

The Impact of Social Discrimination on the Mental Health of Migrant Workers: Evidence from China

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Abstract: Migrant workers have been a central force in China's rapid urbanisation and economic expansion, yet they continue to experience multiple forms of social discrimination that may adversely affect their mental health. Using nationally representative data from the 2016 China Family Panel Studies, this study investigates the association between social discrimination and mental health outcomes among migrant workers, with a particular focus on discrimination related to income inequality and household registration status. Mental health is assessed using indicators of life satisfaction and depressive symptoms. The empirical results demonstrate that perceived social discrimination is significantly associated with lower life satisfaction and higher levels of depression among migrant workers. Further heterogeneity analyses reveal that these negative effects are more pronounced for male migrant workers and those belonging to the first generation of migrants, indicating substantial variation in vulnerability across demographic groups. To explore the underlying mechanisms, mediation analyses are conducted and show that interpersonal trust plays a critical role in linking discrimination to mental health outcomes. Experiences of unfair treatment reduce individuals' trust in others, which in turn exacerbates feelings of social isolation and emotional distress. By identifying both differential effects and a key psychological pathway, this study contributes to the literature on social inequality and mental health by elucidating how structural and social discrimination jointly shape mental health disparities among migrant workers. The findings underscore the importance of addressing not only institutional sources of discrimination but also the erosion of social trust when designing interventions aimed at improving the well-being of migrant populations in urban contexts.

Keywords: Migrant workers, Social discrimination, Mental health, Interpersonal trust

1. Introduction

Since the reform and opening up, migrant workers have become a crucial driving force in China's social and economic development, serving as an important link between urban and rural areas. According to official statistics, the number of migrant workers in China reached 285.6 million in 2020, accounting for 19.79% of the total population (2020 Migrant Worker Monitoring Survey Report) [1]. However, the household registration system, which originated during the era of the planned economy, has contributed to a persistent urban-rural dual structure. The hukou system classifies individuals as rural or urban residents and links this status to differential access to public services and social welfare. As a result, rural hukou holders who migrate to cities for employment often remain

excluded from many urban benefits despite their long-term residence and substantial contributions to urban economies. This institutional arrangement produces unequal treatment based on hukou status rather than individual merit or labour contribution. In the China Family Panel Studies (CFPS), hukou-based discrimination is measured through respondents' self-reported experiences of unfair treatment attributable to their household registration status. Although reforms to the household registration system and policy measures supporting migrant workers have gradually expanded in recent years, the overall social position of migrant workers has changed only marginally. They continue to occupy a marginalised status in urban society and are frequently described as "second-class citizens," which poses a significant challenge to the balanced development of China's urban-rural society. Consequently, social discrimination against migrant workers has emerged as an

Article

increasingly salient social issue that requires systematic attention. The No. 1 Central Document of 2021 explicitly emphasised the need to “accelerate the formation of a new type of urban–rural relationship,” promoting coordinated development between industry and agriculture, complementary urban–rural growth, and common prosperity [2]. In October 2016, the Central Committee of the Communist Party of China (CPC) and the State Council jointly issued the Healthy China 2030 planning outline [3], which elevated health to a national strategic priority and positioned health promotion as a core objective of public policymaking. This strategic framework underscores that improvements in public health are essential not only for individual well-being but also for long-term social sustainability. Within this broader agenda, the mental health of migrant workers has been identified as a critical concern. Enhancing their psychological well-being is not only an important component of public service provision and social equity but also a necessary condition for advancing urbanisation and fostering a more integrated urban–rural society. Against this background, the present study draws on data from the 2016 China Family Panel Studies (CFPS) to examine how experiences of social discrimination affect the mental health of migrant workers. Specifically, this study aims to investigate both the magnitude of these effects and the underlying mechanisms through which discrimination influences mental health outcomes. By providing empirical evidence on these relationships, this study seeks to inform policies aimed at reducing discrimination and promoting greater mental health equity among China’s migrant labour population.

The phenomenon of social discrimination against migrant workers is connected with social stratification and inequality, and can lead to tense social relations and even conflict [4–5]. To explain the immigrant phenomenon that occurred in American cities in the 1920s, sociologist Park proposed the concept of "Marginal man," which refers to immigrants who are situated on the margins of two cultures and two societies, and who often face various accidental collisions and conflicts, leading to the fusion of ethnic groups and cultures [6]. In urban sociology research, because immigrants often engage in low-paying jobs, have meagre incomes, and live in poor environments, they are always associated with social discrimination [7]. The sociological meaning of discrimination refers to the behaviour of refusing to give certain groups equal access to social rewards and opportunities [8]. It is not only a macro-systematic process of exclusion of a certain group, race, or culture, but also a differential and negative micro-attitude cognition of subordinate social members in certain social structures [9]. Social exclusion theory believes that social factors such as race, language, family background, and religious beliefs can all become reasons for one social group to discriminate against another, leading to the monopoly of social and economic opportunities by some

groups [10]. Some literature explores the relationship between prejudice and social discrimination, suggesting that prejudice is a negative emotional feeling (hatred, repulsion, fear) and a negative view held by one social group toward another at the psychological level, while discrimination is the differential treatment behaviour towards others based on these negative emotions and views [11–12]. Wilson proposed policy-making based on the principle of social inclusion to address the problem of social discrimination against migrant workers [13]. About the relationship between social discrimination and the mental health of migrant workers, a substantial body of research has demonstrated that perceived discrimination is a significant predictor of depression, anxiety, psychological distress, and social isolation [14]. Systematic evidence further indicates that exclusion in the workplace, identity-based stigma, and institutional inequality exacerbate mental health difficulties [15]. Finch et al. Carried out a study in California, revealing that social discrimination significantly increased the incidence of depression among Mexican immigrants. This effect was influenced by various factors, including place of birth/residence, gender, cultural adaptation, and educational background [16]. Foster found that the negative effects of social discrimination on the mental health of migrant workers are moderated by coping mechanisms. When seeking social support proactively, the mental health of migrant workers improves, but when avoiding it negatively, the mental health of migrant workers declines [17].

