

Exploring the Motherhood Penalty in China: A Scoping Review of Key Manifestations and Influencing Factors

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Abstract: This scoping review explores the phenomenon of the "motherhood penalty" in China, a growing issue within the global gender equality discourse. The motherhood penalty refers to the wage and career disadvantages that women experience in the labor market due to their roles as mothers. Despite global research on this topic, limited studies have examined the specific manifestations and influencing factors of the motherhood penalty in China. This review aims to fill this gap by synthesizing 24 empirical studies published between 2013 and 2024, primarily utilizing quantitative methods. The review follows Arksey and O'Malley's five-step framework to analyze the studies. The review identifies four main manifestations of the motherhood penalty in China: lower income, labor force participation and career interruptions, and restricted career development. Moreover, it examines key factors that contribute to these penalties, including family structure, education, workplace sector, intergenerational support, gender norms, and policy. The study provides a comprehensive overview of the literature on the motherhood penalty in China, highlighting the need for future research and policy intervention to address the issue.

Keywords: motherhood penalty, Chinese women, wage gap, gender equality, family role

1. Introduction

Across the world, there are still many different kinds of gender gap in the workplace. And some women face many disadvantages in the labor market due to their motherhood identity, which seems to relate to lower salaries. Most mothers will spend more time rearing children than fathers. Thus, the extra work of motherhood may improve the gender inequality, and lower earnings of women is one point of that [1]. Many studies found that mothers not only get the lower incomes than men, but also earn less money than other childless women [2]. Global research has widely documented the motherhood penalty, a phenomenon women experience in the workplace due to their roles as mothers. In China, as the nation continues to undergo rapid social and economic transformations, the issue of the motherhood penalty has become increasingly significant. With the transition from a planned economy to a market economy, there have been significant changes in labor policies related to child-rearing, education policies, the structure of the labor market and employment opportunities faced by women, as well as the specific nature of motherhood in private life [3]. However, the development of gender ideology in China has not kept pace with the changes in the economic system. The traditional gender division of labor has not changed. Women are still considered to be responsible for most of the household work. At the same time, the increase in women's participation in the labor market has

forced women to face conflicts between family and work. However, there are no corresponding policies to solve these problems [4].

This scoping review is significant because, despite growing global interest in the motherhood penalty, few studies have focused on the Chinese context. China's unique socio-economic landscape—shaped by rapid urbanization, evolving family structures, and a history of gendered social norms—creates a distinct environment for understanding the experiences of working mothers. In the past 20 years, some scholars have conducted research on motherhood penalty in China, and most of them focus on the manifestation and influencing factors of motherhood wage penalty. But there has not been an extensive review of the motherhood penalty phenomenon in China. This paper aims to fill this academic gap. Through the review of existing literature and data analysis, I will summarize and conclude the different manifestations of the maternal punishment among Chinese women, and deeply analyze which factors may lead to or aggravate the occurrence of the maternal punishment. This review aims to provide a comprehensive perspective for academic research on maternal punishment in China and provide theoretical support for future policy making and social change.

Existing research has focused on the following areas. First, the manifestation of motherhood punishment. Many scholars have already conducted preliminary discussions on the phenomena of pay gap and promotion barriers encountered by mothers in the workplace. Second, the influencing factors of motherhood punishment. Studies have shown that the formation of motherhood punishment is related to multiple factors, including gender roles, family responsibilities, corporate policies, social culture and so on. In order to provide systematic evidence to facilitate future research and interventions to help reduce motherhood penalty phenomenon in China, this study proposes two research questions:

- (1) What are the main manifestations of the motherhood penalty in China?
- (2) What are the factors that influence the motherhood penalty for Chinese women?

