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ORIGINAL RESEARCH

Primary Healthcare Pharmacists' Perceived Organizational Support and Turnover Intention: Do Gender Differences Exist?

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Purpose: This study aims to explore the relationship between the four-dimensional structured perceived organizational support (emotional support, instrumental support, supervisor support, and coworker support) and the turnover intention of pharmacists in primary healthcare institutions. The gender differences between perceived organizational support and turnover intention will also be examined.

Methods: A cross-sectional study was conducted in primary healthcare institutions of 31 cities in China from 2 July to 1 September 2021. And the binary logistic regression model was employed for data analysis.

Results: 937 valid questionnaires are allocated from pharmacists in primary healthcare institutions. The regression results indicated that emotional support (b=0.073, p<0.001) has a significant influence on pharmacists' turnover intention, and the effect of supervisor support (b=0.173, p=0.046) on pharmacists' turnover intention differs by gender.

Conclusion: These findings offer suggestions for the management and stabilization of pharmacists in primary healthcare institutions. It is suggested that specific measures should be taken to increase pharmacists' perceived organizational support and reduce their turnover intention. At the same time, gender differences need to be taken into consideration by the managers when providing perceived organizational support to reduce their turnover intention through adaptive management.

Keywords: primary healthcare pharmacist, turnover intention, perceived organizational support, emotional support, supervisor support, gender

Introduction

In China, primary healthcare pharmacists are the main provider of pharmacy services, they assist physicians in prescribing and guaranteeing rational medication for patients. Therefore, primary healthcare pharmacists play an increasingly vital role in the healthcare system. However, most primary healthcare institutions in China do not place adequate value on pharmaceutical services. Pharmacists' routine works are only to fill the physicians' prescriptions and provide patients brief explanations of the medication cautions.[1] Moreover, patients are more inclined to trust physicians than pharmacists in primary healthcare institutions,[2] which makes it challenging for them to accept pharmacists' advice and guidance. As a result, primary healthcare institutions experience a high turnover of pharmacists. High turnover and low retention rates of healthcare pharmacists not only exists in China but also in developed countries.[3] This phenomenon is detrimental to the quality of pharmaceutical service, which poses a risk to patients and public health services.

Previous studies have shown that turnover intention is the strongest predictor of employees' actual turnover behavior.[4–6] Turnover intention is an individual's motivation to leave the organization or change jobs over a certain period of time, and it is directly related to turnover behavior.[7] The higher turnover intention among primary healthcare pharmacists can decrease their work efficiency, weaken the quality of pharmaceutical care and delay the construction of a high-level team with professional pharmaceutical skills in primary healthcare institutions. To reduce pharmacists'

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turnover and change their turnover behavior, it is crucial for managers to learn about the factors that significantly influence turnover intention.[8]

According to the current research, perceived organizational support is significantly related to turnover intention.[8,9] Eisenberger et al first developed the term "perceived organizational support". It refers to the employees' overall feelings and beliefs about how the organization views their contribution and cares about their interests. A High level of perceived organizational support can enhance employees' sense of self-identity, belonging, and responsibility, thus making them closely related to their organization.[10,11] Organization provides pharmacists the opportunities to participate in clinical medication and values their productivity and contributions, enabling pharmacists to be more fulfilled and productive at work.[12] Meanwhile, pharmacists who seldomly perceived care and support from organizations may have a relatively higher turnover intention on their work for the feeling of difficulty to realize their self-worth.[13] As a main psychological status of employees, perceived organizational support has a significant connection with employees' work-related behavior. Attention to employees' perceived organizational support can help increase their work engagement and enhance their relationship with the organization. As for primary healthcare pharmacists in China, organizations' attention and care can help to improve their work enthusiasm, realize the full mission of their work, better guarantee the safety of patients, and promote the development of social public health. Therefore, it will be meaningful to see how the perceived organizational support of primary healthcare pharmacists affects their turnover intention. Additionally, the specific content of organizational support is various in different regions. Most western studies regarded perceived organizational support as a one-dimensional structure. However, perceived organizational support was often considered a multi-dimensional structure in China.[14] One possible reason is that employees attach great importance to and are sensitive to interpersonal support from supervisors and colleagues under the influence of Chinese traditional culture of "strict relationship between supervisors and subordinates, and cooperative and win-win relationships between colleagues".[15] Hence, the multi-dimensional perceived organizational support seems to be more suitable for Chinese employees.

Perceived organizational support and turnover intention are both psychological states of employees. Men and women experience these two psychological states differently. Previous studies have demonstrated that women are better able than men to detect organizational support.[16,17] Perhaps due to gender differences, men are more independent and prefer to ignore the opinions and support of others at work. While women prefer to work in a harmonious and congenial atmosphere and are more receptive to the opinions and support of others.[17] Additionally, Deng's study about physicians' turnover intentions found that there are certain differences in turnover intention between men and women in the same organization as well.[18] However, there is no known study discussing the effect of gender differences on the relationship between perceived organizational support and turnover intention in the field of primary healthcare.

At present, the research on perceived organizational support and turnover intention in primary healthcare institutions is still at a blank stage. It is necessary to study primary healthcare pharmacists' perceived organizational support and turnover intention because of their growing significance in the field of public health. To fill the research gap, this study examined the relationship between primary healthcare pharmacists' perceived organizational support and turnover intention and investigated whether the relationship differs according to gender. This study aims to reduce primary healthcare pharmacists' turnover intention and provide a theoretical basis for the sustained supply of primary pharmaceutical care. Moreover, this study also makes a significant contribution to the diversification management of primary healthcare institutions by introducing gender factors. Finally, the current study hopes to enrich the literature on the relationship between perceived organizational support and turnover intention and the impact of gender on this relationship from the primary healthcare perspective. Figure 1 shows the structural model of this study.