In China, the strict household registration policy makes the study of migrant worker issues even more complex. According to different household registration types and migration destinations, migrant workers can be divided into four types: "Urban-urban migration," "Urban-rural migration," "Rural-urban migration," And "Rural-rural migration." Migrant workers in China mainly belong to the "Rural-urban migration" Type, and short-term migration is predominant [18]. Therefore, Chinese scholars' research on the relationship between social discrimination and the mental health of migrant workers mainly focuses on the group of migrant workers from rural areas. Migrant workers live in the contrasting social cultures of urban and rural areas and gradually become marginal people in urban society through marginalisation and self-marginalisation, becoming the target of "Discrimination" By multiple entities such as urban governments, citizens, enterprises, and other units [19]. In the 1990s, it was generally believed in academia that a considerable proportion of migrant workers in China felt discriminated against by urban residents, and group bias and discrimination existed between migrant workers and urban residents [20].

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Article

moderated by coping mechanisms. When seeking social support proactively, the mental health of migrant workers improves, but when avoiding it negatively, the mental health of migrant workers declines [21-22]. They believe that the relatively high level of perceived social discrimination among migrant workers increases the probability of negative mental emotions such as depression, anxiety, distress, loneliness, and relative deprivation, and also reduces positive mental emotions such as self-worth, life satisfaction, happiness, and sense of social fairness [23]. Ultimately, this is detrimental to the improvement of the mental health of migrant workers. At the same time, social support, self-esteem, family environment, and coping strategies are key factors affecting the impact of perceived social discrimination on the mental health of migrant workers [24]. Some literature also explores the relationship between social discrimination and the mental health of migrant workers from the perspective of labour protection. They believe that social discrimination is closely related to the employment of migrant workers, and factors such as "Unequal pay for equal work" And wage arrears become direct factors affecting migrant workers' experiences of social discrimination. The relatively low labour income and imperfect labour protection system will also promote the feeling of deprivation among migrant workers, reduce their awareness of fairness, and make it difficult for them to form a positive social mentality [25]. The imperfect labour protection relationship leads to differential treatment of migrant workers in urban employment, which becomes a constraint for migrant workers to integrate into cities [26]. The root of social discrimination lies in the lack of understanding between migrant workers and urban residents, which leads to incorrect judgments based on limited information. As migrant workers' time in the city increases and they interact more with local residents, their living habits, behaviour patterns, values, and beliefs gradually converge with those of urban residents. This helps to reduce social discrimination against migrant workers and promote the establishment of good social relationships between both parties [27].

There are numerous studies on social discrimination and the mental health of migrant workers, and the negative effects of social discrimination on the mental health of migrant workers. However, the results of most studies have a few shortcomings. Firstly, most studies are limited to subjective studies on perceived social discrimination and the mental health of migrant workers, and few studies study the effect and mechanisms of social discrimination experiences on the mental health of migrant workers from an objective perspective. Secondly, most studies focus on survey data of a particular region and have not used nationally representative samples, which limits the validity of the results. Third, most studies use simple descriptive statistics, logit models, and structural equation models, which cannot solve the endogeneity problem of

econometric models and make it difficult to obtain the "net effect" Of social discrimination on the mental health of migrant workers. Hence, the reliability of the results needs to be further investigated. This study draws on several established perspectives to frame the relationship between discrimination and mental health. Minority stress theory suggests that repeated experiences of unfair treatment create chronic psychological pressure. Social stress models similarly hold that such stressors erode emotional well-being over time. In addition, the conservation of resources theory highlights that discrimination can reduce individuals' social and psychological resources, including trust and a sense of belonging. Together, these perspectives provide the basis for our hypothesis that discrimination may influence mental health partly through changes in interpersonal trust.

2. Methodology

2.1 Estimation Method

To analyse the impact of social discrimination on the mental health of migrant workers, the ideal situation would be to obtain data on the mental health of migrant workers who have experienced social discrimination and those who have not experienced it within the same time period. The average treatment effect on the treated (att) effect of social discrimination on the mental health of migrant workers is as follows:

$$\text{Att} = e[(\text{Health}_{1i} - \text{Health}_{0i})|D_i = 1] = e[\text{Health}_{1i}|D_i = 1] - e[\text{Health}_{0i}|D_i = 1] \quad (1)$$

D_i represents social discrimination $D_i = 0$, represents experiencing social discrimination; $D_i = 1$, represents not experiencing social discrimination. $E[\text{Health}_{1i}|D_i = 1]$ Represents the observable mental health status of migrant workers who have experienced social discrimination, while $e[\text{Health}_{0i}|D_i = 1]$ Represents the unobservable mental health status of migrant workers who have not experienced social discrimination. Therefore, a substitute indicator $e[\text{Health}_{0i}|D_i = 0]$ Needs to be constructed using the PSM method.