2. Motherhood Penalty in China

The negative effects of motherhood on women's labor market outcomes have been amply demonstrated by research. Through Budig and England's study, the wage penalties of mothers are larger than unmarried women. The findings indicate a 7% wage reduction for each child, and a 5% reduction per child persists [1]. Besides the wage penalty, Women who are mothers have less success in getting hired and advancing in the workplace, and they are considered less competent due to their motherhood identities [5]. The motherhood penalty has become a widely researched topic around the world. In the U.S., U.K., and some OECD countries, women with young children earned 5 to 20 percent less [6]. Many scholars use classical human capital theory to explain motherhood penalty. This theory posits that investments in education and skills enhance an individual's productivity, leading to higher income and better career opportunities [7]. A mother's investment in child-rearing reduces the time available for enhancing her own productivity, potentially impacting her career development and income levels. Additionally, Becker uses the 'compensating differential theory' to explain that mothers may choose 'family-friendly' jobs, which in turn can affect their wage income [8]. Besides, gender discrimination in the workplace is a factor in the penalization of motherhood.

However, China's unique socio-economic background gives it a distinctive position globally. Many previous studies on the motherhood penalty have focused on developed countries, but China's national conditions are different. Shen mentioned three perspectives to summarize the motherhood penalty differences between China and other developed countries, including fewer flexible working opportunities, longer working hours in general and Impact of ownership structure on wages [3]. Many studies on the motherhood penalty in China focus on the reform of China's economic system. During the planned economy, to help working mothers, resources were allocated to a public childcare system [9]. As the reform of the economic system continues, the wage penalties for motherhood went up

substantially, and wage penalties for mothers are greater in the non-state sector than in the state sector [10]. It has also been argued that economic transformation has contributed to the separation of the public and private spheres [4], and the research conducted a theoretical framework regarding how the two-spheres separation has exacerbated gender inequality and the motherhood penalty in China.

Traditional Chinese gender roles also play an important role in contributing to the exacerbation of the phenomenon of motherhood penalty. There is an old Chinese saying “Men are responsible for work outside the home, and women are responsible for the domestic duties.”, which reflects women are seen as the primary caregivers of the family. Considered in the context of Chinese culture, Confucianism is the primary reason for the low social status of women in China [11]. The traditional gender perspective has had a profound impact on society as a whole and continues to today. Traditional gender perceptions of women and their spouses have a significant impact on motherhood penalty, and traditional perceptions of gender roles in local societies exacerbate fertility penalty [12].

3. Methodology

This study followed the five-step methodological framework proposed by Arksey and O’Malley to guide the scoping review process [13]. This review is conducted in the following 5 steps: (1) identifying the research question, (2) identifying relevant studies, (3) screening and selecting studies for inclusion in the review, (4) charting the data, (5) collating, summarizing, and reporting the results. Additionally, the review also utilized the preferred reporting items for systematic reviews and meta-analyses extension for scoping reviews (PRISMA-ScR) [14] to ensure the clarity and transparency in review process.

3.1. Database and Search Methods

The study will conduct an extensive literature search covering the following databases: Web of Science, Scopus, Wiley and CNKI. Since this study is based on the maternal penalty in the Chinese context, it included CNKI, which is one of China's largest academic resources. The study filtered articles from 2010 to 2024 in peer-reviewed journals with a specific focus on motherhood penalty in China. Articles written in both English and Chinese were included in the review.

3.2. Criteria and Selection Process

To ensure that this review cover all relevant studies related to our research question, the study conducted an extensive literature search and screened the literature according to the pre-set screening criteria, as shown in Figure 1. After selection process, 24 articles satisfied the inclusion criteria made up the final sample.

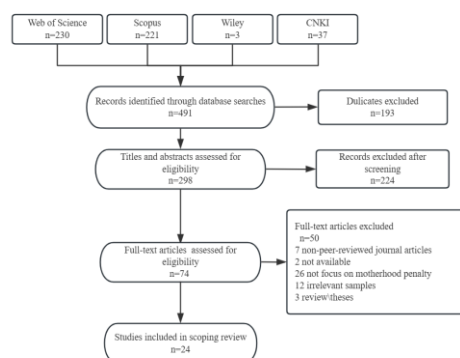


Figure 1: Data selection process for scoping review

4. Results

4.1. Characteristics of included study

All 24 studies included in this review are empirical studies that employ quantitative methods. The majority of studies employed longitudinal designs (54.2%), followed by cross-sectional studies (29.2%). The studies were published from 2013 to 2024, with the highest number of papers appearing in 2022, as shown in figure 2. Data collection primarily relied on large-scale, secondary datasets, with the China Family Panel Studies (CFPS) being the most frequently used (50%). These studies provide comprehensive empirical insights into the relationship between gender, motherhood, and labor market participation in China. Detailed characteristics of the included studies can be found in Table 1.

