party Congress report, which prioritize health development and emphasize primary care, Chinese GPs face both significant opportunities and challenges, including low social recognition, inadequate management systems, and immature training programs [17]. The discrepancy between social status, practice environment, and career development may explain the moderate intention to stay. As intention to stay is a strong predictor of actual retention behavior [4], understanding this status is crucial. There remains room for improvement in GPs' intention to stay, and authorities should address workforce turnover by enhancing the attractiveness of general practice to ensure continuous, comprehensive, and personalized care for residents.

### 3.2 Positive Correlation Between Psychological Capital and Intention to Stay

Psychological capital and its dimensions were positively correlated with intention to stay. Kim et al. [18] found that individuals with higher psychological capital maintain more positive attitudes toward work environments and organizational climate, demonstrating greater engagement and stronger intention to stay. Qian et al. [19] similarly reported that positive psychological capital promotes self-direction, enabling individuals to confront difficulties with greater resilience and reduced negative affect, thereby improving adaptation to work environments and intention to stay.

However, hierarchical regression showed that psychological capital explained only 3.7% of variance in intention to stay, and the structural equation model revealed a small direct effect coefficient of 0.032. This may be because GPs in our sample (all with  $\leq 1$  year of experience) make career decisions based not solely on psychological capital but also on objective factors such as social evaluation, work environment, and career cognition, where organizational factors may exert stronger influence. Nevertheless, as a key component of positive psychological resources, psychological capital significantly impacts attitudes, behaviors, and performance [20]. Managers should prioritize GPs' mental health and effectively develop their psychological capital through positive psychological guidance, service-oriented mindset cultivation, optimistic attitude promotion, and role modeling, while also providing negative psychological counseling, humanistic care, and group psychological support to identify and address mental health issues promptly.

### 3.3 Professional Identity as a Partial Mediator

Professional identity was positively correlated with psychological capital, its dimensions, and intention to stay, and partially mediated the relationship between psychological capital and intention to stay. Professional identity integrates cognitive, emotional, and

behavioral elements, emphasizing affirmation of professional self-worth, while higher perceived resource value represents achievement and worth that guides professional practice [9]. Peng et al. [21] and Zou et al. [22] found that psychological capital indirectly affects turnover intention through organizational commitment and professional identity. Enhancing GPs' professional identity can reduce turnover intention and improve retention, advancing China's general practice and healthcare system development [23]. Strengthening professional identity education, fostering professional beliefs and belonging, creating supportive practice environments, and enhancing social recognition can promote GPs' intention to remain in general practice.

**Limitations and Conclusion** This study has limitations. First, the cross-sectional design limits causal inference. Second, self-reported data may introduce misclassification and recall bias. Future longitudinal or interventional studies should examine these relationships further.

In conclusion, this large-scale national survey found that Chinese GPs have moderate intention to stay, with positive correlations among psychological capital, professional identity, and intention to stay. Professional identity partially mediates the relationship between psychological capital and intention to stay. Multi-faceted strategies to enhance psychological capital and professional identity may improve GPs' intention to stay, offering new directions for stabilizing the primary care workforce.

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**Author Contributions:** PAN Wen conceptualized and designed the study and drafted the manuscript; FENG Jing designed the questionnaire, performed data analysis, and revised the manuscript; ZHENG Yanling and LEI Zihui collected literature and verified data; GAN Yong conducted feasibility analysis, revised the English manuscript, and provided overall supervision.

**Conflict of Interest:** The authors declare no conflicts of interest.

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