

# The Relationship Between Psychological Contract and Occupational Wellbeing of Mother-Infant Care Helpers in Zhejiang Province

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## Research Article

**Keywords:** Psychological Contract, Occupational Wellbeing, Mother-Infant Care Helpers

**Posted Date:** June 17th, 2022

**DOI:** <https://doi.org/10.21203/rs.3.rs-1513992/v1>

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**Version of Record:** A version of this preprint was published at Human Resources for Health on March 1st, 2023. See the published version at <https://doi.org/10.1186/s12960-023-00793-w>.

# Abstract

**Background:** Mother-infant care (MIC) helpers have become an indispensable part in hospital services in order to bridge the gap between the shortage of nurses in obstetrics and the ever-increasing demand for mother-infant care. However, this occupation is faced with such problems as unstable team and high job mobility. This article, by focusing on the inner needs of the MIC helpers, aims to understand the status of psychological contract and occupational wellbeing of the MIC helpers in Zhejiang Province, explore their influencing factors and analyze their relationship, so as to provide some reference for standardized management and sustainable development of the MIC helpers.

**Methods:** Convenience sampling was adopted to select MIC helpers in obstetrics from 20 hospitals of 9 cities in Zhejiang Province. This cross-sectional survey was conducted using a general information questionnaire, the psychological contract scale and the occupational wellbeing scale. Statistical analysis was performed to determine the factors affecting psychological contract and occupational wellbeing as well as the relationship between them.

**Results:** This study surveyed 260 MIC helpers and found out the score of psychological contract was 4.38 (SD 0.59) and the score of occupational wellbeing was 4.01 (SD 0.62). The psychological contract was influenced by the grade of their hospitals, length of working, daily working hours and income level ( $P<0.05$ ). The psychological contract has positive correlation with occupational wellbeing ( $r=0.784$   $P<0.001$ ) and the organizational interpersonal obligations in psychological contract can independently explain 65.1% variation in occupational wellbeing of the MIC helpers.

**Conclusions:** This study provides an insight into the psychological contract of the MIC helpers in China. By doing so, it identifies areas for change which may improve their future occupational wellbeing.

## Introduction

With the improvement of living standards and upgrade of health concept, people are having increasingly higher demands for disease treatment and services. They require not only effective disease treatment, but also high-quality care services. "Healthy China 2030" also emphasizes on improving the level and quality of health care services and establish a health care quality management system with Chinese characteristics [1]. Reasonable allocation of human resources is a guarantee for effective nursing. In recent years, the obstetrics are especially short-handed in terms of nursing resources. According to the Statistical Bulletin of China's Health Development in 2020, the coverage rate of nurses and/or midwives per 1,000 population in China is merely 3.34[2]. In 1992, China launched "Baby-friendly Initiative", which started from "promoting breast feeding and establishing baby-friendly hospitals". As hospitals began to provide rooming-in [3–4], the nurses' job has changed from attending to the pregnant and parturient women to mother-infant care guidance and health education for the family with the puerperae and the newborn at the center, resulting in high work load for the nurses in obstetrics. Moreover, during Covid 19 pandemic, in order to minimize the flow of people, only one fixed accompanying relative (usually the

husband) is allowed in the obstetric ward. Inexperienced in breast feeding and newborn caring, these new parents are often overreacted to the newborn's normal cry, and resort to the nurses for help, thus interrupting their work flow and bringing burden to the care services. Therefore, the MIC helpers become an integral part of in-hospital services to solve the problem of insufficient healthcare resources, guarantee high-quality mother-infant care, and control the cost of nursing human resources.

As a kind of nursing assistants, the MIC helpers are those who provide care services for the pregnant, the parturient, and the infant in their daily life [5]. Mainly engaged in auxiliary nursing, they are not professional healthcare workers in medical institutions [6]. Their workplaces can be hospitals, mother-infant service agencies (postpartum care centers), and the homes of the puerperae. The MIC helpers discussed in this article are mainly responsible for the care of the puerperae in hospital during 2 to 5 days after parturition, and their job covers attending to the puerperae, assistance in infant feeding and daily care for the newborn, etc. They are hired by the puerperae voluntarily according to the needs. Currently, the MIC helpers in the hospitals are usually dispatched by the mother-infant service agencies and managed by both after the hospitals sign agreement with the agencies. The advent of this occupation marks a refined division of labor and individualization of social demands. Researches in recent years have shown that scientific care can effectively promote the maternal and infants' physical health, and that the nursing intervention from the MIC helpers during puerperium is closely related to the health of the puerperae and the newborn [7, 8]. With the assistance of the MIC helpers, the working pressure of obstetric nurses, especially of the night shift nurses, is substantially reduced [9]. The MIC helpers are gradually gaining scale for their indispensable role in the overall obstetric care service chain.