Table 1: Characteristics of included studies

Categories	n	Percentage (%)
Data Collection Method		
CFPS	12	50%
CHNS	8	33.30%
Others (e.g., CMDS, CGSS)	4	16.70%
Sample Composition		
Female-only	13	55.80%
Male and Female	11	45.80%
Journal Distribution		
Population Research and Policy Review	2	8.30%
Chinese Journal of Sociology	2	8.30%
Journal of Chinese Sociology	2	8.30%
Journal of Marriage and Family	2	8.30%
Other Journals	16	66.70%
Research Design		
Longitudinal Study	13	54.20%
Cross-sectional Study	7	29.20%
Natural Experiment	2	8.30%
Quasi-experiment	2	8.30%

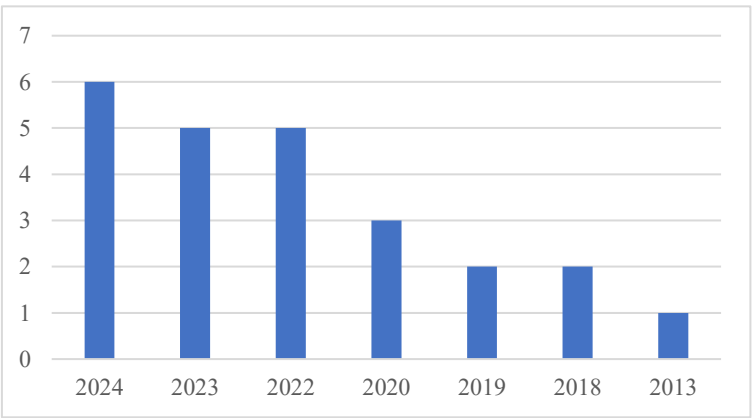


Figure 2: Years of Publication

4.2. Manifestations of the Motherhood Penalty

4.2.1. Wage Gap

Most literature mentions that mothers face significant wage gaps in the labor market, which can be divided into gender wage gaps and wage gaps between mothers and non-mothers [9]. The study found that within seven years after giving birth, women's annual income dropped significantly by 21.4%, while men did not experience a similar drop [12,15]. Many studies have mentioned the phenomenon of fatherhood premium, which refers to the phenomenon where fathers tend to receive higher wages or better career advancement opportunities in the workplace [16], as opposed to motherhood penalty, and have verified fatherhood premium through empirical research, thereby highlighting the motherhood penalty [17,18].

Women with children face a more significant wage penalty than those without children, especially in low-income groups and private sector. Mothers in low-income groups are the worst hit because they are more likely to work in the private sector and receive lower welfare benefits. For example, in the private sector, for every additional child a mother has, her annual salary and hourly wages drop by about 29.1% and 29.3% respectively. In the public sector, the motherhood penalty is relatively mild, with a woman's annual salary and hourly wages dropping by about 12.2% and 12.7% for every additional child she has [17,19]. Yang proposed the concept of "Double Penalty of Gender and Motherhood", pointing out that the dual influence of gender and fertility directly determines women's wages, and the maternal tax increases significantly with the increase in the number of children [20].

There are also studies pointing out that the impact of the motherhood penalty starts from the childbearing stage. Studies have shown that the motherhood wage penalty does not only begin after childbirth, but also appears from the beginning of childbearing risks (potential childbearing) [21]. After childbirth, wages of women suffer the greatest penalty when they first give birth, and the recovery is relatively slow, especially among low-income groups [15]. The wage rate also declines gradually with each additional child [3]. Women who have multiple children face a greater income penalty, especially women with low education and women in rural areas. The income penalty for women in two-child families is significantly higher than that in one-child families, especially when the children are young, the impact of the maternal penalty is more prominent [22, 23].