Theoretical Background and Hypothesis Development
Turnover Intention and Perceived Organizational Support

Turnover intention is defined as "the probability of changing jobs within a certain period", which is an important predictor of employees' propensity to change jobs. Besides, it can also be regarded as a warning sign before employees' actual turnover.[4,19–21] In the healthcare system, researchers reported that healthcare workers' turnover intention happened before the turnover behavior.[22–24] Many studies identified that pharmacists' turnover intention is influenced by many factors which can be divided into individual factors (gender, age, or educational background) and organizational factors
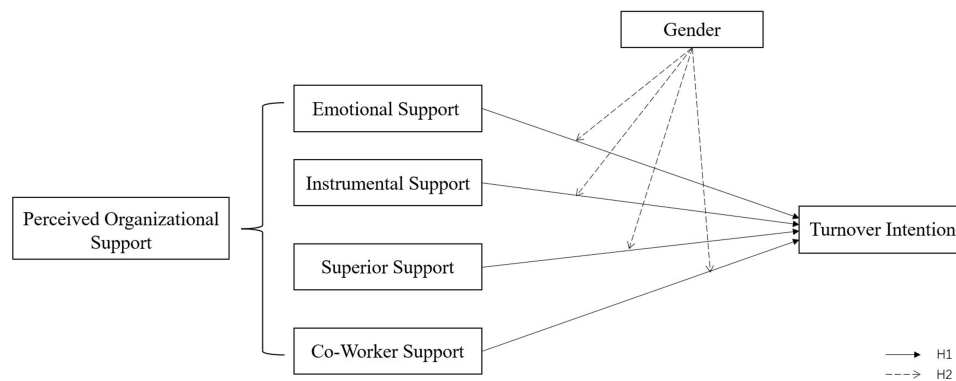
Figure 1 Research model.

(job satisfaction, job stress, perceived organizational support, or career development opportunities).[25–31] For primary healthcare pharmacists who are neglected in the organization, the organization's attention and care determine their turnover intention to a large degree. Therefore, it is an effective measure to influence the turnover intention of pharmacists through perceived organizational support in primary healthcare institutions. However, there are different opinions about the relationship between perceived organizational support and the turnover intention of pharmacists. In Arndt's study,[32] perceived organizational support had a significantly negative effect on turnover intention. However, two other studies proposed that it was not related to pharmacists' turnover intention if other factors were present in the model.[33,34] In conclusion, the relationship between perceived organizational support and turnover intention of primary healthcare pharmacists remains to be explored.

Perceived organizational support was first coined by Eisenberger et al[35] (1986) and was defined as "the general perception of employees that the organization values their contribution and cares about their well-being and development". At present, there are two views on the dimensional structure of perceived organizational support: one-dimensional structure and multi-dimensional structure. Eisenberger is a representative of those who support one-dimensional structured perceived organizational support.[35] He held that employees' perceived organizational support is formed when organizational behaviors are regarded as holistic behaviors, which only reflects the holistic support perceived by employees at the organizational level. As for the multi-dimensional structure of perceived organizational support, scholars have different viewpoints. McMillan supplemented Eisenberger's view and suggested that perceived organizational support can be divided into emotional support and instrumental support from the nature of support.[36] Ling et al[37] divided perceived organizational support into work support and life support. Chen studied the perceived organizational support of Chinese knowledge workers and proposed that the perceived organizational support, in a broad sense, consists of four dimensions: emotional support, instrumental support, supervisor support, and coworker support.[14] Bao came up with a multi-dimensional perceived organizational support model suitable for Chinese employees after reviewing the previous representative views on the dimension division of perceived organizational support.[38] He considered that perceived organizational support is composed of system support, supervisor support, and coworker support. Furthermore, supervisor support is divided into task-oriented support and relationship-oriented support, and coworker support is divided into work support and life support. Based on the above research, this study defines perceived organizational support as emotional support, instrumental support, supervisor support, and coworker support with the consideration of the context of Chinese organizational culture.

According to the social exchange theory, individuals and the organization interact and exchange interests in a relationship where both parties pursue their interests.[39] When an organization recognizes the contributions and achievements of its members and attaches importance to its employees' welfare and treatment, in turn, they are more motivated to work and loyal to the organization.[40] In other words, the organization provides both mental support and material support, which can motivate employees to stay and continue working and reduce their turnover intention.[41] A higher perceived organizational support can motivate employees to make efforts to achieve organizational goals, thus reducing their turnover intention.[42] Perceived organizational support has direct and indirect effects on turnover intention.[8]

It creates a self-identity among employees that they are an important part of the organization. The stronger the employees' perceived organizational support is, the less likely they are to find a new job or leave their current position.[43] Whereas the faint perceived organizational support leads to turnover intention.[31] Overall, perceived organizational support harms employees' turnover intention and motivates them to stay.[40] Based on the existing literature, this study argues that perceived organizational support could negatively influence turnover intention in primary healthcare institutions. Therefore, we propose the first hypothesis as follows:

Hypothesis 1: There will be a significant negative relationship between perceived organizational support and pharmacists' turnover intention.

Perceived Organizational Support, Turnover Intentions, and Gender

Previous studies have demonstrated that men and women have different perceived organizational support and turnover intention.[16,44,45] These differences are possibly due to the gender differences projected in employees' working attitudes and behaviors.[16,46] Compared with men, women are more socially oriented and more likely to establish supportive relationships with superiors and coworkers. And they also pay more attention to emotional support during work because of their sensitive perception towards emotions.[47–50] Thus, women may be more receptive to perceived organizational support than men. However, previous studies showed that when men feel strong organizational support, especially support from supervisors, they will be more actively involved in their work. This phenomenon is possible because men focus more on their status and value in the organization.[51] At present, some studies have indicated that gender may play a potential moderate role between perceived organizational support and turnover intention, but the findings were inconsistent. One study found that women will be more actively involved in work than men when women feel supported by the organization and then their turnover intention will be reduced.[52] But the result was just the opposite in textile and apparel manufacturing firms. Although women have higher perceived organizational support than men, they still have higher turnover intention than men.[16] This difference may stem from the high-performance work system of the organization and the special physiological activities of women, such as pregnancy and childbirth. Thus, the second hypothesis in the present study was formulated as follows:

Hypothesis 2: The effects of perceived organizational support on turnover intention differ by gender.