In China, however, there are quite a few deficiencies in human resource management, system construction, and service delivery of the MIC helpers, most of whom are re-employed middle-aged laid-off women in rural and urban areas. Such problems as uneven quality, high job mobility, and unstable team are quite concerning. To further implement the spirits and requirements of "Notice on Strengthening the Training and Standardized Management of Medical Caregivers" by National Health Commission in 2019 and other relevant documents [10], and to better stabilize and develop the team, this article hopes to focus on the inner needs of the MIC helpers to have an in-depth understanding of their working concept and values.

Emerging from psychology, human resource management and organizational behavior, psychological contract is a crucial part in scientific management. It refers to the individual employee's perception and belief system of the responsibilities and obligations between employees and employers, and it is about psychological expectations and commitment in the subjective sense [11]. The two-dimension structure theory of psychological contract has been widely applied [12]. One is transactional dimension consisting of specific, short-term, and tangible mutual obligations with the two parties focusing on instant exchange of immediate interests. The other is relational dimension composed of extensive, long-term, and open mutual obligations, which is not only based on the exchange of economic elements, but also on the future career development, learning and self-improvement as well as the exchange of social feelings. Based on the Chinese cultural background, Chinese scholar Li Yuan [13] believes obligations in

interpersonal communication and interpersonal environment are of great importance for Chinese employees. Therefore, he has put forward with three-dimension psychological contract, i.e., normal obligations, interpersonal obligations, and developmental obligations. Normal obligations emphasize on the explicit, concrete, and fundamental mutual obligations of employees and employers. Interpersonal obligations focus on the two parties' social connections and mutual trust and respect. Developmental obligations highlight that both employers and employees take responsibility in career success and career development of each other. Psychological contract theory has been widely applied in the human resource management of various industries. An Irish scholar [14], after his survey of doctors, found that there was a positive relationship between psychological contract and job satisfaction. Australian scholar John Rodwell [15] conducted a research on 113 allied health professionals and found that psychological contract breach had negative effects on the employees' emotions and commitments. In China, some scholars have already surveyed the psychological contract of medical care workers [16] and care helpers in elderly care institutions [17, 18]; nevertheless, there has been rare research on the psychological contract of the obstetric MIC helpers in hospitals. Given that occupational wellbeing is a subjective feeling of happiness in the workplace, it can be used to measure the employees' positive feelings towards their work and cognitive evaluation [19]. Good occupational wellbeing is a prerequisite for a stable working team. Hence, this study aims to investigate the condition of the MIC helpers' psychological contract and occupational wellbeing, explore their influencing factors, and analyze their relationship in order to provide some references for standardized management of the MIC helpers.

## Methods

### Sample and procedure

Convenience sampling was adopted to make a cross-sectional survey in 20 hospitals which employ MIC helpers in 9 cities of Zhejiang Province in January and February, 2021. The trained researchers and administrators of the MIC helpers in hospitals jointly selected qualified respondents in accordance with the following inclusion criteria: working as an MIC helper for no less than a month and still on the job; working in the hospital's obstetric ward; without cognitive disorder and impaired verbal communication; and voluntary participation in the study.

A questionnaire link including three questionnaires was generated through wjx.cn. Ten MIC helpers were pre-surveyed to ensure the rationality of questions and choices in the questionnaires. Then questionnaires were sent by the researcher through WeChat to the MIC helpers in the hospitals of different cities in Zhejiang Province. The study was approved by the Institutional Review Board of the Women's Hospital, Zhejiang University School of Medicine (approval no. IRB-20220151-R) and informed consent for participation in the study was signed online by the respondents prior to the survey. The questionnaire was anonymous to ensure data security. All questions were set as compulsory. In case of omission, after clicking "submit", the respondents would be directed to the missed question to finish the answer, so that the completeness of the questionnaire was ensured.

# **Measures**

A general information questionnaire for the MIC helpers is compiled based on literature reading and expert consultation, which includes age, education background, household registration type, marital status, length of working, working experience before this job, working hours, resting hours, monthly income and so on.

Psychological Contract was measured by using the Psychological Contract Scale made by Li Yuan [20] which includes 39 items and consists of two sub-scales. One is the scale of organizational obligations to employees (organizational obligations for short), which includes organizational normal obligations (5 items), organizational interpersonal obligations (9 items) and organizational developmental obligations (7 items). The other is the scale of employee obligations to organizations (employee obligations for short), which includes employee normal obligations (6 items), employee interpersonal obligations (5 items) and employee developmental obligations (7 items). It adopted Likert Rating Scale ranging 1 to 5 (strongly disagree to strongly agree) and the respondents scored each item according to their psychological contract fulfillment. The higher the score is, the higher the level of psychological contract fulfillment. A score of 1–2 means low fulfillment level, 2–4 medium, 4–5 high. The Cronbach's alpha of the scale is 0.92 and the Cronbach's alpha for the six dimensions ranges from 0.673 to 0.909.