4.2.2. Labor Force Participation and Career Interruptions

In general, mothers participate in the labor market at a lower rate than men and non-mothers. The labor force participation rate of women dropped significantly in the year they gave birth to their first child, and their working hours were greatly reduced, and only gradually recovered after the child was 4 years old. The labor supply of men was not significantly affected by childbirth [24]. The age of the child had a more significant impact on the mother, especially since the employment rate of mothers of infants aged 0-5 years old was the lowest [25]. There is a significant negative correlation between women with young children and labor market participation, which is more significant after local economic development [26]. Some studies have linked labor force participation rates to reduced income. In the study by Zhang, the decline in income was mainly due to a 14.1% decline in labor force participation rates and a 17.9% decline in working hours, rather than a simple change in wage rates [12].

Motherhood may also result in a temporary withdrawal from the labor market, known as career interruptions. Marriage and childbirth make it easy for women to interrupt their careers, especially after childbirth, when the risk of job interruption increases significantly [20]. Women may interrupt their career development due to childbirth, resulting in loss of participation in the labor market [22]. Mothers whose children are infants or toddlers are more likely to interrupt their employment and

engage in informal employment [25]. Mothers, especially in one-child families, have experienced significant wage suppression. In particular, the reduction or interruption of working hours after the birth of a child leads to an interruption in human capital accumulation, resulting in a motherhood penalty [18]. At the same time, women's labor participation is negatively affected by family economic resources. When the relative income status of couples is low, women are more likely to withdraw from the labor market [27]. In conclusion, mothers need to spend time giving birth and taking care of young children, which will reduce their working hours and input, and reduce their labor force participation rate. The impact of this phenomenon is long-term for mothers, and it gradually weakens when their children reach adolescence.

4.2.3. Limitation of Career Development Opportunities

The motherhood penalty is not only reflected in the wage gap, but also affects career development opportunities. Starting from employment, gender and marital status are key factors affecting employment opportunities. Gender role stereotypes set a higher employment threshold for women [20]. Within the female group, there are significant differences in workplace characteristics between unmarried women, married women without children, and women with children. Women with children, especially mothers of multiple children, face more workplace difficulties. However, this is not obvious among men. The impact of fatherhood on the workplace is far less than that of motherhood. Mothers may face employment interruptions or switch to low-paying part-time jobs due to childcare, and these changes will affect their career development and accumulation of human capital [3,28].

Two studies focused on mothers' career aspirations and suggested that having children may affect mothers' work orientation. One study showed that family-work conflict has a significant positive impact on employment exclusion, especially for two studies [29]. Women with one or more children have increased family responsibilities, resulting in limited career development. Another study found that some mothers' career aspirations declined after having children, but this change explained only 3.5% of the motherhood wage penalty [19].

4.3. Influencing Factors of Motherhood Penalty

The motherhood penalty in China is influenced by a range of factors that interacts with cultural, social, economic, and policy contexts. This section provides an overview of the key determinants identified in included articles. Detailed data is shown in Table 2.

Table 2: Influencing Factors of Motherhood Penalty in China

Influencing factors	number	Studies
Workplace sector	7	[3,9,17,21,30,33,34]
Family structure and the age of children	8	[3,18,20,22,24,25,26,27]
Educational attainment	7	[19,23,24,27,30,31,32]
Intergenerational support	5	[6,15,22,27,28]
Traditional gender roles and cultural expectations	6	[6,12,17,20,23,33]
Policy and institutional factors	2	[19,31]

In the 24 articles included in the review, 8 studies mention the influence of family structure and the age of children as key factors. Mothers with multiple children, especially those with two or more, face larger wage penalties and career setbacks than those with one child. This is especially true in rural areas, where the extra caregiving duties worsen labor market disadvantages [22,18]. Younger children, particularly those under five, have a greater negative effect on mothers' employment and wages, due to the increased caregiving needs in the early years, which often lead to fewer working

hours or leaving the workforce temporarily in the first three years post-childbirth [3,24,27]. However, the penalty decreases somewhat with the birth of a second child, suggesting diminishing effects as the number of children increases [26]. Single mothers face a lower initial penalty than married mothers, but this penalty increases more quickly over time. This is mainly because they lack partner support in caregiving and financial responsibilities, forcing them to balance work and home duties alone [20,25].

