

Exploring the Experiences of Female Residents during Pregnancy and Maternity Leave in China's Standardized Residency Training

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Introduction. In China, female residents face unique challenges during their standardized residency training due to the demands of pregnancy and motherhood. Existing research primarily focuses on international perspectives, leaving a gap in understanding the Chinese context.

Methods. Using a qualitative approach, we explored the experiences of female residents during pregnancy and maternity leave in two Shanghai medical institutions. Data was collected through semi-structured interviews and subjected to thematic analysis.

Results. Twelve female resident physicians participated, spanning various specialties. Key themes emerging from their experiences included adverse pregnancy symptoms, internal pressures, and supportive measures during pregnancy; postpartum mental health challenges, physical recovery, bonding with the newborn, and preparation for return during maternity leave; and challenges transitioning back to work, breastfeeding struggles, balancing work and family, and childcare concerns post-return.

Conclusion. The study underscores the need for policy reforms and supportive practices in China's medical institutions, enabling female residents to effectively navigate the dual roles of medicine and motherhood.

Keywords. Female Residents, Pregnancy, Maternity Leave, Standardized Residency Training

INTRODUCTION

Standardized residency training is a critical phase for medical professionals in China, sharpening their clinical skills in specialized fields. For female residents, however, the confluence of motherhood and professional growth poses significant challenges. [1] International research has explored the impact of pregnancy on female medical residents, but Chinese perspectives are noticeably absent from this narrative.

Over recent decades, the number of female doctors in China has surged. [2] Despite this increase, the challenge of balancing personal aspirations with professional commitments persists, especially for female residents in the intense phase of their residency training.

Existing studies highlight the pressures faced by female residents, such as prolonged work hours, heavy workloads, and the struggle to balance work and personal life. [1,3] Pregnancy and childbirth intensify these pressures, making it difficult for female residents to juggle their training responsibilities with the demands of motherhood. [4-6] Unfortunately, there's a notable lack of in-depth research on the experiences of pregnant female residents in China, creating a knowledge gap in the challenges they face.

METHODS

Study Design: A qualitative approach was chosen for this study to explore the experiences of female residents during pregnancy and maternity leave. Qualitative research, recognized for its depth in elucidating complex, subjective experiences, provided valuable insights into participants' real-life encounters.[7]

Sampling and Recruitment: Participants were selectively recruited from two medical institutions in Shanghai, China using a purposive sampling technique to enrich the

data quality. The inclusion criteria targeted female residents who had undergone pregnancy and taken maternity leave during their standardized residency training. Department leads facilitated the identification of potential participants, who were then invited via email. Before participation, written informed consent was obtained from each participant.

Data Collection: Data was sourced from semi-structured individual interviews, informed by an extensive literature review on pregnancy and maternity experiences in the medical field. The interviews, conducted in Chinese, were tailored to uncover the distinct challenges and experiences of the participants. With participant consent, interviews were audio-recorded, each lasting between 45 minutes to an hour.

Data Analysis: A thematic analysis, as outlined by Braun & Clarke, [7] was employed to identify patterns and themes in the data. Two bilingual researchers collaboratively handled the analytical process. They began by immersing themselves in the transcripts to gain familiarity, then identified preliminary themes, refined them, and grouped them into broader categories to highlight the main trends.

Ethical Considerations: The study received approval from the Institutional Review Board of the participating medical institution. Stringent ethical standards were upheld, ensuring written informed consent from all participants and maintaining strict confidentiality of the data throughout the study.

RESULTS

A cohort of 12 female resident physicians, aged between 28 and 32 years, participated in this study. (Table 1) They hailed from diverse specialties: internal medicine, surgery, pediatrics, obstetrics and gynecology, radiology, nuclear medicine, and emergency medicine. All participants were in marital unions and were mothers to one child during the interview. The thematic analysis revealed poignant themes reflecting their experiences during pregnancy, maternity leave, and their return to the workforce.