There is no readily available occupational wellbeing questionnaire specifically designed for the study of the MIC helpers. Considering that they are medical care aides serving puerperae and infants at hospital, after discussion with experts, this study used Occupational Wellbeing Scale for Medical Staff compiled by Hu Dongmei [21]. The scale covers 24 items in 5 dimensions: social support, value/competence, working environment, economic income, physical and mental health. The MIC helpers are under direct management of the MIC agencies that cooperate with hospitals, in order to design a more reasonable questionnaire for the survey, the word "hospital" in the original items such as "are you satisfied with the hospital's welfare policy" was replaced by "agency". "How are you satisfied with current doctor-patient relationship" was adjusted into "how are you satisfied with the relationship with those who you serve". Each item is scored according to Likert Rating Scale ranging from 1 to 5 (strongly disagree to strongly agree). The overall Cronbach's alpha of the scale is 0.939 and the Cronbach's alpha for the 5 dimensions ranges from 0.815 to 0.898.

# **Analysis**

SPSS 20.0 statistical software was used to do data analysis. Independent-samples T test or one-way analysis of variance was used to make comparisons of scores in psychological contract and occupational wellbeing of the MIC helpers with different demographic characteristics. The relationship between psychological contract and occupational wellbeing was analyzed with Pearson correlation analysis. The impact of 6 factors in psychological contract on occupational wellbeing was explored by using multivariate hierarchical regression analysis.

## Results

This study surveyed a total of 260 MIC helpers and collected 260 valid questionnaires with 100% response rate. Table 1 shows the majority of respondents came from rural areas (69.2%) and were aged between 46 and 50 years old (39.6%). Only 14.6% worked in the same city as their household registration. Over half of them (58.8%) had high school education. Most of the respondents have been working as MIC helpers for over 36 months (33.5%), followed by 20.4% for 6 to 12 months. The daily working hours of most respondents (48.8%) was 24 hours and most of them (65%) got only a day off per week, with a monthly income ranging from RMB 6,001 to 8,000 (\$883.3 to 1177.6). Respondents had no training after being employed accounted for 10.8%.

Table 1  
General information of the respondents and score comparisons of psychological contract and occupational wellbeing with different demographic characteristics

Characteristics	N	%	Psychological contract			Occupational wellbeing		
			Mean ± SD	F/t	P	Mean ± SD	F/t	P
Age(years)								
≤ 35	40	15.4	4.33 ± 0.75	.955	.433	3.92 ± 0.66	1.187	.317
36 ~ 40	26	10.0	4.39 ± 0.58			4.12 ± 0.6		
41 ~ 45	57	21.9	4.3 ± 0.53			3.89 ± 0.66		
46 ~ 50	103	39.6	4.38 ± 0.5			4.04 ± 0.58		
≥ 51	34	13.1	4.54 ± 0.72			4.09 ± 0.61		
Household registration								
Urban	80	30.8	4.39 ± 0.52			4 ± 0.57		
Rural	180	69.2	4.37 ± 0.62			4.01 ± 0.64		
Hometown								
This city	38	14.6	4.37 ± 0.61			4 ± 0.64		
Other city of Zhejiang province	21	8.1	4.43 ± 0.51			4 ± 0.55		
Other province	201	77.3	4.29 ± 0.52			4.05 ± 0.49		
Marital status								
Single	6	2.3	4.6 ± 0.56			3.96 ± 0.37		
Married	222	85.4	4.35 ± 0.6			3.99 ± 0.62		
Divorced	20	7.7	4.38 ± 0.55			4.08 ± 0.7		
Widowed	12	4.6	4.77 ± 0.27			4.25 ± 0.48		