Specifically, the propensity score matching (PSM) method involves two main steps: The estimation of propensity scores and the subsequent matching process. In the first step, a probabilistic model—typically a logistic regression—is developed to estimate the conditional probability that a given migrant worker has experienced social discrimination. This probability, known as the propensity score, reflects the likelihood of discrimination based on observed covariates. The model's validity is assessed by testing whether the covariates are balanced across groups when conditioned on these scores. In the second step, various matching techniques are employed to pair treated and untreated individuals with similar propensity scores. These methods include nearest

neighbour matching, calliper matching, and kernel matching. The primary objective is to create a comparison group of migrant workers who have not faced social discrimination but are statistically similar to those who have. This approach helps to approximate random assignment, thereby minimising both selection bias and potential confounding factors that may otherwise distort the estimation of treatment effects. Finally, by comparing the mental health levels of migrant workers who have or have not had social discrimination but have similar propensity score values, the average impact of social discrimination on mental health is obtained. We also used PSM analysis to investigate the difference between generational and gender effects of social discrimination on the mental health of migrant workers.

2.2 Data Source

The dataset employed in this study is derived from the 2016 wave of the China Family Panel Studies (CFPS), a nationally representative and comprehensive longitudinal survey project. Cfps covers approximately 16,000 households across 25 provinces, municipalities, and autonomous regions in China, with the exception of the Xinjiang Uygur Autonomous Region, Tibet Autonomous Region, Qinghai Province, Inner Mongolia Autonomous Region, Ningxia Hui Autonomous Region, and Hainan Province. The survey collects detailed data at three distinct levels: Individual, household, and community. It provides rich information reflecting changes and trends in various dimensions of Chinese society, including the economy, population dynamics, education, and public health.

For the purpose of this study, individuals aged 15 to 64 years who held agricultural household registration but were part of the urban sample were identified as migrant workers. The classification approach follows the standards of the China Statistical Yearbook. To ensure data quality and accuracy, observations with missing or erroneous values in key variables were excluded from the analysis. Missing data in key variables were handled through listwise deletion. The proportion of missing values was small and did not materially alter the sample composition or the distribution of key characteristics. After removing observations with incomplete information, a total of 6,378 valid cases were retained for analysis. Consistent with common practice in Chinese migrant labour research, this study classifies "new-generation migrant workers" as those born in or after 1980, and "first-generation migrant workers" as those born before 1980. The two groups differ in important ways: younger workers generally have higher levels of education and stronger expectations for urban inclusion, whereas older workers often focus more on economic security. These distinctions provide a meaningful basis for examining generational differences in the effects of discrimination.

2.3 Variable Descriptions

Dependent variable: The mental health of the migrant workers, using depression and life satisfaction, measured by negative and positive emotions. Depression is the negative emotion of migrant workers measured using the Centre for Epidemiologic Studies Depression Scale in a simplified survey. Based on the psychological state of migrant workers in the past week, "feeling sad", "feeling everything is an effort", "poor sleep", "feeling lonely", "feeling unhappy", "feeling life is not worth living", "feeling happy", "feeling joyful". Questions are randomly answered with four possible answers: "rarely or none of the time," Corresponding to cumulative mental health days. For the first six questions, the scores are 3, 2, 1, and 0 points, respectively. For the last two questions, the scores are reversed, with 0 points for the highest level of satisfaction and 3 points for the lowest. Finally, the scores for the eight questions are added together to obtain an indicator of the level of depression among migrant workers, with a score range of 0-24 points. In this study, the CES-D scale exhibited strong internal consistency, with a Cronbach's alpha of 0.81. This level of reliability is consistent with previous CFPS-based research and supports the appropriateness of the scale for assessing depressive symptoms among migrant workers. Life satisfaction is the positive emotion of migrant workers measured with Likert scale, "how satisfied are you with your life?" Scores range from 1-5. 1 "very dissatisfied" And 5 "very satisfied". A higher score indicates better mental health for migrant workers.

Independent variable: Social discrimination is a typical social injustice phenomenon, which usually refers to differential treatment of a certain social group based on factors such as identity, gender, or resources rather than ability, contribution, cooperation, etc., resulting in some degree of deprivation of some social members [28]. Social discrimination is generally divided into attitude-based discrimination, behavior-based discrimination, and institutional discrimination. If migrant workers experience attitude-based or behaviour-based discrimination, they may develop feelings of resentment or hatred towards others. The poverty discrimination measurement is used, which assigns a value of 1 if the answer to the question "Have you been treated unfairly because of the difference in wealth?" Is "Yes," And a value of 0 if the answer is "No." If migrant workers experience institutional discrimination, they may have complaints about government behaviour, ultimately leading to social conflicts and instability. The household registration discrimination measurement is used, which assigns a value of 1 if the answer to the question "Have you been treated unfairly because of your household registration?" Is "Yes," And a value of 0 if the answer is "No." This reflects institutional exclusion generated by the hukou system. Although the CFPS discrimination items use simple yes-no questions, this format is widely adopted in large-scale social surveys in China. It captures whether respondents

have directly encountered unfair treatment, which is the core concept required for identifying exposure to discrimination. More detailed multi-item scales are not available in the CFPS, making the binary measure the most appropriate choice for this dataset. We acknowledge that this approach cannot reflect all nuances of discriminatory experiences and note this limitation in the conclusion.