Materials and Methods

Data Collection

The study was conducted between 2 July and 1 September 2021 in primary healthcare institutions in 31 cities in China. The researcher contacted potential respondents recommended by institution managers by telephone and explained the purpose and content of the study. After they consented to participate, pharmacists' basic information will be collected to ensure that the respondents met the inclusion criteria. To ensure the quality of the research, two data reviewers were recruited for this study to review the uploaded questionnaires in real-time. A total of 1500 completed questionnaires were sent out and eventually 1206 questionnaires were returned, with a response rate of 80.4%. Due to missing values, the final valid sample size was 937.

Sample

Among the respondents in the sample, 64.03% were female. The average age of respondents was 38.7 years (SD = 7.96) with the largest proportion (41.30%) in the 35–44 age group. The average organizational tenure was 13 years (SD=7.86). The average Annual Salary was ¥78,000 (SD=5.60) with nearly half earning between ¥50,000 and ¥100,000 per year (49.4%). The majority of their professional titles were junior titles (51.7%). Concerning their education, more than half of pharmacists have bachelor's degrees (56.99%). In addition, more than half of the sample were permanent personnel (61.47%) and married pharmacists make up the majority (85.59%). The proportion of the sample's gender, age, education, and title was similar to the proportion of them in the 2019 statistics of China pharmacists, so the sample is representative of the population in China to some extent.

Measure

Turnover Intention

Turnover intention was measured by a single item: "Have you ever wanted to leave your job?" which has been widely used in previous studies.[53,54]

Perceived Organizational Support

The perceived organizational support scale was developed by Chinese scholar Chen (2006) for Chinese knowledge workers based on studies of Eisenberger, Ling, House, and Yoon.[14,35,55–57] It contains 16 items in four dimensions: emotional support, instrumental support, supervisor support, and coworker support. The emotional support dimension contained seven items, while the other three dimensions all contained three items. Items were rated on a 7-point Likert scale (from 1 = very strongly agree to 7 = disagree), with higher scores indicating lower perceived organizational support. The Cronbach's alpha for this scale is 0.923, showing high internal consistency reliability.

Control Variables

The gender (male=0, female=1) was included as a control variable as it may influence perceived organizational support and turnover intention.[26,45,58] Furthermore, this study also includes the above demographic variables considering that education, professional title, the form of employment, marital status, age, organizational tenure, and annual income may also have an impact on turnover intention.[59–62] Among them, the professional title is a sign reflecting the technical level and working ability of pharmacists.

Analytical Techniques

Descriptive statistics on the demographic variables were performed using Excel. Stata 15.0 was used to perform statistical analyses and descriptive statistics such as means, standard deviations, and correlations between key variables. As the turnover intention was a dichotomous variable, the binary logistic regression model was employed for data analysis. In addition, the model introduced gender as a moderator variable to explore the differences in the effects of perceived organizational support on turnover intention. P-values < 0.05 and 95% CI was used to indicate statistical significance.

Results

Descriptive Statistics

The means, standard deviations, and correlation of the study's variables are reported in Table 1. The results showed that there were correlations between the four dimensions of perceived organizational support and turnover intention. Table 2 presents descriptive statistics for each item of the perceived organizational support questionnaire. Among them, the mean scores of the two questions "The organization cares about my personal development" (2.84±1.35) and "The organization cares about my personal feelings" (2.82±1.32) were higher than others, indicating that the primary pharmacists felt that they are least supported in these two aspects. In addition, the mean scores of "The organization cares about my welfare" (2.74±1.25), "The organization respects my goals and values" (2.68±1.29), "The organization will try its best to provide me with the staff and information support I need to do my job" (2.65±1.32), and "my supervisors care about my welfare" were also high, which reflected that pharmacists' perceived fewer feelings of support from the organization in terms of welfare, training, and respect. Overall, among the four dimensions, the emotional support dimension had the highest mean score and the coworker support dimension had the lowest mean score, indicating that pharmacists had the lowest perceived emotional support and the highest perceived colleague support.

Determinants of Respondents' Turnover Intention

Logistic regression was performed on the relationship between perceived organizational support and turnover intention in Table 3 Model 1. The results showed that emotional support was a positive main effect (OR=1.08, p<0.01). Previous studies have also shown a significant relationship between emotional support and turnover intention.[63–66] We also noticed that gender had a positive and statistically significant relationship with turnover intention (OR=0.70, p=0.04) in this study. Furthermore, to explore whether the relationship between perceived organizational support and pharmacists' turnover intentions differs by gender, we respectively included the interaction between gender and the four dimensions of perceived organizational support

Table 1 Correlations of All the Variables

		Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Turnover Intention	0.25	0.01	1.00												
2	Emotional support	18.57	0.25	0.29***	1.00											
3	Instrumental support	7.79	0.12	0.25***	0.83***	1.00										
4	Supervisor support	7.91	0.12	0.26***	0.82***	0.80***	1.00									
5	Coworker support	6.7	0.1	0.18***	0.67***	0.64***	0.73***	1.00								
6	Age	38.72	0.26	−0.10**	−0.09**	−0.05	−0.03	−0.02	1.00							
7	Years of experience as a pharmacist	12.97	0.26	−0.07*	−0.08*	−0.08	−0.04	−0.05	−0.02***	1.00						
8	Annual income	7.78	1.83	0.04	0	−0.03	0.02	0.03	0.01	0.00	1.00					
9	Gender	0.64	0.02	−0.04	0.05	0.01	0.01	−0.01	−0.19***	−0.15***	−0.11***	1.00				
10	Title	0.58	0.02	−0.04	−0.04	−0.03	−0.04	0.02	0.35***	0.36***	0.12***	−0.06	1.00			
11	Permanent personnel	0.39	0.02	0.08*	0.04	0.00	0.01	0.02	−0.23***	−0.24***	−0.03	0.08*	−0.23***	1.00		
12	Education	1.63	0.02	−0.01	−0.03	−0.05	−0.19	−0.02	−0.22***	−0.26***	0.28***	0	0.16***	−0.01	1.00	
13	Marital status	0.89	0.01	−0.06*	−0.04	−0.05	−0.04	−0.04	0.46***	0.36***	−0.03	0.03	0.21***	−0.14***	−0.06	1.00

Notes: *p<0.05, **p<0.01, ***p<0.001;
Abbreviation: SD, standard deviation.