Characteristics	N	%	Psychological contract			Occupational wellbeing		
			Mean ± SD	F/t	P	Mean ± SD	F/t	P
Childbirth				-1.04	0.298		-0.318	0.751
Yes	254	97.7	4.37 ± 0.59			4.00 ± 0.62		
No	6	2.3	4.63 ± 0.58			4.08 ± 0.35		
Education background				.281	.839		.064	.979
Elementary school and below	15	5.8	4.39 ± 1			4.02 ± 0.75		
Junior high school	153	58.8	4.38 ± 0.58			4.02 ± 0.61		
Senior high school	81	31.2	4.35 ± 0.53			3.98 ± 0.64		
Undergraduate and above	11	4.2	4.52 ± 0.5			3.98 ± 0.3		
Grade of hospital				2.20	.029		1.29	.20
Class 3	197	75.8	4.42 ± 0.52			4.03 ± 0.59		
Class 2	63	24.2	4.23 ± 0.76			3.92 ± 0.69		
Length of working				2.468	.045		3.330	.011
1 ~ 6 months	48	18.5	4.23 ± 0.72			3.85 ± 0.68		
6 ~ 12 months	53	20.4	4.26 ± 0.53			3.82 ± 0.6		
13 ~ 24 months	39	15.0	4.47 ± 0.45			4.11 ± 0.56		
25 ~ 36 months	33	12.7	4.35 ± 0.48			4.07 ± 0.56		
>36 months	87	33.5	4.5 ± 0.62			4.13 ± 0.6		
Relative experience before employed				.534	.594		-.451	.653
No	104	40.0	4.4 ± 0.51			3.98 ± 0.59		

Characteristics	N	%	Psychological contract			Occupational wellbeing		
			Mean ± SD	F/t	P	Mean ± SD	F/t	P
Yes	156	60.0	4.36 ± 0.64			4.02 ± 0.64		
Daily working hours				3.302	.021		2.366	.071
≤ 8	12	4.6	4.64 ± 0.43			4.11 ± 0.39		
9 ~ 12	102	39.2	4.48 ± 0.5			4.10 ± 0.59		
13 ~ 23	19	7.3	4.3 ± 0.6			3.84 ± 0.71		
24	127	48.8	4.28 ± 0.65			3.79 ± 0.63		
Days of rest per week				1.925	.126		1.418	.228
1	169	65.0	4.41 ± 0.51			4.05 ± 0.6		
2	29	11.2	4.27 ± 1.02			3.97 ± 0.75		
≥ 3	25	9.6	4.5 ± 0.45			4.09 ± 0.45		
No day off	37	14.2	4.20 ± 0.54			3.79 ± 0.65		
Monthly income (RMB)				4.310	.001		5.580	.000
≤ 4000	5	1.9	4.81 ± 0.12			4.32 ± 0.12		
4001 ~ 6000	44	16.9	4.1 ± 0.7			3.66 ± 0.67		
6001 ~ 8000	114	43.8	4.35 ± 0.5			3.97 ± 0.55		
8001 ~ 10000	69	26.5	4.46 ± 0.65			4.15 ± 0.65		
10001 ~ 15000	24	9.2	4.65 ± 0.43			4.32 ± 0.52		
>15000	4	1.5	4.68 ± 0.54			4.21 ± 0.06		
Regular trainings				.404	.846		.667	.649

Characteristics	N	%	Psychological contract			Occupational wellbeing		
			Mean ± SD	F/t	P	Mean ± SD	F/t	P
No	28	10.8	4.3 ± 0.55			3.87 ± 0.62		
Once a year	33	12.7	4.45 ± 0.46			3.95 ± 0.54		
Twice a year	68	26.2	4.4 ± 0.53			3.97 ± 0.6		
Once every quarter	65	25.0	4.4 ± 0.5			4.05 ± 0.54		
Once a month	63	24.2	4.32 ± 0.8			4.09 ± 0.76		
Once a week	3	1.2	4.56 ± 0.48			3.99 ± 0.34		

## Psychological Contract and Occupational Wellbeing

Scores for psychological contract and occupational wellbeing were displayed in Table 2. The average score of psychological contract was 4.38 (SD 0.59) out of a maximum score of 5, indicating an overall positive level of psychological contract among the MIC helpers. For sub-scales, employee obligations (Mean 4.50, SD 0.56) scored higher than organizational obligations (Mean 4.25, SD 0.71). In the sub-scale of organizational obligations, organizational interpersonal scored highest with a mean score of 4.30 (SD 0.70), and organizational normal scored lowest with a mean score of 4.20 (SD 0.78). In the sub-scale of employee obligations, employee interpersonal scored highest with a mean score of 4.53 (SD 0.57), and employee developmental scored lowest with a mean score of 4.46 (SD 0.59).