Control variables: They mainly include three categories: Socioeconomic status characteristics, lifestyle characteristics, and community environment characteristics. Socioeconomic status refers to the position of migrant workers in the social structure, which is generally divided into objective socioeconomic status (age, gender, education, marriage, residence) and subjective socioeconomic status (subjective economic status, subjective social status). Subjective socioeconomic status is the migrant worker's subjective perception of their own socioeconomic status, which is measured by "Your personal income belongs to" And "Your social status in this area," With values ranging from 1 to 5. Lifestyle is a series of habits, attitudes, and systems formed by migrant workers under the influence of social culture, values, economic conditions, and customs. This study selects smoking, drinking, exercise, and siesta. The community is the main place where migrant workers live and is measured from three aspects: neighbour relationships, living environment, and public facilities. They are respectively measured based on "Overall, how do you feel about the neighbour relationships in your community?" "What is the situation of noise pollution, garbage disposal, and other environmental issues around your community?", and "What is the overall situation of public facilities such as education, medical care, and transportation around your community?" The values range from 1 to 5, with 1 being "Very poor" And 5 being "Very good." Table 1 provides descriptive statistics of the sample data.

Mediating variables: Interpersonal trust was operationalised using two dimensions: neighbourhood trust and stranger trust. Respondents rated their level of trust on an 11-point scale ranging from 0 ("very distrustful") to 10 ("very trusting"). The items asked, "How much do you trust your neighbours?" and "How much do you trust people you meet for the first time?" These measures align with established approaches in CFPS research and capture both bonding trust within close social circles and bridging trust toward unfamiliar individuals, enabling a nuanced examination of the mediating role of interpersonal trust.

Table 2 shows the results of the difference test of mental health between the treatment group and the control group. It can be seen that, regardless of the full sample or the sub-samples, there are significant differences between the treatment group (experiencing social discrimination) and the control group (not experiencing social discrimination)

in terms of life satisfaction and depression. The reason for this result may be the influence of the factor of "Social discrimination", or it may be the influence of other factors.

3. Results

3.1 Propensity Score Estimation

Propensity score estimation is the first step in the PSM method. By constructing a logistic regression model that predicts the probability of experiencing social discrimination among migrant workers and including covariates that simultaneously affect social discrimination and migrant workers' mental health, we estimate the conditional probability values of experiencing social discrimination (i.e., propensity score values) for each migrant worker. Specifically:

$$\text{Logit}(D_i = 1) = \beta_0 + \sum_{k=1}^n \beta_{ik} X_{ik} + \varepsilon_i \quad (2)$$

X_{ik} Represents covariates, including socioeconomic characteristics, lifestyle characteristics, and community characteristics. Finally, based on the aforementioned logistic regression model, the regression results in Table 3 are obtained. From the p-values of the covariate coefficients, most variables have a significant negative impact on social discrimination, indicating that relatively high socioeconomic status and a good community environment reduce the likelihood of rural migrant workers experiencing social discrimination. This study also examined several model-fit indicators, including AIC, BIC, and the Hosmer–Lemeshow test. These measures suggest that the models provide an acceptable fit to the data.

3.2 Matching Quality Check

To ensure the quality and reliability of the matching process, it is essential to examine the common support domain after estimating the propensity score values for migrant workers with and without experiences of social discrimination. Figure 1 illustrates the kernel density.

Table 1. Descriptive Statistics of Sample Data

Variable	Definition	Mean	S.d.	Min	Max	Sample size	
Mental health	Quality of life satisfaction	3.547	1.087	1	5	6378	
	Depression	18.895	3.833	0	24	6378	
Social discrimination	Poverty discrimination (1=yes)	0.157	0.363	0	1	6378	
	Household registration discrimination(1=yes)	0.079	0.269	0	1	6378	
	Objective socioeconomic status						
	Age (years)	40.394	12.81	6	1	64	6378
	Gender (1=male)	0.501	0.500	0	1	6378	
	Education						
	Primary school or below (1=yes)	0.397	0.489	0	1	6378	
	Junior high school (1=yes)	0.366	0.482	0	1	6378	
	Senior high school						
Socioeconomic characteristics	Or above (1=yes)	0.236	0.425	0	1	6378	
	Marital status (1=married/have a spouse)	0.830	0.376	0	1	6378	
	Residential location						
	Eastern region (1=yes)	0.449	0.497	0	1	6378	
	Central region (1=yes)	0.288	0.453	0	1	6378	
	Western region (1=yes)	0.264	0.441	0	1	6378	
	Subjective socioeconomic status						
	Subjective economic status	2.380	0.991	1	5	6378	
	Subjective social status	2.675	1.043	1	5	6378	
	Smoking (1=yes)	0.289	0.453	4	0	1	6378
Lifestyle characteristics	Drinking (1=yes)	0.157	0.364	0	1	6378	
	Exercise (1=yes)	0.398	0.490	0	1	6378	
	Siesta (1=yes)	0.476	0.499	0	1	6378	
Community environment characteristics	Neighbor relationships	3.821	0.830	1	5	6378	
	Living environment	3.227	0.929	1	5	6378	
	Public facilities	3.313	0.871	1	5	6378	

Table 2. The Results of the Differences Test of Mental Health Between the Treatment Group and the Control Group