Table 1. Demographic characteristics of participating residents between 2020 and 2023

CHARACTERISTICS	VALUE
No. of total participants	12
No. of participants at residency site	
Ruijin Hospital	10
Renji Hospital	2
Age, y, mean	30.2 (28-32)
Maternity leave duration, day, mean (SD)	154.9 (120-158)
Postpartum days after childbirth at interview, mean (SD)	288.5 (208-362)

Pregnancy Experiences

Adverse Pregnancy Symptoms: The majority of participants reported exacerbated pregnancy symptoms such as extreme fatigue, intense contractions, and musculoskeletal pain. (Table 2) They often linked these symptoms to the demanding clinical workload they shouldered before realizing their pregnancies.

"During my third trimester, I often felt so exhausted," a resident from surgery shared. "I'm certain the long shifts before my pregnancy diagnosis contributed to my symptoms."

Table 2. Reported adverse symptoms during pregnancy

SYMPTOM	NO. OF ADVERSE EVENTS
Excessive fatigue	7
Musculoskeletal pain	7
Nausea and emesis	5
Poor sleep quality	4
Poor weight gain	3
Intense contractions	2
Bleeding	1

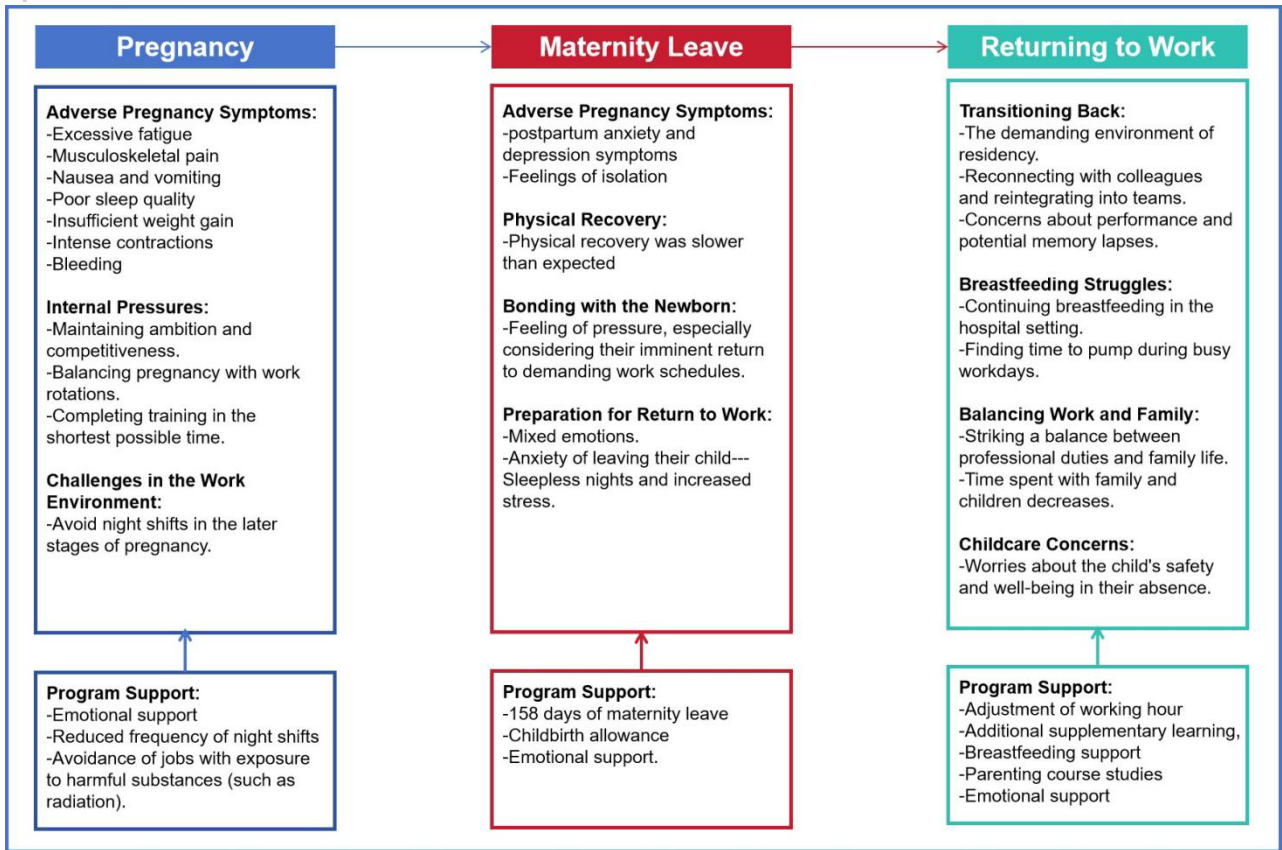
Internal Pressures: Participants felt an intrinsic drive to maintain ambition and competitiveness during their residency. Balancing pregnancy with work rotations and completing their training in the shortest possible time added to this pressure. Consequently, they would rarely take leave during pregnancy, unless faced with severe symptoms.