Table 2  
The score of psychological contract and occupational wellbeing (n = 260)

	Items No.	Median	Mean	SD
Psychological contract	39	4.42	4.38	0.59
Organizational obligations	21	4.19	4.25	0.71
Organizational normal	5	4.20	4.20	0.78
Organizational interpersonal	9	4.33	4.30	0.70
Organizational developmental	7	4.14	4.23	0.73
Employee obligations	18	4.67	4.50	0.56
Employee normal	6	4.83	4.52	0.57
Employee interpersonal	5	4.60	4.53	0.57
Employee developmental	7	4.57	4.46	0.59
Occupational wellbeing	24	4.09	4.01	0.62
Physical and mental health	6	3.17	3.12	1.27
Value/competence	6	4.33	4.27	0.70
Social support	5	4.60	4.41	0.64
Economic income	3	4.00	3.95	1.01
Working environment	4	4.25	4.27	0.75

The mean score of occupational wellbeing was 4.01 with a standard deviation of 0.62. The dimension scoring the highest was social support with a mean score of 4.41 (SD 0.64) and the lowest was physical and mental health with a mean of 3.12 (SD 1.27).

## **Score Comparisons of Psychological Contract and Occupational Wellbeing of MIC Helpers with Different Demographic Characteristics**

Score comparisons of psychological contract and occupational wellbeing of MIC helpers with different demographic characteristics are shown in Table 1. Grade of hospital, length of working, daily working hours and monthly income had significant influence on psychological contract ( $P < 0.05$ ), and occupational wellbeing was significantly affected by length of working and monthly income ( $P < 0.05$ ). No significant differences were found in psychological contract or occupational wellbeing when it came to the other demographic characteristics.

## **Relationship between Psychological Contract and Occupational Wellbeing**

The results of Pearson correlation analysis showed that the total score ( $r = 0.784$ ) and dimensions of psychological contract all had positive significant correlation with the occupational wellbeing. Among the dimensions of psychological contract scale, organizational interpersonal obligations showed the strongest correlation with occupational wellbeing ( $r = 0.794$ ).

The ability of psychological contract to predict occupational wellbeing was determined using hierarchical regression analysis. The occupational wellbeing was set as the dependent variable, the factors with statistically significant differences in the general information (including length of working, monthly income) were set as the first-step independent variables, and the 6 dimensions of psychological contract were used as the second-step independent variables. The hierarchical regression analysis showed that with controlled general information, the psychological contract can independently explain 65.1% of the variation in occupational wellbeing. The organizational interpersonal obligation is an important factor influencing the occupational wellbeing of the MIC helpers ( $\beta = 0.484$ ,  $p < 0.001$ ). Refer to Table 3 for details.

Table 3  
Hierarchical regression analysis predicting occupational well-being

	$\beta$	$\Delta R^2$	<i>p</i> value
Step 1		0.073	<0.001
Constant	3.384		.000
Years of working	.054		.033
Monthly income	.136		.001
Step 2		0.651	<0.001
Constant	.543		.006
Years of working	.030		.058
Monthly income	.043		.084
Organizational normal	.032		.651
Organizational interpersonal	.484		.000
Organizational developmental	.085		.334
Employee normal	-.066		.531
Employee interpersonal	.120		.315
Employee developmental	.090		.457

## Discussion

This study has examined the degree of occupational wellbeing of the MIC helpers in Zhejiang Province, China, the status of their psychological contract and occupational wellbeing, their influencing factors and the extent to which the psychological contract predicts the occupational wellbeing. Below, we discussed the significance of our findings in the context of the Chinese mother-infant care sector.

## Occupational Wellbeing

The overall score of occupational wellbeing of the MIC helpers in this study stood at a medium level, indicating that they were relatively satisfied with the working condition. “Value/competence” scored the highest in the occupational wellbeing scale, meaning they had a relatively high sense of professional value and professional identity, which has a positive impact on employees' loyalty, motivation, and sense of achievement [22]. The dimension of “physical and mental health” got the lowest score due to the special nature of this profession. In this survey, only 4.6% of the MIC helpers work less than 8 hours per day, 48.8% of MIC helpers bonded with specific maternal and infants 24 hours a day, and 14.2% of them did not have a day off for a week. Fatigue caused by continuous long working hours will lead to an increase in the probability of mother-infant adverse events [23]. What's more, irregular diet and sleep will damage the immune system, endocrine system, and nerve system of the body, inducing physical and mental diseases. The average labor intensity of the MIC helpers is greater than that of medical institutions, which is also an important reason behind the weak willingness of nursing graduates to serve as MIC helpers [24]. Therefore, it is both necessary and important for the MIC agencies to actively provide occupational health service for the MIC helpers, set reasonable working hours, and improve shift systems. Given that some MIC helpers, who are bonded with the puerperae and infants 24 hours a day, share the same schedule with them, administrators should take initiative in caring for their employees and ensure reasonable workload and enough resting time for the MIC helpers.