Social discrimination types	Life satisfaction		Difference test	Depression		Difference test
	T	C		T	C	
Full sample						
Poverty discrimination ($N^T = 998$; $N^C = 5380$)	3.168	3.617	-0.449***	16.509	19.338	-2.829***
Household registration discrimination ($N^T = 504$; $N^C = 5874$)	3.268	3.571	-0.303***	16.500	19.101	-2.601***
Sub-sample						
New-generation migrant workers ($N = 2702$)						
Poverty discrimination ($N^T = 360$; $N^C = 2342$)	2.989	3.549	-0.560***	16.856	19.394	-2.538***
Household registration discrimination ($N^T = 191$; $N^C = 2511$)	3.162	3.498	-0.336***	17.325	19.187	-1.863***
First-generation migrant workers ($N = 3676$)						
Poverty discrimination ($N^T = 638$; $N^C = 3038$)	3.270	3.670	-0.401***	16.314	19.295	-2.982***
Household registration discrimination ($N^T = 313$; $N^C = 3363$)	3.332	3.626	-0.293***	15.997	19.037	-3.040***
Male migrant workers ($N = 3195$)						
Poverty discrimination ($N^T = 555$; $N^C = 2640$)	3.070	3.602	-0.532***	16.888	19.763	-2.875***
Household registration discrimination ($N^T = 266$; $N^C = 2929$)	3.154	3.542	-0.388***	16.895	19.479	-2.584***
Female migrant workers ($N = 3183$)						
Poverty discrimination ($N^T = 443$; $N^C = 2740$)	3.291	3.632	-0.341***	16.034	18.929	-2.895***
Household registration discrimination ($N^T = 238$; $N^C = 2945$)	3.395	3.600	-0.205***	16.059	18.725	-2.666***

Note: N represents the sample size; N^T represents the sample size of the treatment group; N^C represents the sample size of the control group; *, **, *** represent significance at the 10%, 5%, and 1% levels, respectively. The same applies to the following.

Table 3. Regression Results of Rural Migrant Workers Experiencing Social Discrimination

Variable	Poverty discrimination		Household registration discrimination	
	Coefficient	Standard error	Coefficient	Standard error
Age	0.010***	0.003	0.004	0.004
Gender	0.216**	0.091	0.209*	0.119
Junior high school	-0.186**	0.082	-0.237**	0.111
Senior high school Or above	-0.363***	0.106	-0.195	0.137
Marital status	0.033	0.106	0.466***	0.154
Eastern region	-0.570***	0.086	-0.344***	0.114
Central region	-0.134	0.089	-0.133	0.120
Subjective Economic status	-0.119***	0.041	-0.089*	0.054
Subjective social status	-0.178***	0.039	-0.0342	0.051
Smoking	0.183*	0.095	-0.001	0.127
Drinking	-0.073	0.103	-0.182	0.143
Exercise	0.003	0.073	0.275***	0.096
Siesta	0.135*	0.072	-0.140	0.096
Neighbor relationships	-0.140***	0.045	-0.161***	0.060
Living environment	-0.150***	0.044	-0.197***	0.058
Public facilities	-0.134***	0.047	0.027	0.063
Log likelihood	-2646.129		-1723.7144	
Lr chi2	241.02		77.99	
Prob > chi2	0.000		0.000	
Pseudo r ²	0.044		0.022	

Distributions of the propensity scores both before and after matching. As shown in the figure, the overlap between the treatment group (those experiencing social discrimination) and the control group (those not experiencing discrimination) becomes substantially greater after the matching procedure, indicating an expanded common support region. This enhanced overlap suggests that the matching process effectively improves the comparability between the two groups. Moreover, across the three matching techniques employed—nearest neighbour, calliper, and kernel matching—the maximum number of lost observations due to unmatched cases was only 33, resulting in a minimal sample loss rate of just 0.52%. This low attrition rate further confirms the robustness and quality of the matching, ensuring that the subsequent analysis is based on well-balanced comparison groups.

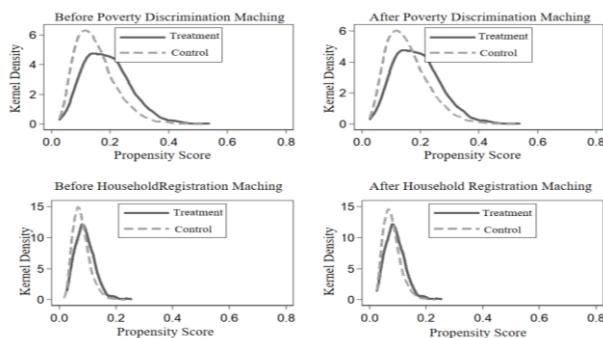


Figure 1. Density Distribution of Propensity Score Before and After Matching

In addition to the visual comparison presented in Figure 1, we conducted a formal covariate balance assessment in line with the recommendations of Rubin (2001) and Austin (2009). Standardised mean differences (SMDs) were calculated for all covariates before and after matching. Following matching, SMDs declined substantially and fell below the commonly accepted threshold of 0.1 in absolute value. This indicates that the matching procedure effectively improved comparability between treated and untreated individuals and mitigated potential selection bias. These diagnostics provide additional confidence in the validity of the ATT estimates.

To further clarify the implementation of the matching procedure, a common support restriction was imposed to ensure that treated and untreated observations were compared only within overlapping regions of the propensity score distribution. After applying this restriction, only 33 observations (0.52% of the sample) were excluded due to the absence of suitable matches, leaving 6,345 observations for ATT estimation. The minimal loss of cases suggests that most treated individuals had appropriate matches and that the common support condition was satisfactorily met.

3.3 Analysis of Estimation Results

Table 4 shows the estimated effects of social discrimination on the mental health of migrant workers (including life satisfaction and depression) using three matching methods. The estimates obtained using the three matching methods are relatively stable, and the results are strong. Specifically, the net effects of discrimination based on income and wealth on the life satisfaction and depression of migrant workers are significantly negative, ranging from -0.325 to -0.288 and from -2.524 to -2.429, respectively. Similarly, the net effects of discrimination based on household registration on the life satisfaction and depression of migrant workers are also significantly negative, ranging from -0.258 to -0.220 and from -2.472 to -2.330, respectively. The results suggest that social discrimination has a significant negative effect on the mental health of migrant workers, and discrimination based on income and wealth has more negative effects than discrimination based on household registration. To account for the survey's sampling structure, standard errors were clustered at the community level. The results are robust to this adjustment.