Table 2 Descriptive Statistics of the Sense of Organizational Support Questionnaire

	Min	Max	Mean	SD
Emotional support	1	7	2.65	0.42
The organization cares about my welfare	1	7	2.74	1.25
The organization respects my opinion	1	7	2.59	1.24
When I meet difficulties in my work, the organization will help me	1	7	2.35	1.15
When I meet difficulties in my life, the organization will help me	1	7	2.60	1.29
The organization cares about my personal development	1	7	2.84	1.35
The organization cares about my personal feelings	1	7	2.82	1.32
The organization respects my goals and values	1	7	2.68	1.29
Instrumental support	1	7	2.60	0.43
The organization will try its best to provide me with a good working environment and facilities	1	7	2.56	1.26
The organization will try its best to provide me with the staff and information support I need to do my job	1	7	2.65	1.32
The organization will make every effort to provide me with the training or related support I need to do my job	1	7	2.59	1.31
Superiors support	1	7	2.64	0.43
My supervisors are willing to listen to the problems I encounter at work	1	7	2.58	1.28
My supervisors care about my welfare	1	7	2.76	1.34
I get help from my supervisor when I am in trouble	1	7	2.57	1.26
Coworker support	1	7	2.23	0.36
My coworkers are willing to listen to the problems I encounter at work	1	7	2.31	1.12
My coworkers are very helpful to me in my work	1	7	2.27	1.10
My coworkers are willing to help when I am in trouble	1	7	2.12	1.03

in model 2. From the results, we found that the interaction between gender and supervisor support is statistically significant (OR=0.84, p=0.05). This finding implied that gender moderates the relationship between supervisor support and turnover intention. As depicted in Figure 2, the slope of the relationship between supervisor support and turnover intention was steeper for the male group and flatter for the female group, which suggested that the relationship between supervisor support and turnover intention was stronger for men than for women. At the same time, the interaction between another three dimensions and gender was not statistically significant. Thus, the effect of emotional support, instrumental support, and coworker support on China's primary healthcare pharmacists' turnover does not differ by gender in this research.

Discussion

This study first explored the relationship between multi-dimensional structured perceived organizational support and turnover intention of pharmacists in primary healthcare institutions. And we further determined whether gender differences moderate this relationship. In addition, the proportion of the sample's gender, age, education, and professional title in the study is similar to the proportion of them in the 2019 statistics of China pharmacists, which shows the representativeness of the sample. The findings of this research fill the gaps of studies on the relationship between multi-dimensional structured perceived organizational support and turnover intention, and provide a reference for primary healthcare institution managers to stabilize and motivate the healthcare workers.

Emotional Support, Instrumental Support, Supervisor Support, Coworker Support, and Turnover Intention

First, the findings showed that increasing emotional support would in turn decrease the turnover intention of pharmacists in primary healthcare institutions. However, the level of emotional support of pharmacists surveyed in this research was the lowest among the four dimensions. This indicates the lack of respect and attention for primary healthcare pharmacists in China currently and leads to the high turnover intention of pharmacists. Emotional support is an intangible emotional resource. It can not only make employees feel valued and respected but also make employees feel that the organization

Table 3 Results of the Logistic Regression

Turnover Intention	Coef.	OR	P	CI	Coef.	OR	P	CI
			Model 1				Model 2	
Emotional support	0.07	1.08	0.00**	1.03–1.12	0.04	1.04	0.23	0.98–1.11
Instrumental support	0.02	1.02	0.64	0.94–1.10	0.04	1.04	0.50	0.92–1.18
Supervisor support	0.06	1.06	0.19	0.97–1.15	0.16	1.17	0.02	1.03–1.34
Coworker support	−0.04	0.96	0.27	0.89–1.03	−0.09	0.91	0.09	0.82–1.02
Age	−0.04	0.97	0.07	0.93–1.00	−0.04	0.96	0.06	0.93–1.00
Years of experience as a pharmacist	0.01	1.01	0.52	0.98–1.05	0.01	1.01	0.49	0.98–1.05
Annual income	0.00	1.00	0.31	1.00–1.00	0.00	1.00	0.30	1.00–1.00
Gender								
Female	−0.35	0.70	0.04*	0.50–0.99	−0.38	0.68	0.47	0.25–1.90
Title								
Intermediate	0.18	1.20	0.33	0.83–1.74	0.20	1.22	0.29	0.85–1.77
Senior	0.09	1.09	0.79	0.58–2.04	0.08	1.08	0.81	0.58–2.02
Permanent personnel								
No	0.32	1.38	0.06	0.99–1.92	0.34	1.41	0.05	1.01–1.97
Education								
Junior college	−0.58	0.56	0.08	0.29–1.08	−0.54	0.58	0.11	0.30–1.14
Bachelor's degree	−0.53	0.59	0.11	0.31–1.13	−0.48	0.62	0.15	0.32–1.20
Master's degree	−0.48	0.62	0.30	0.25–1.54	−0.41	0.66	0.38	0.27–1.66
Marital status								
Married	−0.21	0.81	0.43	0.48–1.36	−0.21	0.81	0.43	0.48–1.36
The others (divorced)	0.61	1.84	0.32	0.56–6.08	0.62	1.85	0.31	0.56–6.13
Emotional support*Gender					0.06	1.06	0.17	0.98–1.15
Instrumental support*Gender					−0.03	0.97	0.70	0.83–1.14
Supervisor support*Gender					−0.17	0.84	0.05*	0.71–1.00
Coworker support*Gender					0.09	1.10	0.22	0.95–1.27
R2				0.098				0.103

Notes: Gender was dummy coded as 0=male and 1=female; job title was dummy coded as 0=junior, 1=intermediate and 2=senior; permanent personnel was dummy coded as 0=yes and 1= no; education was dummy coded as 0= technical secondary school or below, 1= junior college, 2= bachelor's degree and 3= master's degree; marital status was dummy coded as 0= unmarried, 1= married and 2= other or divorced. Turnover intention was dummy coded as 0= no, 1= yes. **p<0.01, *p<0.05.

recognizes their contributions and cares about their welfare and personal development.[67] In China, primary healthcare institutions generally neglect the importance of pharmacy services and ignore the vital role of pharmacists in the process of clinical medication. Therefore, it is a common phenomenon that pharmacists in primary healthcare institutions are more engaged in drug supply rather than rational medication.[12] Additionally, the status of pharmacists in medical institutions is generally lower than doctors,[67] and they receive less attention, support, and benefits.[68] These may contribute to the low emotional support perceived by pharmacists. With the implementation of the "hierarchical healthcare system" in China,[69] the importance of primary pharmaceutical service has increased. To meet all the requirements and guarantee service quality, pharmacists should participate in more prescription reviewing and clinical medication. Meanwhile, primary healthcare institutions are paying more attention to pharmacists, which makes primary pharmacists have higher expectations of their value. As a result, pharmacists perceived emotional support has an increasingly significant impact on their turnover intention.