"It's not just about work; it's about proving to myself that I can handle it all," expressed a resident in pediatrics.

Supportive Measures: The participants acknowledged measures taken by the residency program administration to support pregnant residents. This included emotional support, flexibility in schedules, and restrictions on night shifts after the 28th week of pregnancy. Typically, pregnant residents were not assigned to posts involving heavy physical work or harmful exposures like radiation. (Figure 1)

"Post my 28th week, the administration ensured I wasn't on night shifts. That was a solace," remarked a resident from obstetrics and gynecology.

Figure 1. Difficulties, challenges, and support for resident physicians becoming pregnant during their training.



Maternity Leave Experiences

Postpartum Mental Health: A significant portion, specifically four participants, wrestled with heightened feelings of anxiety and depression post-delivery. The transition from being a seasoned physician to a new parent often felt overwhelming, with many expressing feelings of isolation and inadequacy.

"Navigating motherhood felt like charting unknown territory. I was accustomed to the clinical environment, but the challenges of new motherhood caught me off guard," shared a radiologist.

Physical Recovery: Many participants highlighted the physical challenges post-delivery. The process of healing and recuperation, especially after cesarean sections, was often more prolonged than anticipated.

"Physically, it took me longer to feel like myself again. Balancing recovery with the demands of a newborn was quite a challenge," remarked a pediatrician.

Bonding with the Newborn: The maternity leave period was a crucial time for bonding with their babies. While many cherished these moments, some also felt the pressure to make the most of this time, especially given their imminent return to demanding schedules.

"Every moment with my baby felt precious, knowing that my maternity leave was ticking away and I'd soon be back in the hospital," shared an obstetrician.

Preparation for Return: As the end of maternity leave approached, participants experienced mixed emotions. The anticipation of returning to work, coupled with the anxiety of leaving their child, often led to sleepless nights and heightened stress.

"The thought of leaving my child and returning to the hospital was daunting. The closer I got to my return date, the more anxious I became," voiced a resident in radiology.

Maternity Leave Support: Resident physicians were entitled to the same maternity leave as regular staff. While most utilized their full maternity leave, finding it the optimal duration, a few desired longer leave. Some chose to return to work earlier to complete their rotation schedules timely and avoid potential employment implications from extended training. At the same time, the full childbirth allowance was also given to resident physicians, so that they would not have additional financial pressures during maternity leave.

"The maternity leave felt just right, but on challenging days, I wished for a bit more time," mused a pediatrician.

Challenges Upon Returning to Work

Transitioning Back: Returning to the demanding environment of residency after maternity leave is no small feat. Beyond the anxieties related to performance and memory lapses, many physicians mentioned the challenges of reconnecting with colleagues and reintegrating into teams.

"Coming back to work after maternity leave, I felt like I had missed out on a lot. Syncing up with the team again took some time," shared a gynecology resident.

Breastfeeding Struggles: Continuing breastfeeding in the hospital setting isn't just about facilities. Many physicians also highlighted challenges in communicating with colleagues and superiors about pumping times and locations, as well as finding the time to pump during busy workdays.