As an additional robustness check, we performed a Rosenbaum sensitivity analysis to assess the extent to which unobserved confounding might affect the estimated treatment effects. The results show that the ATT remains statistically significant until the Rosenbaum bounds reach $\Gamma = 1.45$, indicating that the findings are reasonably robust and unlikely to be overturned by moderate levels of hidden bias. This reinforces the credibility of the causal inferences derived from the PSM framework.

3.4 Heterogeneity Test

Inter-generational difference analysis: In this study, new-generation migrant workers are defined as those born in or after 1980. To explore generational heterogeneity in the effects of social discrimination, the sample was divided into two distinct subgroups—new-generation and first-generation migrant workers—based on their birth years. The analysis employed the propensity score matching (PSM) method to estimate and compare the differential impacts of social discrimination on mental health across these two cohorts. The estimation results, as presented in Table 5, reveal notable intergenerational differences. Specifically, in terms of life satisfaction, the negative effect of discrimination related to poverty and wealth for new-generation migrant workers ranges from -0.369 to -0.339, whereas for first-generation migrant workers, the corresponding impact lies between -0.277 and -0.241. Additionally, discrimination based on household registration also demonstrates varying effects: The estimated impact on life satisfaction ranges from -0.261 to -0.184 for the new generation and from -0.273 to -0.197 for the first generation. These findings suggest that although both generations are negatively affected, the magnitude and sensitivity of the effects differ, indicating the importance of considering generational context when

Article

evaluating the psychological consequences of social discrimination. Regarding depression, the impact of discrimination based on socioeconomic status on both new-generation and first-generation migrant workers ranges from -2.214 to -2.044 and from -2.649 to -2.611, respectively. The impact of discrimination based on household registration on the mental health of new-generation and first-generation migrant workers falls between -1.605 and -1.525 and between -2.995 and -2.839, respectively. These findings suggest that social discrimination exerts significant negative effects on the mental health of both new-generation and first-generation migrant workers, with first-generation migrant workers experiencing a greater degree of negative impact.

Gender difference analysis: To examine the gender-based heterogeneity in the psychological effects of social discrimination, the sample was divided into two subgroups: male and female migrant workers. Using the propensity score matching (PSM) method, the study estimated the differential impacts of discrimination on mental health outcomes across gender lines. The empirical results, as shown in Table 5, reveal distinct patterns. With respect to life satisfaction, the adverse impact of discrimination related to poverty and wealth ranges from -0.350 to -0.318 for male migrant workers and from -0.269 to -0.260 for their female counterparts. Similarly, discrimination based on household registration leads to a decrease in life satisfaction, with estimated effects ranging from -0.281 to -0.256 for males and -0.277 to -0.222 for females.

In terms of depression, poverty-related discrimination results in a reduction in mental health scores ranging from -2.490 to -2.405 for males and -2.501 to -2.383 for females. Household registration discrimination shows a negative impact ranging from -2.323 to -2.219 for male workers and from -2.503 to -2.223 for female workers. These findings indicate that social discrimination, regardless of its source, has a statistically significant and detrimental effect on the mental health of both male and female migrant workers. However, the magnitude of impact is generally more severe for male migrant workers, suggesting greater vulnerability among this subgroup in coping with social exclusion.

The above analysis has shown that social discrimination does have a significant negative impact on the mental health of migrant workers. The following mainly explores the possible mechanisms involved. Trust, as the foundation of interpersonal communication, is an important influencing factor for the mental health of migrant workers. A higher tendency for interpersonal trust means that migrant workers have a good evaluation of their communication partners, and are more likely to

extend their trust to people outside their circle of acquaintances, which helps to enhance their communication and cooperation with the outside group, narrowing the psychological and social distance between the two, and having a positive effect on mental health. However, a lower tendency for interpersonal trust may lead to feelings of loneliness, anxiety, and other negative mental emotions, which are not conducive to improving mental health. Experiences of unfair treatment can weaken trust in everyday social interactions. When individuals feel excluded or judged, they may interpret their social environment as less predictable or less welcoming. This can lead to more cautious or withdrawn behaviour, reducing opportunities for positive contact with neighbours or strangers. Prior work on social trust also notes that trust tends to decline when people believe they are not treated fairly. These processes help explain why discrimination may undermine both neighbourhood trust and general social trust.

This study operationalised the interpersonal trust of migrant workers into special trust with neighbours and general trust with strangers. The eleven categories ranged from "Very distrustful" (0 points) to "Very trusting" (10 points). The bootstrap method was used for 1000 repeated extractions to test the mediating effects, and Table 6 shows the results of the mediating effects test. The study revealed that poverty discrimination primarily exerts a negative influence on the life satisfaction and depression levels of migrant workers by undermining trust in their neighbours, with mediating effects of 5.33% and 3.62%, respectively. Household registration discrimination similarly impacts the life satisfaction and depression of migrant workers negatively by eroding trust in their neighbours, with mediating effects of 7.33% and 3.97%, respectively. All indirect effects were estimated using 1,000 bootstrap replications to obtain confidence intervals. Although the size of the mediated effects is modest, they represent a meaningful share of the total impact, highlighting the importance of interpersonal trust as a pathway linking discrimination to mental health. These findings suggest that social discrimination does indeed adversely affect the mental well-being of migrant workers by damaging their trust in neighbours. Given that the indicators of social discrimination in this study primarily concentrate on whether migrant workers have encountered unfair treatment due to wealth disparities and household registration in their daily work and life, and since this unfair treatment predominantly occurs in the immediate vicinity of migrant workers, the impact of social discrimination on their mental health through the avenue of trust in strangers is not significant.