Secondly, the results indicated that instrumental support, supervisor support, and coworker support had no significant effect on the primary pharmacists' turnover intention. In performing pharmaceutical service, primary healthcare pharmacists need to make use of certain hardware equipment,[1] such as consultation service equipment, organizing equipment, etc. At the same time, pharmacists have to continuously attend training to increase their professional knowledge reserves and enhance their technical abilities. Therefore, whether healthcare institutions can provide certain equipment and regular training activities may influence the pharmacist's behaviors in providing pharmacy services and their sense of self-worth, which in turn may influence their turnover
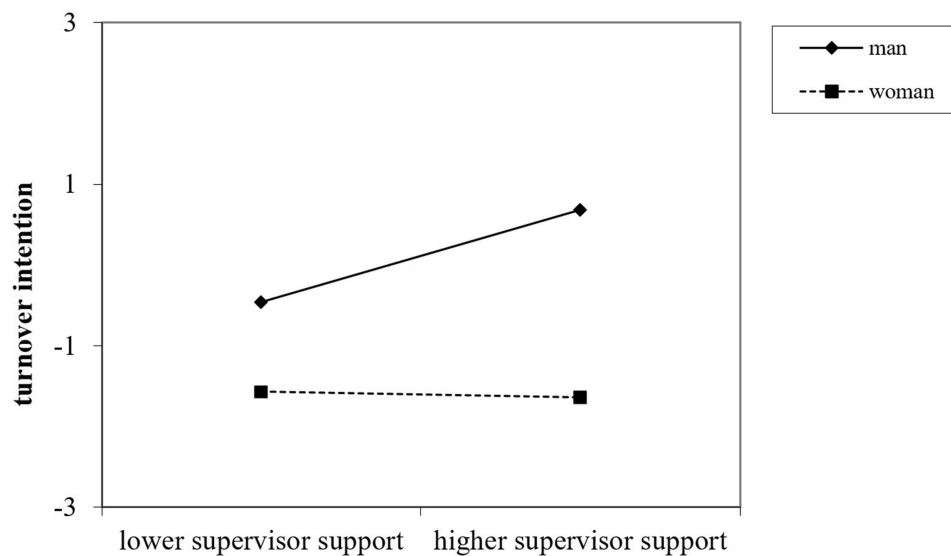
Figure 2 Interactive effects of supervisor support and gender on turnover intention.

intention. However, there was no significant relationship between pharmacists' perceived instrumental support and their turnover intention in this research. The explanation could be that primary healthcare pharmacists were not aware of the importance of active learning, and they were also less likely to actively participate in learning and training activities.[70] This suggests that learning, participating in training, and using advanced equipment to carry out pharmacy services may not be a priority in their daily work for primary healthcare pharmacists. Therefore, the degree of instrumental support that pharmacists perceive from their organizations may not have a significant impact on their turnover intention. Previous research has shown that interpersonal relationships with supervisors and coworkers have a significant effect on employees' turnover intention.[71,72] However, the results of the present study were in contrast. There was no significant effect of supervisor support and coworker support on the turnover intention of primary healthcare pharmacists. This may be due to the low status of pharmacists in primary healthcare institutions in China. On the one hand, pharmacists mainly communicate with patients, and their daily work is oriented toward simple activities such as descriptions filling and medication dispensing.[68] On the other hand, doctors and nurses in primary healthcare institutions tend to overlook the role and importance of pharmacists and lack recognition of the professional competence of pharmacists.[73] The communications between doctors, nurses, and pharmacists are deficient. As a result, it is quite common that there are not enough cooperation and communication between pharmacists and their coworkers or supervisors at work, accounting for the non-essential role of interpersonal support when pharmacists consider whether to remain in their current position.

Implications for Gender Differences

Although the findings showed no significant effect of supervisor support on pharmacists' turnover intention, interestingly, we found that the relationship between perceived supervisor support and turnover intention was stronger for male pharmacists than for female pharmacists. And the perceived supervisor support of male pharmacists was also higher than that of female pharmacists (2.62, 2.65; the higher the score, the lower the level of support). In the organization, supervisors are often regarded as the representatives of the organization who guide and evaluate employees. Supervisors' attention and care may directly reflect that of the organization. In the Chinese organizational context, there are differences in the way men and women value interpersonal relationships. At the same time, male supervisors are the majority. Men have both higher cognitive trust and emotional trust in their supervisors than those women when their superiors are male.[74] In the current pharmacist team, the ratio of men to women is approximately 1:2 with female pharmacists making up the majority. Under the influence of China's organizational environment, male pharmacists may focus more on the views and support of their superiors to realize their sense of self-worth and self-achievement. When they perceive less supervisor support, their psychological pressure will increase which then leads to turnover intention. Although contemporary women also have higher career goals and pursue career achievements, in the specific environment of primary healthcare institutions, they possibly attach more importance to the attention and care given by healthcare

institutions compared with supervisor support. Therefore, in China's primary healthcare institutions, supervisor support has a stronger influence on the turnover intention of male pharmacists than that of female pharmacists.