## Psychological Contract

As an important part of people-oriented management, psychological contract is not only a mental bond between the MIC helpers and their administrators, but also a key element affecting their behaviors and attitudes [25]. In this study, reported levels of overall psychological contract in this cohort of MIC helpers were higher than that of 448 medical care helpers in hospitals in Taiyuan (Mean 4.11, SD 0.63) [16] and that of the researches on care helpers in elderly care institution in Sichuan (Mean 4.11, SD 0.46) and Chongqing (Mean 4.18, SD 0.35) done by Li Yuxin [17] and Rao Yunshuang [18] respectively. This may be attributed to the fact that the MIC helpers can feel the vitality from young moms and the newborn.

However, the MIC helpers subjectively believed what they contributed to the organization outweighed what they received from it. From the perspective of psychological contract fulfillment, the mismatch between expectations and reality can result in disappointment and complaint or even a tendency to quit the job [26, 27]. With regard to organizational normal obligations, this may be evidence of a mismatch in views between employers and employees of the psychological contract. The MIC helpers have high expectations on income, welfare, and profession guarantee, but the agencies fail to meet their needs. This study found out 70.3% of the MIC helpers had a monthly income ranging from RMB6,001 to 10,000

(\$883.3 to 1,472), better than the average annual salary of private sector employees in Zhejiang Province which is RMB60,521( 8,908.7) [28]. The MIC helpers have higher expectations of their incomes may because of the longer working hours. Interestingly, the MIC helpers with the lowest monthly income enjoyed the highest level of psychological contract and occupational wellbeing. Based on the principle of “more pay for more work”, they accepted the wage since what they received was in line with what they gave. The research by Steinmetz also showed that attention to working and commuting times can complement attention to wages and wage satisfaction [29]. This gives administrators of mother-infant service agencies a potentially significant policy lever. On the one hand, administrators of agencies should improve the incentive mechanism for the MIC helpers, optimize work and rest schedule, and meet their fundamental demands. Comprehensive quantitative evaluation of service quality, competence, service attitude, working intensity and condition of the mother and infant should be introduced into salary allocation system. On the other hand, MIC helpers’ expectations may need to be realigned. Increasing transparency from mother-infant service agencies regarding employees’ obligations and benefits may help this.

When we specifically look at the MIC helpers’ perceptions of employees’ obligations, developmental obligations got the lowest score. It indicates the MIC helpers don’t have enough motivation and passion in improving their service level and long-term development of the organization. At present, most of the MIC helpers are over 41 years old with an education background of junior high school or below, hence poor learning ability. Besides, there’s no clear promotion mechanism for this occupation. Therefore, the administrators are supposed to guide the MIC helpers in a positive and effective way, provide them with necessary learning opportunities, and acknowledge their skills so as to stimulate their confidence and improve their activity. In addition, administrators should set up reasonable, well-planned, and transparent promotion systems for the MIC helpers so that they will have a clear understanding of their career development prospect and combine their personal development goals with the organizational development goals, which is conducive to stabilizing the team of the MIC helpers in obstetrics and improving the service quality.

The psychological contract of the MIC helpers has dynamic changes and are affected by various factors. The MIC helpers who have worked for more than 3 years have the highest level of psychological contract as they have been accustomed to the working environment after years of mother-infant care and are experienced enough to deal with pressure in work and life; they can obtain trust from their clients and develop a good work mode with the medical staff in the workplace so that they can acquire a sense of belonging. However, the data in this study showed the psychological contract of those who work less than three years was unstable, which would be more likely to result in a higher employee turnover. That’s why the MIC agencies should pay more attention to the MIC helpers with shorter working years and adopt effective incentives to improve their psychological contract.

Originally, it was assumed that whether there were regular trainings after the MIC helpers were employed and the frequency of the training would have certain effect on their psychological contract and occupational wellbeing [25] as such trainings reflected that the organization paid attention to the

employees' competence cultivation. However, that's not the case, which is worth thinking. Currently, the trainings are mostly conducted by the MIC agencies and there's a common shortage of training mentors, and often the trainings are just a kind of formalism and lack substantial content and motivational courses. Fortunately, the national government has been aware of this problem, and some institutions have been assessed and approved by the Ministry of Human Resource as certified organizations providing occupational skill classification for the MIC helpers [30], which is helpful to promote the homogenous and standardized management of occupational trainings for the MIC helpers.

The findings of this study make clear that psychological contract has a direct, positive relation with occupational wellbeing for the MIC helpers, echoing the results of previous research conducted among doctors [14]. The organizational interpersonal obligation is the most important factor influencing the occupational wellbeing. Good interpersonal relationship in an organization is not only conducive to the mother-infant care, but also surrounds the care helpers with harmonious working atmosphere in which the awareness of teamwork and cooperation is promoted among employees. Support from different aspects is required to build up such atmosphere. The MIC helpers should equip themselves not only with caring and nursing skills but also communication skills with clients. The clients should respect and understand the MIC helpers instead of having prejudice against or looking down upon the profession. The registered nurses in obstetrics should regard them as partners and establish good partnership with them. Last but not least, care and support from the organization's administrators is of great significance and their humanistic care towards the employees will enhance the sense of belonging and trust [31]. In terms of material aspect, the administrators should provide benefits in accordance with the MIC helpers' actual needs. When it comes to psychological aspect, the administrators should give sincere care and support to them, pay attention to their emotion changes, effectively relieve their mental stress, and actively seek solutions.