Table 4. Estimation results of social discrimination on the mental health of migrant workers

Matching method	K-nearest neighbour matching	Life satisfaction				Depression			
		T	C	Att	Stand	T	C	Att	Stand
					ard				ard
Poverty discrimina -tion	Caliper matching	3.170	3.4 58	- 0.288***	0.046	16.5 15	18.9 43	- 2.429***	0.166
		3.167	3.4 84	- 0.315***	0.042	16.5 15	19.0 02	- 2.487***	0.153
		3.167	3.4 95	- 0.325***	0.042	16.5 15	19.0 39	- 2.524***	0.152
Househ old registratio n discrimina tion	Kernel matching	3.275	3.5 00	- 0.225***	0.062	16.5 28	19.0 00	- 2.472***	0.238
		3.275	3.4 95	- 0.220***	0.056	16.5 28	18.8 58	- 2.330***	0.220
		3.275	3.5 33	- 0.258***	0.056	16.5 28	18.9 99	- 2.472***	0.219

Table 5. Results of Heterogeneity Test

Matching method	Life satisfaction				Depression				Stand ard error	
	T	C	Att	Stand ard error	T	C	Att			
New-generation migrant workers										
Poverty discrimination	K-nearest neighbour matching	3.00 0	3.34 5	-0.339***	0.074	16.899	18.94 3	-2.044***	0.257	
	Caliper matching	3.00 0	3.34 8	-0.348***	0.067	16.899	18.98 8	-2.089***	0.241	
Household registration discrimination	Kernel matching	3.00 0	3.36 7	-0.369***	0.066	16.899	19.04 2	-2.143***	0.238	
	K-nearest neighbour matching	3.19 2	3.45 3	-0.261***	0.094	17.415	18.98 3	-1.569***	0.339	
Household registration discrimination	Caliper matching	3.19 2	3.37 5	-0.184**	0.087	17.415	18.94 0	-1.525***	0.318	
	Kernel matching	3.19 2	3.39 5	-0.204**	0.086	17.415	19.02 0	-1.605***	0.315	
First-generation migrant workers										
Poverty discrimination	K-nearest neighbour matching	3.27 6	3.51 6	-0.241***	0.058 9	16.339	18.95 0	-2.611***	0.215	
	Caliper matching	3.27 6	3.54 4	-0.266***	0.054	16.339	18.97 3	-2.635***	0.199	
Household registration discrimination	Kernel matching	3.27 6	3.55 3	-0.277***	0.054	16.339	18.98 8	-2.649***	0.198	
	K-nearest neighbour matching	3.33 2	3.53 0	-0.197**	0.080	15.997	18.99 2	-2.995***	0.320	
Household registration discrimination	Caliper matching	3.33 4	3.58 7	-0.253***	0.073	16.023	18.86 1	-2.839***	0.296	
	Kernel matching	3.33 2	3.60 6	-0.273***	0.073	15.997	18.94 3	-2.947***	0.294	
Male migrant workers										
Poverty discrimination	K-nearest neighbour matching	3.07 2	3.39 0	-0.318***	0.061	16.899	19.31 0	-2.411***	0.222	

	Matching method	Life satisfaction				Depression				Stand ard error	
		T	C	Att	Stand	T	C	Att			
					ard error						
New-generation migrant workers											
Poverty discrimination	K-nearest neighbour matching	3.00 0	3.34 5	-0.339***	0.074	16.899	18.94 3	-2.044***	0.257		
	Caliper matching	3.00 0	3.34 8	-0.348***	0.067	16.899	18.98 8	-2.089***	0.241		
	Kernel matching	3.00 0	3.36 7	-0.369***	0.066	16.899	19.04 2	-2.143***	0.238		
Household registration discrimination	Caliper matching	3.07 2	3.40 1	-0.329***	0.056	16.899	19.30 4	-2.405***	0.207		
	Kernel matching	3.07 2	3.42 3	-0.350***	0.056	16.899	19.38 9	-2.490***	0.205		
	K-nearest neighbour matching	3.16 2	3.42 0	-0.258***	0.084	16.932	19.16 3	-2.231***	0.326		
Poverty discrimination	Caliper matching	3.16 2	3.41 8	-0.256***	0.077	16.932	19.15 1	-2.219***	0.307		
	Kernel matching	3.16 2	3.44 3	-0.281***	0.075	16.932	19.25 4	-2.323***	0.303		
Female migrant workers											
Household registration discrimination	K-nearest neighbour matching	3.29 4	3.56 3	-0.267***	0.069	16.050	18.43 3	-2.383***	0.246		
	Caliper matching	3.29 4	3.55 4	-0.260***	0.064	16.050	18.51 5	-2.466***	0.227		
	Kernel matching	3.29 4	3.56 0	-0.266***	0.064	16.050	18.55 1	-2.501***	0.226		
Household registration discrimination	K-nearest neighbour matching	3.39 5	3.67 2	-0.277***	0.091	16.059	18.28 2	-2.223***	0.346		
	Caliper matching	3.39 5	3.63 1	-0.236***	0.084	16.059	18.49 5	-2.437***	0.321		
	Kernel matching	3.39 5	3.61 7	-0.222***	0.083	16.059	18.56 2	-2.503***	0.319		