Considering the gender differences in perceived organizational support and turnover intention, healthcare institutions' managers should take measures flexibly to increase perceived organizational support and reduce turnover intention among pharmacists of different genders. For example, supervisors should actively help pharmacists with difficulties and listen to their demands for work and life so that pharmacists can feel respected and valued by supervisors. In addition, supervisors should communicate more with female pharmacists to promote their recognition and trust, and to better reduce the turnover intention of pharmacists by increasing the supervisor support provided to pharmacists.

Practical Suggestions for Policy Decision-Makers

To reduce the turnover intention of pharmacists, national health service managers, and policymakers should continuously increase the attention to primary pharmacy services. Meanwhile, the managers of primary healthcare institutions should also transform their inherent management mindset and conduct adaptive management for pharmaceutical service personnel. Based on the results of this study, we come up with the following recommendations.

First of all, national health service managers and policymakers should formulate corresponding incentive policies and carry out public lectures on pharmacy services regularly. These measure aims to promote the development of pharmaceutical services and improve the public's awareness of pharmacy services.

Secondly, managers of primary healthcare institutions should realize the importance of pharmacy services in the development of primary healthcare institutions. They should implement several measures like providing opportunities to participate in clinical medication and setting up a reward system to quantify the work for encouraging pharmacists to constantly strive to achieve organizational goals and self-worth.

Finally, healthcare institutions should attach importance to pharmacists' ability enhancement and career development by equipping the facilities and equipment needed to carry out pharmaceutical services and providing regular professional training. Through these, pharmacists' awareness of active learning can be improved and their professional knowledge and skills can be enhanced so that pharmacists can provide more scientific and professional pharmaceutical services.

Limitations and Future Research

During the development of this study, several limitations were found. First, the study was conducted with Chinese primary healthcare pharmacists, which is cultural, geographical, and organizational level specific. Despite new insights into the findings of the pharmacist turnover study, the further examination needs to be given to the applicability in different regions or cultural contexts of the results. Second, this study used cross-sectional data. Therefore, it is difficult to reflect the development and changes in the relationship between pharmacists' perceived organizational support, turnover intentions, and gender over a certain period of time. Thus future studies may explore the relationship between the variables in depth through follow-up studies. Third, as the data analysis was based on respondents' responses, the result may be inevitably biased. Finally, the mechanism of action between perceived organizational support and turnover intentions is complex. Future studies may consider including other relevant variables to facilitate a more comprehensive and rigorous exploration of the relationship between the above variables.

Conclusion

This study demonstrated the significant negative correlation between perceived organizational support and primary healthcare pharmacists' turnover intention. Additionally, emotional support was a significant factor affecting the turnover intention of pharmacists, and the relationship between supervisor support and turnover intention was stronger in males. This study provides a supplement to the research in the field of perceived organizational support and turnover intention. Meanwhile, these findings may provide national policymakers and primary healthcare managers with reference to reduce pharmacist turnover intention and promote China primary healthcare pharmacist team building.

Data Sharing Statement

Original data related to this paper can be obtained by contacting the corresponding author directly.

Ethics Approval and Consent Informed Consent

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Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or all these areas; took part in drafting, revising, or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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References

1. Wang XJ, Yuan B. Status quo and countermeasures of carrying on pharmaceutical service in basic hospitals. *World Lat Med Inform*. 2015;15 (36):11–12.
2. Liao DJ. Status and future development of clinical pharmacists in primary hospitals. *China Health Indust*. 2020;17(09):194–195.
3. Mak VSL, March GJ, Clark A, et al. Why do Australian registered pharmacists leave the profession? A qualitative study. *Int J Clin Pharm*. 2013;35 (1):129–137. doi:10.1007/s11096-012-9720-5
4. Sun RS, Wang WJ. Transformational leadership, employee turnover intention, and actual voluntary turnover in public organizations. *Pub Manag Rev*. 2017;19(8):1124–1141. doi:10.1080/14719037.2016.1257063
5. Wang H, Chen H, Chen JM. Correlation study on payment satisfaction, psychological reward satisfaction and turnover intention of nurses. *Chin Hosp Manag*. 2018;38(03):64–66.
6. Yang WW, Huang QJ. Investigation on current situation of the career values and the turnover intention of new nurses in the tertiary hospital. *Chin Hosp Manag*. 2015;35(03):62–64.
7. Shi YH. *Love and Resentment: A Survey on the Turnover Intention of Middle School Teachers in Poor Areas of Gansu*. Sichuan Normal University; 2018.
8. Thin SM, Nakpun T, Nitadpakorn S, et al. What drives pharmacists' turnover intention: a systematic review. *Pharm Pract*. 2021;19:4.
9. Ma Y, Chen F, Xing DG, et al. Study on the associated factors of turnover intention among emergency nurses in China and the relationship between major factors. *Int Emerg Nurs*. 2022;60:101106. doi:10.1016/j.ienj.2021.101106
10. Cropanzano R, Howes JC, Grandey AA, et al. The relationship of organizational politics and support to work behaviors, attitudes, and stress. *J Organ Behav*. 1997;18:159–180. doi:10.1002/(SICI)1099-1379(199703)18:2<159::AID-JOB795>3.0.CO;2-D
11. Stinglhamber F, Vandenberghe C. Organizations and supervisors as sources of support and targets of commitment: a longitudinal study. *J Organ Behav*. 2003;24:251–270. doi:10.1002/job.192
12. Eden M, Schafheutle EI, Hassell K. Workload pressure among recently qualified pharmacists: an exploratory study of intentions to leave the profession. *Int J Pharm Pract*. 2009;17(3):181–187. doi:10.1211/ijpp.17.03.0009
13. Zhang YL, Huang R. Explanation of the problems in the management of pharmacists in primary hospitals and suggestions for optimization. *Hum Resour Manage*. 2017;11:216–217.
14. Chen ZX. *Chinese Knowledge-Workers' Perceived Organizational Support and Its Influence on Their Job Performance and Turnover Intention*. Huazhong University of Science and Technology; 2006.
15. Tai GK, Jin KL, Jun HL. Do interpersonal relationships still matter for turnover intention? A comparison of South Korea and China. *Int J Hum Resour Manag*. 2013;24(5):966–984. doi:10.1080/09585192.2012.743472
16. Wickramasinghe GLD. Effects of gender on work-related attitudes: study of lean implemented textile and apparel manufacturing firms. *J Tex Instit*. 2016;107(7):854–863. doi:10.1080/00405000.2015.1061795
17. Zhu JW, Wu ZC, Deng Q. The impact of perceived organizational support on the induction of 1990s employees: the moderating role of gender. *Chin for Entrepr*. 2018;33:98–100.
18. Deng ZQ, Wang HW, Ping WJ, et al. Analysis of Turnover Intention and Related Factors of General Practitioners in Western China. *Chin J Soc Med*. 2022;39(04):441–445.
19. Jung HS, Namkung Y, Yoon HH. The effects of employees' business ethical value on person–organization fit and turnover intent in the foodservice industry. *Int J Hosp Manag*. 2009;29:3.