## Limitations

There are some limitations in this study. First of all, this study only surveyed the MIC helpers in obstetrics in Zhejiang Province, no other regions in China were covered. Secondly, the psychological contract scale used in this article was not designated for the target group of MIC helpers. And based on the scale for medical staff occupational wellbeing with some simple adjustment, the occupational wellbeing scale used here hasn't gone through test of validity and reliability among the target group. Therefore, it is possible that some information unique to MIC helpers have been missed. Finally, this study just focuses on the perspective of MIC helpers and their understanding of organization obligations and employee obligations in psychological contract. It is suggested that future studies analyze the psychological contract from the viewpoints of both administrators and the MIC helpers, and compare the differences between the them.

## Conclusion

To my knowledge, this article is the first study in China to research the psychological contract and occupational wellbeing of the MIC helpers in obstetrics. The study found that their psychological contract was above average, and occupational wellbeing was at moderate level. Psychological contract was affected by the grade of hospitals, length of working, daily working hours and incomes. Besides length of working and income, psychological contract is another important factor affecting occupational wellbeing. Future research and policy initiatives can build on these findings to explore the effective psychological contract management mechanism, and improve occupational wellbeing for the MIC helpers, so as to guide the MIC industry towards sustainable development.

## Abbreviations

MIC  
mother-infant care  
SD  
Standard deviation.

## Declarations

### Ethics approval and consent to participate

Ethical approval was granted from China, Institutional Review Board of the Women's Hospital, Zhejiang University School of Medicine (approval no. IRB-20220151-R). Consent for participation and publication in the study was sought electronically prior to commencement of the questionnaire.

### Consent for publication

Not applicable.

### Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

### Competing interests

The authors declare that they have no competing interests.

### Funding

This research did not receive any funding.

### Authors' contributions

QL designed the study, collected data, processed the initial data and performed initial analysis of data. YL designed the study, collected data, and performed initial analysis of data. QL and YL drafted the initial manuscript together. YJ contributed to the analysis of the results and writing of the manuscript. SF contributed to the study design and manuscript revision. All authors read and approved the final manuscript.

## Acknowledgements

Not applicable

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## References

1. CPC Central Committee and State Council. *Healthy China 2030*. [http://www.gov.cn/zhengce/2016-10/25/content\\_5124174.htm](http://www.gov.cn/zhengce/2016-10/25/content_5124174.htm) (2016). Accessed 24 March 2022; in Chinese.
2. The 2020 statistical report on the development of medical and health services in China. <http://www.nhc.gov.cn/guihuaxxs/s10743/202107/af8a9c98453c4d9593e07895ae0493c8.shtml> (2020). Accessed 24 March 2022; in Chinese.
3. Molmen Lichter M, Peled Y, Levy S, Wiznitzer A, Krissi H, Handelzalts JE. The associations between insecure attachment, rooming-in, and postpartum depression: A 2 months' longitudinal study. *Infant Ment Health J*. 2021;42(1):74–86.
4. Lai YL, Hung CH, Stocker J, Chan TF, Liu Y. Postpartum fatigue, baby-care activities, and maternal-infant attachment of vaginal and cesarean births following rooming-in. *Appl Nurs Res*. 2015;28(2):116–20.
5. Hun Yang X, He H, Cao. Reflection on training and standard management of nurse staffing in China. *Chin Nurs Res*. 2020;383(9931):1824–30.
6. National Administration of Traditional Chinese Medicine. Notice on Strengthening the Training and Standardized Management of Medical Care workers. <http://bgs.satcm.gov.cn/zhengcewenjian/2019-08-27/10693.html> (2019). Accessed 4 March 2022; in Chinese.
7. Yeh YC, St John W, Venturato L. Inside a Postpartum Nursing Center: Tradition and Change. *Asian Nurs Res (Korean Soc Nurs Sci)*. 2016;10(2):94–9.
8. Renfrew MJ, McFadden A, Bastos MH, Campbell J, Channon AA, Cheung NF, et al. Midwifery and quality care: findings from a new evidence-informed framework for maternal and newborn care. *Lancet*. 2014;384(9948):1129–45.