In the 24 articles reviewed, 7 mention the impact of educational attainment on the motherhood penalty. Women with higher education levels typically face a smaller initial penalty, but this advantage diminishes over time as their penalty grows faster. Higher educated women often have greater career expectations before childbirth, leading to more significant career disruptions and income losses after having children, with long-term wage impacts [19,24,27,30,31]. In contrast, women with lower education levels experience a more severe and consistent penalty, facing higher job instability and income reductions, especially in informal or unregulated sectors. These women also encounter more lasting negative effects on employment and income. Additionally, the educational gap between spouses increases the motherhood penalty for women, particularly regarding income loss [23,32].

Six studies highlighting the workplace sector. Women in the private sector face higher wage penalties due to competitive markets and fewer welfare protections [3,9,17]. Public sector women experience smaller penalties due to more stable jobs and better support [21]. The shift from the "single-child" to "two-child" policy has amplified these differences. Women in high-skilled, flexible jobs, like live streaming, face less severe penalties, while those in low-skilled jobs face greater wage reductions and career disruptions [30,33,34].

In China, grandparents play a crucial role in child-rearing, a practice rooted in traditional family values [35]. Five studies in the review highlight the impact of intergenerational support on the motherhood penalty. Grandparental care, particularly from maternal grandparents, can reduce career interruptions and increase women's income by 20-80% [6,15]. Urban mothers benefit more from this support compared to rural mothers, as they are more likely to receive it [27,28]. Mothers living with in-laws face a higher penalty due to the added caregiving responsibilities for both children and elderly relatives, while those living with their own parents experience a reduced penalty [6,22].

Traditional gender roles and cultural expectations also significantly exacerbate the motherhood penalty. Gender stereotypes, such as the expectation that women should handle most caregiving duties, lead to unequal career opportunities. Fathers typically do not face similar penalties [20,17]. Women whose partners adhere to traditional gender norms experience the most severe penalties, while those with more egalitarian views face less pronounced wage penalties [12,23]. In regions where patriarchal cultural expectations are stronger, the penalty is more significant, as these areas expect women to balance both caregiving and professional responsibilities [6,12,33].

Policy and institutional factors also contribute to the severity of the motherhood penalty. China's three-child policy has had an impact on mothers' choices between career and family responsibilities, especially with the extension of parental leave, which may have exacerbated gender employment discrimination [19]. After the implementation of the universal two-child policy, women's working hours and hourly wages have dropped significantly [31].

5. Conclusion

The 24 studies reviewed highlight that the motherhood penalty is prevalent in China's labor market, manifesting as lower income, decreased labor participation, limited career opportunities, and career interruptions. Mothers experience a significant income gap compared to childless women, along with restricted career growth, reflecting gender inequality in the workplace, particularly in China's social

and economic context. The motherhood penalty is influenced by factors such as family structure, education level, sector of employment, intergenerational support, and traditional gender roles.

To reduce the motherhood penalty, policies promoting work-life balance, such as paid parental leave and flexible working arrangements, are crucial. Strengthening anti-discrimination laws and encouraging shared parental responsibility would also help. It is equally important to address cultural norms around gender roles. In Chinese family sphere, patriarchy and conventional gender ideology have been painstakingly upheld [36]. Promoting gender equality awareness and encouraging men to share caregiving duties can reduce workplace discrimination.

This study also has limitations, including a focus on urban areas, limited exploration of rural mothers' challenges, and reliance on secondary data. Future research should include more diverse populations, especially rural and disadvantaged mothers, and examine the long-term effects of the penalty on economic mobility and career trajectories. Additionally, exploring how workplace culture impacts mothers' experiences and how organizations can create supportive environments is necessary. Future studies can provide a more comprehensive understanding of the motherhood penalty in China, guiding effective strategies to reduce its negative impact on women's careers and economic well-being.

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