

The Relationship among Psychological Capital, Professional Identity, and Intention to Stay among Chinese General Practitioners: Postprint

Authors: Pan Wen, Feng Jing, Zheng Yanling, Lei Zihui, Gan Yong, Gan Yong

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Abstract

General practitioners primarily provide primary healthcare services, and the development of the general practice workforce is closely associated with the advancement of primary healthcare. Objective: To examine the current status of psychological capital, professional identity, and retention intention among Chinese general practitioners, and to investigate the relationships among these three constructs. Methods: From March to May 2021, a multi-stage stratified random sampling approach was utilized to recruit 4,632 general practitioners from eastern, central, and western China for an electronic questionnaire survey assessing basic demographics, psychological capital, professional identity, and retention intention. Data were analyzed using general descriptive analysis, independent samples t-tests, one-way ANOVA, Pearson correlation analysis, multivariate hierarchical regression, and structural equation modeling. Results: A total of 4,376 general practitioners were included, with mean total scores of (102.89 ± 16.94) for psychological capital, (33.93 ± 8.95) for professional identity, and (21.69 ± 4.04) for retention intention. Pearson correlation analysis revealed significant positive correlations between psychological capital and professional identity, professional identity and retention intention, and psychological capital and retention intention ($P < 0.001$). Multivariate hierarchical regression and structural equation modeling indicated that both psychological capital and professional identity positively predicted retention intention, with professional identity serving as a partial mediator between psychological capital and retention intention. Conclusion: The retention intention of Chinese general practitioners is at a moderate level. Positive relationships exist among psychological capital, professional identity, and retention intention, with psychological capital influencing retention intention through professional identity. Enhancing general practitioners' psychological capital and professional identity is conducive to improving their retention intention.

Full Text

Abstract

Background General practitioners (GPs) primarily provide basic medical and health services, and the development of the GP workforce is closely related to the advancement of primary healthcare. **Objective** To investigate the status and relationships between psychological capital (PsyCap), professional identity, and intention to stay among GPs in China. **Methods** A multi-stage stratified random sampling approach was used to collect electronic questionnaire data from 4,632 GPs in eastern, central, and western China between March and May 2021. The questionnaire included basic information, PsyCap, professional identity, and intention to stay. Statistical analyses included descriptive statistics, independent samples t-tests, one-way ANOVA, Pearson correlation analysis, multivariable hierarchical regression, and structural equation modeling. **Results** A total of 4,376 GPs were included. The mean total scores were 102.89 ± 16.94 for PsyCap, 33.93 ± 8.95 for professional identity, and 21.69 ± 4.04 for intention to stay. Pearson correlation analysis revealed significant positive correlations between PsyCap and professional identity, professional identity and intention to stay, and PsyCap and intention to stay ($P < 0.001$). Multivariable hierarchical regression and structural equation modeling showed that PsyCap and professional identity positively predicted intention to stay, with professional identity partially mediating the relationship between PsyCap and intention to stay. **Conclusion** Chinese GPs exhibit a moderate level of intention to stay. Positive correlations exist among PsyCap, professional identity, and intention to stay, with professional identity serving as a partial mediator. Enhancing GPs' PsyCap and professional identity may improve their intention to stay and stabilize the primary care workforce.

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

Introduction

The “14th Five-Year Plan for National Health” proposes continuous improvement in primary healthcare service capacity by 2025, emphasizing the need to strengthen primary care workforce development and enhance GP training programs [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 service quality, developing the primary healthcare system, and safeguarding public health. However, China' s GP workforce faces instability and high turnover intentions [2, 3], which severely constrains the development of primary healthcare.

Intention to stay refers to the strength of an employee' s desire to remain in

their current position rather than seek alternative employment opportunities [4]. Previous research has identified psychological capital as a significant positive predictor of intention to stay [5-7]. Additionally, multiple studies have demonstrated that higher professional identity correlates with stronger intention to stay [8-10]. Attending to employees' psychological states and strengthening professional identity can enhance intention to stay and stabilize the workforce [9].