9. Scheepers RA, Smeulders IM, van den T, Broek. The impact of an additional nurse assistant during evening shifts on nurses' perceptions of job demands, job resources and well-being. *J Adv Nurs.* 2021;77(2):1013–6.
10. Medical Authority, Notice on Strengthening the Training and Standardized Management of Medical Care workers.  
<http://www.nhc.gov.cn/yzygj/s7653/201908/f239ab4290f94d3cb6b36d1705e29f34.shtml> (2019). Accessed 24 March 2022; in Chinese.
11. Rousseau DM. Psychological and implied contracts in organizations. *Empl Responsibilities Rights J.* 1989;2(2):121–39.
12. MacNeil IR. Relational contract: what we do and do not know. *Wisconsin law review.* 1985; 483.
13. Li Y, Guo D. A study on the structure and internal relationship of employee psychological contract. *Sociol Stud.* 2006;21(5):151–68.
14. Collins A, Beauregard A. The effect of breaches of the psychological contract on the job satisfaction and wellbeing of doctors in Ireland: a quantitative study. *Hum Resour Health.* 2020;18(1):89.
15. Corder E, Ronnie L. The role of the psychological contract in the motivation of nurses. *Leadersh Health Serv (Bradf Engl).* 2018;31(1):62–76.
16. Wang Jing Z, Ruifang Z, Qian X, Li X, Ping. Influence of psychological contract on the job satisfaction of medical care workers. *Chin Nurs Res.* 2021;23:4193–8.
17. Li Yuxin Y, Qian. ChenLi, LiuShaohua, PengLu. Relationship between psychological contract and turnover intention among nursing care workers in elderly care institutions in Sichuan province. *J of Nursing Science.* 2016;31(3):74–6.
18. Yunshuang Rao. Study on the psychological contract and working state of nursing home caregivers in chongqing. Chongqing Medical University; 2017.
19. Liang Wang H, Li X, Li J, Zhang Yu, Lv P, Jia, et al. Current occupational well-being status and protective and risk factors of male nurses in Chengdu, China: A cross-sectional study. *Nurs Open,* 2022; 1–9.
20. Li Yuan. Psychological Contract of Enterprise Employees. Shanghai: Fudan University Press; 2006. pp. 151–68.
21. Dongmei Hu, Yuedan M, Li N, Guihua L, Hongmei W. Formation and analysis of reliability and validity of the occupational well-being scale for medical workers. *Chin J Hosp Stat.* 2011;18(2):127–9.
22. Kaya A, Boz I. The development of the Professional Values Model in Nursing. *Nurs Ethics.* 2019;26(3):914–23.
23. Donnelly EA, Bradford P, Davis M, Hedges C, Socha D, Morassutti P. Fatigue and Safety in Paramedicine. *Cjem.* 2019;21(6):762–5.
24. Zhu Qinghua S, Xia Z, Chunhui Wu, Donghong G, Jinling. Investigation and analysis of nursing students' intention to engage in maternal and infant care. *Chin J Practical Nerv Dis.* 2012;15(2):10–1.

25. Wang Jing X, Ping G, Jinli H, Ran X, Li. Study on status quo of psychological contract of nursing assistants and its influencing factors. *Chin Nurs Res.* 2021;35(6):969–75.
26. Rodwell J, Gulyas A. The impact of the psychological contract, justice and individual differences: nurses take it personally when employers break promises. *J Adv Nurs.* 2013;69(12):2774–85.
27. Rodwell J, Gulyas A. Psychological contract breach among allied health professionals. *J Health Organ Manag.* 2015;29(3):393–412.
28. The average annual salary of private sector employees in Zhejiang province in 2020 is 60,521 yuan. [http://tjj.zj.gov.cn/art/2021/6/18/art\\_1229129213\\_4666919.html](http://tjj.zj.gov.cn/art/2021/6/18/art_1229129213_4666919.html) (2021). Accessed 29 April 2022; in Chinese.
29. Steinmetz S, DH de Vries KG, Tijdens. Should I stay or should I go? The impact of working time and wages on retention in the health workforce. *Hum Resour Health.* 2014;12:23.
30. Zhejiang Human Resources and Social Security Department Office. Notice on soliciting projects and development units of the 2022 Vocational Skill Standards and Special Vocational Ability Assessment Standards. [http://rlsbt.zj.gov.cn/art/2022/3/10/art\\_1453811\\_58928490.html](http://rlsbt.zj.gov.cn/art/2022/3/10/art_1453811_58928490.html) (2022). Accessed 13 May 2022; in Chinese.
31. Okello DR, Gilson L. Exploring the influence of trust relationships on motivation in the health sector: a systematic review. *Hum Resour Health.* 2015;13:16.