"I often try to find time to pump between shifts, but it's challenging at times," shared a radiology resident.

Balancing Work and Family: Returning to work means striking a balance between professional duties and family life anew. Many physicians indicated that as work hours increased, the time spent with family and children decreased, leading to feelings of guilt.

"Every evening, I wish I could return home earlier to be with my child, but the demands and responsibilities of the job often make it difficult," lamented a pediatrician.

Childcare Concerns: Beyond relying on their parents, many physicians faced challenges in choosing the right daycare or nanny and expressed concerns about the safety and well-being of their child in their absence.

"Finding a daycare or nanny that I can trust is truly challenging. I'm constantly worried about whether my child is receiving the care and attention they deserve," voiced an emergency medicine resident.

DISCUSSION

The journey of pregnancy and maternity leave for female residents within the confines of medical institutions in China presents a plethora of challenges and complexities. This study has shed light on the multifaceted experiences of these professionals,

highlighting a considerable need for attention, understanding, and reform in policies and practices.

Balancing Professional and Personal Roles: In China, where traditional roles often expect women to prioritize familial duties, balancing the demands of a rigorous profession like medicine with the transformative experience of motherhood is particularly challenging. The need to juggle both roles was a recurring theme in our findings. This echoes sentiments of previous studies underscoring work-family conflict among medical professionals. [8-10] Yet, in the Chinese context, where family plays a central role in societal expectations and personal identity, this balance becomes even more pivotal.

Specific Policies and Practices: Among the most challenging policies and practices, the limited duration of maternity leave stands out. While some Western countries offer extended maternity leave, [11] Chinese female residents often find themselves needing to return to work sooner, impacting both physical recovery and child bonding time. Additionally, certain specialties such as critical care medicine and emergency medicine, with their high-intensity and long working hours, exacerbate these challenges.

The Role of Peer and Superior Support: Our study emphasized the importance of support from peers and superiors. While camaraderie is universally essential, the traditional Chinese values of relationship and emotional bonds highlight the deep-rooted cultural significance of interpersonal support in China. Such bonds, when fostered within medical institutions, can be particularly beneficial.

Proposed Solutions: Instituting flexible work schedules, especially post-maternity, can greatly assist in easing the transition back to work. [12,13] Medical institutions could also benefit from mentorship programs where senior female doctors guide and support newer residents through their maternity journey. At the same time, we also need to pay attention to the impact of maternity leave on the rotation performance of resident

physicians, and the management department needs to provide additional educational resources and attention to resident physicians after maternity. [14] Furthermore, extending maternity leave and providing adequate facilities for breastfeeding and child care within institutions can offer tangible support. [15-17] Addressing heightened rates of depression and anxiety is imperative. Given the collectivist nature of Chinese society, group-based wellness programs and peer support groups could be particularly effective.

Study Limitations: While our study has highlighted several pertinent issues rooted in Chinese societal norms and policies, it does have its limitations. These underline the need for broader, more diversified future research endeavors.

CONCLUSION

The landscape of pregnancy and maternity leave during residency training is filled with challenges, but it's also one of resilience and perseverance. Efforts from institutions, regulatory bodies, and the medical community can pave the way for harmonious co-existence of passion for medicine and the joy of motherhood.

AVAILABILITY OF DATA AND MATERIALS

The dataset used and/or analysed during this study is available from the corresponding author on request.

CONSENT FOR PUBLICATION

Not Applicable.

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AUTHORS' CONTRIBUTIONS

JHJ and LXY conceived and designed the study, developed the study protocol, statistical analyses and wrote the manuscript. HBW and YJY were responsible for the questionnaire design, data analysis, and interviews. GZY and HWG performed quality control, and statistical analyses.

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DECLARATION

Ethics approval and consent to participate

The study was approved by the Human Ethics Committee of the Ruijin Hospital and Renji Hospital, and was in accordance with the Declaration of Helsinki. Written informed consent was obtained from all participants.

Competing interests

The authors declare that there are no competing interests.

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