Current research on psychological capital, professional identity, and intention to stay has primarily focused on nurses, with no studies targeting GPs specifically. Furthermore, no research has examined the mediating role of professional identity in the relationship between psychological capital and intention to stay. Therefore, this study aims to investigate 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.

1.1 Study Subjects

Between March and May 2021, we employed a multi-stage stratified random sampling method. 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 ≥ 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)], and all participants provided informed consent.

1.2 Research Methods

Based on literature review, group discussion, and expert consultation, we designed an electronic questionnaire administered via WeChat. Detailed survey methods are described in relevant literature [11, 12]. The questionnaire comprised eight sections; we analyzed the following components for this study: (1) Basic information: age, gender, education level, etc. (2) The Professional Identity Scale developed by Tyler et al. [13], consisting of 10 items scored from 1 ("completely disagree") to 5 ("completely agree"), with higher scores indicating stronger professional identity. (3) The Psychological Capital Scale developed by Luthans et al. [14] and translated by Li Chaoping [15], comprising 24 items across four dimensions: self-efficacy, hope, resilience, and optimism (6 items each), scored from 1 ("strongly disagree") to 6 ("strongly agree"), with higher scores reflecting greater psychological capital. (4) The Intention to Stay Scale developed by Turnley et al. [16] and revised by Tao Hong et al. [17], containing 6 items scored from 1 ("absolutely impossible") to 5 ("very likely"), with higher scores indicating stronger intention to stay. In this study, Cronbach's α coefficients were 0.947 for PsyCap, 0.942 for professional identity, and 0.764

for intention to stay, indicating good reliability for the PsyCap and professional identity scales and acceptable reliability for the intention to stay scale.

1.3 Statistical Methods

Data were analyzed using SPSS 27.0 and Amos 26.0. Continuous variables were described using means and standard deviations, while categorical variables were presented as frequencies and percentages. Independent samples t-tests and one-way ANOVA were used to compare intention to stay scores across different groups. Pearson correlation analysis, multivariable hierarchical regression, and structural equation modeling were employed to explore relationships among professional identity, PsyCap, and intention to stay. Statistical significance was set at $P < 0.05$.

Results

2.1 Basic Information of Study Subjects

Of 4,632 GPs surveyed, 4,376 valid responses were obtained (valid response rate: 94.47%). The sample distribution was 46.07% from eastern, 27.06% from central, and 26.87% from western regions. Participants aged <30 years accounted for 10.76% ($n = 471$), 40.63% were male, and 7.11% were from ethnic minority areas. The majority (87.11%) were married, 6.83% held master's degrees or higher, 45.34% had ≥ 10 years of work experience, and 76.21% practiced in urban areas. Additional demographic details are shown in .

2.2 Univariate Analysis of GPs' Intention to Stay

Significant differences in intention to stay scores were found across groups stratified by region, age, gender, ethnicity, marital status, education level, work 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 tasks weekly, overtime frequency, home visit frequency, workload, work pressure, and career development opportunities ($P < 0.05$) (see).

2.3 Scores and Correlation Analysis of PsyCap, Professional Identity, and Intention to Stay

The mean total PsyCap score was 102.89 ± 16.94 , with dimension scores from highest to lowest as follows: self-efficacy (26.56 ± 5.52), hope (26.25 ± 5.28), resilience (25.79 ± 4.55), and optimism (24.29 ± 3.52). The mean total professional identity score was 33.93 ± 8.95 (mean item score: 3.39 ± 0.90), and the mean total intention to stay score was 21.69 ± 4.04 (mean item score: 3.61 ± 0.67). Pearson correlation analysis revealed positive correlations between PsyCap and professional identity ($r = 0.402$, $P < 0.001$), professional identity and intention to stay ($r = 0.459$, $P < 0.001$), and PsyCap and intention to stay (r

= 0.236, $P < 0.001$). All PsyCap dimensions also showed positive correlations with both professional identity and intention to stay (all $P < 0.001$) (see).