20. Sadaaki F, Rollins AL, Salyers Michelle P. Characteristics and job stressors associated with turnover and turnover intention among community mental health providers. *Psychiatric Serv*. 2020;71:3.

21. Wermeling L. Why social workers leave the profession: understanding the profession and workforce. *Adm Soc Work*. 2013;37(4):329–339. doi:10.1080/03643107.2012.693057

22. Aman-Ullah A, Aziz A, Ibrahim H, et al. *The Role of Compensation in Shaping Employee's Behaviour: A Mediation Study Through Job Satisfaction During the Covid-19 Pandemic*. Rege-Revista De Gestao; 2022.

23. Aman-Ullah A, Ibrahim H, Aziz A, et al. Balancing is a necessity not leisure: a study on work–life balance witnessing healthcare sector of Pakistan. *Asia Pacific J Bus Admin*. 2022. doi:10.1108/APJBA-09-2020-0338

24. Yang TN, Jin X, Shi HB. Occupational stress, distributive justice and turnover intention among public hospital nurses in China: a cross-sectional study. *Appl Nurs Res*. 2021;61:151481. doi:10.1016/j.apnr.2021.151481

25. Gan Y, Jiang H, Li LQ, et al. A national survey of turnover intention among general practitioners in China. *Int J Health Plann Manag*. 2022;35 (2):482–493.

26. Liu J, Zhu B, Wu J, Mao Y. Job satisfaction, work stress, and turnover intentions among rural health workers: a cross-sectional study in 11 western provinces of China. *BMC Fam Pract*. 2019;20:1. doi:10.1186/s12875-019-0904-0

27. Seston E, Hassell K, Ferguson J, et al. Exploring the relationship between pharmacists' job satisfaction, intention to quit the profession, and actual quitting. *Res Soc Admin Pharm*. 2009;5(2):121–132. doi:10.1016/j.sapharm.2008.08.002

28. Al-Muallem N, Al-Surimi KM. Job satisfaction, work commitment and intention to leave among pharmacists: a cross-sectional study. *BMJ open*. 2019;9:9. doi:10.1136/bmjopen-2018-024448

29. Dai ZW, Ma WG. Modelling of influencing factors of Chinese nurses' turnover intention: a meta-analysis. *Milit Nurs*. 2021;38(08):5–7.

30. Zhang XF, An RR. Turnover intention of emergency physicians in central china and its influencing factors. *Chin J Soc Med*. 2022;39(04):431–435.

31. Tang K, Xu B. An empirical study on the impact of perceived organizational support on turnover intention of doctors in shanghai public hospitals. *Mod Hosp Manag*. 2021;19(05):60–64.

32. Arndt A, Arnold TJ, Landry TD. The effects of polychronic-orientation upon retail employee satisfaction and turnover. *J Retail*. 2006;82:319–330. doi:10.1016/j.jretai.2006.08.005

33. Urbonas G, Kubiliene L, Kubilius R, et al. Assessing the effects of pharmacists' perceived organizational support, organizational commitment and turnover intention on provision of medication information at community pharmacies in Lithuania: a structural equation modeling approach. *BMC Health Serv Res*. 2015;15. doi:10.1186/s12913-015-0741-3

34. Leupold CR, Ellis LE, Valle M. Job embeddedness and retail pharmacists' intention to leave. *Psychol Manag J*. 2013;16:197–216. doi:10.1037/mgr0000006

35. Eisenberger R, Huntington R, Hutchison S, et al. Perceived organizational support. *J Appl Psychol*. 1986;71(3):500–507. doi:10.1037/0021-9010.71.3.500

36. McMillan RC. *Customer Satisfaction and Organizational Support for Service Providers*. University of Florida; 1997:22–61.

37. Ling WQ, Zhang ZC, Fang L. The exploring of the influential factors on the organizational commitment. *Acta Psychol Sinica*. 2001;3:259–263.

38. Bao GM, Liu X. A multidimensional concept model on the perceived organizational support for Chinese employee. *Sci Res Manag*. 2011;32 (2):160–168.

39. Aman-Ullah A, Ibrahim H, Aziz A, et al. Impact of workplace safety on employee retention using sequential mediation: evidence from the health-care sector. *RAUSP Manag J*. 2022;57(2):182–198. doi:10.1108/RAUSP-02-2021-0043

40. Jing JW, Yan JZ. Study on the effect of employees' perceived organizational support, psychological ownership, and turnover intention: a case of china's employee. *Int J Environ Res Public Health*. 2022;19:10. doi:10.3390/ijerph19106016

41. Aman-Ullah A, Aziz A, Ibrahim H, et al. The impact of job security, job satisfaction and job embeddedness on employee retention: an empirical investigation of Pakistan's health-care industry. *J Asia Bus Stud*. 2022;16(6):904–922. doi:10.1108/JABS-12-2020-0480

42. Xu SH. Research on perceived organizational support. *J Chongqing Univ Technol*. 2008;22(3):54–56.

43. Wayne S, Shore L, Liden R. Perceived organizational sup-port and leader-member exchange: a social exchange per-spective. *Acad Manag J*. 1997;40:82–111. doi:10.2307/257021

44. Rhoades L, Eisenberger R. Perceived organizational support: a review of the literature. *J Appl Psychol*. 2002;87(4):698–714. doi:10.1037/0021-9010.87.4.698

45. Mascarenhas C, Galvão AR, Marques CS. How perceived organizational support, identification with organization and work engagement influence job satisfaction: a gender-based perspective. *Administr Sci*. 2022;12:2. doi:10.3390/admsci12020066

46. Boles J, Madupalli R, Rutherford B, et al. The relationship of facets of salesperson job satisfaction with affective organizational commitment. *J Bus Ind Mark*. 2007;22(5):311–321. doi:10.1108/08858620710773440

47. Wang LZ. Management dilemma and countermeasures of female employees in enterprises at present. *J Suzhou Univ*. 2020;35(11):45–48.