2.4 Multivariable Hierarchical Regression Analysis of PsyCap and Professional Identity on Intention to Stay

To examine the effects of PsyCap and professional identity on intention to stay, we conducted multivariable hierarchical regression with intention to stay score as the dependent variable. In Step 1, all variables from were entered as control variables. In Step 2, PsyCap was added to the model, revealing a significant positive predictive effect on intention to stay ($\beta = 0.201$, $P < 0.001$), explaining 3.7% of additional variance. In Step 3, professional identity was added, contributing an additional 9.2% of explained variance. The standardized regression coefficient for PsyCap decreased to 0.079, indicating that professional identity partially mediates the relationship between PsyCap and intention to stay (see).

2.5 Structural Equation Model of PsyCap, Professional Identity, and Intention to Stay

We constructed a structural equation model to further examine pathways among PsyCap, professional identity, and intention to stay. Based on correlation and regression analyses, along with theoretical considerations, we hypothesized that: (1) PsyCap and professional identity would positively influence intention to stay, and (2) PsyCap would positively affect professional identity, which in turn would influence intention to stay. Using maximum likelihood estimation, we added covariance relationships between error terms e3 and e4, e4 and e5, and e4 and e6 based on modification indices. The final model is shown in [Figure 1: see original paper]. PsyCap positively influenced professional identity (direct effect = 0.40), professional identity positively influenced intention to stay (direct effect = 0.45), and PsyCap had both a direct positive effect on intention to stay (0.03) and an indirect effect through professional identity ($0.40 \times 0.45 = 0.18$). 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 total intention to stay score of 21.69 ± 4.04 (mean item score: 3.61 ± 0.67) indicates a moderate level of intention to stay among Chinese GPs. These scores are consistent with findings from Chang [4] on Shandong GPs (3.63 ± 0.78) and Guo [10] on rural doctors in Henan (22.01 ± 3.93). Intention to stay is a strong predictor of actual retention behavior [4], making this finding clinically relevant. There remains considerable room for improvement in GPs' intention to stay, and workforce stability requires strengthening. Relevant authorities should

prioritize GP retention, enhance career attractiveness, and ensure continuous, comprehensive, personalized care for residents.

Our findings demonstrate positive correlations between PsyCap and intention to stay. Kim et al. [18] reported that individuals with higher PsyCap maintain more positive attitudes toward work environments and organizational climates, demonstrating greater dedication and stronger intention to stay. As a crucial component of positive psychological resources, PsyCap significantly influences individual attitudes, behaviors, and performance [19]. Administrators should prioritize GP mental health and effectively develop PsyCap through: (1) positive psychological guidance, establishing service-oriented values, fostering optimism, and using role models to cultivate PsyCap; and (2) addressing negative psychological states through enhanced humanistic care, regular group counseling, and timely intervention for mental health issues.

The results also reveal positive correlations between professional identity and both PsyCap dimensions and intention to stay, with professional identity partially mediating the PsyCap-intention to stay relationship. Professional identity integrates cognitive, emotional, and behavioral elements, emphasizing affirmation of occupational self-worth. Higher perceived resource value represents achievement and self-worth, guiding professional practice behaviors [10]. Enhancing GP professional identity can reduce turnover intention and improve retention, thereby advancing China's general practice and healthcare system development [20]. We recommend strengthening professional identity education, fostering career beliefs and belonging, creating supportive work environments, and enhancing social recognition to promote GP retention.

This study has several limitations. First, the cross-sectional design precludes causal inference. Second, self-reported data may introduce misclassification and recall bias. Future research should employ longitudinal or interventional designs to further examine these relationships.

Conclusion

This large-scale national survey of GPs reveals a moderate level of intention to stay, with positive correlations among PsyCap, professional identity, and intention to stay. Professional identity partially mediates the relationship between PsyCap and intention to stay. Multi-faceted strategies to enhance PsyCap and professional identity may improve GP intention to stay, offering new directions for stabilizing the primary care workforce.

Author Contributions

Pan Wen: Conceptualization, methodology, writing—original draft. Feng Jing: Questionnaire design, data analysis, writing—review & editing. Zheng Yanling, Lei Zihui: Literature review, data collection, data verification. Gan Yong: Feasibility analysis, English revision, supervision, project administration.

Conflicts of Interest: None declared.

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