48. McNeilly K, Goldsmith RE. The moderating effects of gender and performance on job satisfaction and intentions to leave in the sales force. *J Bus Res*. 1991;22(3):219–232. doi:10.1016/0148-2963(91)90003-G

49. Paillé P. Do coworkers make the service customer? A field study in the public sector. *Rev Pub Pers Admin*. 2013;33:28–57.

50. Celep C, Yilmazturk OE. The relationship among organizational trust, multidimensional organizational commitment and perceived organizational support in educational organizations. *Procedia*. 2012;46:5763–5776. doi:10.1016/j.sbspro.2012.06.512

51. Suan CL, Nasurdin AM. Supervisor support and work engagement of hotel employees in Malaysia. *Gen Manag*. 2016;31(1):2–18. doi:10.1108/GM-11-2014-0105

52. Khodakarami N, Dirani K. Drivers of employee engagement: differences by work area and gender. *Indust Commer Train*. 2020;52(1):81–91. doi:10.1108/ICT-06-2019-0060

53. Van Bogaert P, Timmermans O, Weeks SM, et al. Nursing unit teams matter: impact of unit-level nurse practice environment, nurse work characteristics, and burnout on nurse reported job outcomes, and quality of care, and patient adverse events—A cross-sectional survey. *Int J Nurs Stud*. 2014;51(8):1123–1134. doi:10.1016/j.ijnurstu.2013.12.009

54. Yang YM, Wang PG, Kelifa MO. How workplace violence correlates turnover intention among Chinese health care workers in COVID-19 context: the mediating role of perceived social support and mental health. *J Nurs Manag*. 2021;30(6):1407–1414.

55. Ling WQ, Yang HJ, Fang LL. Perceived organizational support (POS) of the employees. *Acta Psychol Sinica*. 2006;02:281–287.

56. House RJ, Rizzo JR. Role conflict and ambiguity as critical variables in a model of organizational behavior. *Organ Behav Hum Perform*. 1972;7 (3):467–505. doi:10.1016/0030-5073(72)90030-X

57. Yoon J, Lim JC. Organizational support in the workplace: the case of Korean hospital employees. *Hum Relat*. 1999;52(7):923–945. doi:10.1177/ 001872679905200704

58. Fan SS, Liu TF. Analysis of the intention to leave pharmacists and related factors in 41 psychiatric hospitals in China. *Chin Hosp*. 2021;25 (02):26–29.

59. He JJ, Wang JJ. Mediating role of organizational commitment in the relationship between authentic leadership and turnover intention among radiology nurses in 20 general hospitals in Sichuan Province. *Occup Health*. 2022;38(20):2787–2791.

60. Nong QJ, Tang S, Zhang MX. Analysis on the Current situation and influencing factors of physicians' Turnover in Public Medical Institutions in Guangxi. *Popul Sci Technol*. 2022;24(09):159–162.

61. Pedersen CA, Nadkarni A, Mott DA. Should I stay or should I go? The influence of individual and organizational factors on pharmacists' future work plans. *J Am Pharm Assoc*. 2007;47(2):165–173. doi:10.1331/6J64-7101-5470-62GW

62. Ducharme LJ, Knudsen HK, Roman PM. Emotional exhaustion and turnover intention in human service occupations: the protective role of coworker support. *Sociol Spect*. 2007;28(1):81–104. doi:10.1080/02732170701675268

63. Kim KY, Eisenberger R, Baik K. Perceived organizational support and affective organizational commitment: moderating influence of perceived organizational competence. *J Organ Behav*. 2016;37(4):558–583. doi:10.1002/job.2081

64. Yuan PP. Research on post-90s Staff's turnover intention based on perceived organizational support. *Mod Bus*. 2016;16:54–55.

65. Liu NC. *Research on the Influence of Perceived Organizational Support on Turnover Intention and Intention to Stay of Knowledge Workers*. Shandong University of Technology; 2011.

66. Satardien M, Jano R, Mahembe B. The relationship between perceived organizational support, organisational commitment and turnover intention among employees in a selected organisation in the aviation industry. *SA J Hum Res Manag*. 2019;17:1. doi:10.4102/sajhrm.v17i0.1123

67. Zuo HM, Yang H. A study on relationship between organizational support emotion and organizational commitment of nurses. *Chin Nurs Res*. 2009;23(15):1341–1343.

68. Zhu YY. Problems and Countermeasures Existing in Pharmaceutical Service in Primary Medical Institutions. *J Huainan Vocat Tech Coll*. 2022;22 (1):138–140.

69. Song BH, Yu JH. Establishment and application of integrated pharmaceutical care model in the construction of a medical consortium. *China Pharmaceut*. 2021;30(11):5–8.

70. Wang B. Investigation analysis for the present situation of pharmaceutical service of primary medical institutions in Beijing. *Chin J Ration Drug Use*. 2021;18(6):48–53.

71. Vandenberghe C, Bentein K. A closer look at the relationship between affective commitment to supervisors and organizations and turnover. *J Occup Organ Psychol*. 2009;82(2):331–348. doi:10.1348/096317908X312641

72. Wang Q. The impact of colleague incivility on employees' turnover intention - the mediating role of work engagement. *Market Manag Rev*. 2022;09:134–136.

73. Pu QH. Cross-sectional survey on cognition with clinical pharmacist services in doctors and nurses. *J China Presc Drug*. 2021;19(12):42–43.

74. Qiao B, Wei G, Lv CX. Research on the influence of the gender combinations of supervisor-subordinate on trust in organizations. *J Xidian Univ*. 2018;28(01):35–43.