Table 6. Results of Mediating Effects Test

Test path	Direct effect		Indirect effect	
	Coefficient	Standard deviation	Coefficient	Standard deviation
Poverty discrimination→ neighbourhood trust → life satisfaction	-0.290***	0.038	-0.016***	0.004
Poverty discrimination→ neighbourhood trust → depression	-2.403***	0.147	-0.090***	0.019
Poverty discrimination→ stranger trust → life satisfaction	-0.307***	0.038	0.001	0.001
Poverty discrimination→ stranger trust → depression	-2.491***	0.148	-0.003	0.003
Household registration discrimination → neighborhood trust→ life satisfaction	-0.211***	0.051	-0.017***	0.005
Household registration discrimination → neighborhood trust→ depression	-2.270***	0.206	-0.094***	0.023
Household registration discrimination → stranger trust→ life satisfaction	-0.228***	0.050	-0.000	0.001
Household registration discrimination → stranger trust→ depression	-2.364***	0.211	0.001	0.004

4. Discussion

This study focuses on migrant workers in the context of China's urbanisation, examining the impact of social discrimination on these individuals. It clarifies the mechanism through which interpersonal trust mediates the effects of social discrimination on mental health and provides theoretical support and coping strategies to enhance the mental well-being of migrant workers. Initially, the research identified that social discrimination significantly and negatively affects the mental health of migrant workers, with poverty-based discrimination having a more detrimental impact than that based on household registration.

One possible explanation is that, according to symbolic interaction theory, migrant workers need to rely largely on feedback from others to establish their self-concept in the city [29]. Social discrimination can easily lead migrant workers to internalise the biased attitudes of others as their own viewpoints, resulting in a series of negative effects on their psychological adaptation and self-perception. Furthermore, in practice, migrant workers are constrained by multiple factors, including the household registration system, human capital, and social capital. They often face unfair treatment in social interactions, job conditions, and education for their children from the city government and citizens. This social discrimination can lead to feelings of helplessness, frustration, and alienation among migrant workers, damaging their self-esteem and sense of self-worth [30].

The analysis of intergenerational heterogeneity revealed that social discrimination significantly negatively impacts the mental health of both new-generation and first-generation migrant workers, with a greater negative impact on the mental health of the first-generation. A possible explanation is that, with the inter-generational transition, the demands of new-generation migrant workers are shifting from "Survival demands" To "Developmental demands" Compared to the first-generation migrant workers. They have increasingly strong demands for self-development and integration into the city, as well as a stronger sense of equality and rights. When facing social discrimination and other unfair treatments, the first-generation migrant workers tend to adopt conservative and fluid ways of resistance due to their age and low expectations of integration into the city, while the new-generation migrant workers tend to adopt "Rational resistance" And "Legal resistance" Behaviors to resist discrimination. At the same time, the positive effects brought by better integration into urban society can help alleviate the negative effects of social discrimination on the mental health of new-generation migrant workers.

In addition to the above heterogeneity, the impact of the social discrimination on migrant workers will be heterogeneous due to the different genders of migrant

workers, and the negative impact on the mental health of male migrant workers is even greater.

On the one hand, male migrant workers from rural areas are more commonly employed in sectors characterised by lower levels of social protection, such as construction and transportation. In contrast, female migrant workers are more frequently found in industries like manufacturing and services, which generally offer comparatively better working conditions and social security benefits. As a result, female migrant workers may encounter lower levels of direct social discrimination in the workplace. On the other hand, although female migrant workers tend to report poorer baseline mental health compared to their male counterparts, they often possess a wider range of psychological coping strategies. Their generally higher levels of sociability and extroverted tendencies enable them to leverage social capital and interpersonal networks more effectively. This helps them to buffer the psychological harm caused by discriminatory experiences. In contrast, societal norms that equate masculinity with emotional toughness and self-reliance often hinder male migrant workers from expressing vulnerability or seeking emotional or instrumental support, placing them at a disadvantage in maintaining mental well-being.

Furthermore, findings from the mechanism analysis underscore that social discrimination undermines migrant workers' mental health primarily by damaging interpersonal trust—particularly trust in neighbours. This erosion of trust contributes to social isolation and reinforces the negative psychological effects of discrimination. The migration from rural to urban areas results in changes to the living environment of migrant workers, and their interpersonal relationship networks experience a process of "Detachment and re-embedding." Migrant workers need to adapt and integrate into urban society as soon as possible, and quickly obtain good interaction and social trust among people to enhance their social capital. However, social discrimination can reduce the sense of social integration and self-worth of migrant workers, which is not conducive to the reconstruction of their interpersonal relationship network, and will have a serious negative impact on the tendency for interpersonal trust of migrant workers. From a public mental health perspective, strengthening mental health literacy—particularly its action-oriented and empowerment components—may offer an important complementary pathway to mitigate the psychological consequences of discrimination by enhancing individuals' capacity for adaptive coping, social engagement, and help-seeking [31].

This study yields several important policy implications.

First, reforms to the household registration (hukou) system should be further accelerated. Under the current system, migrant workers remain institutionally excluded from equal access to urban public services, leading to persistent disparities in the distribution of social and

Article

economic resources. Policy reforms should align the household registration system with the contemporary stage of socioeconomic development by coordinating access to key urban welfare provisions, including pensions, healthcare, education, and housing. Such reforms would help balance economic efficiency with social equity and reduce the institutional and psychological segmentation between migrant workers and urban residents who coexist within the same urban spaces. Ultimately, advancing hukou reform is essential for promoting social integration and fostering a more equitable and inclusive urban society.

Second, greater efforts are needed to promote an inclusive and non-discriminatory urban social environment. Long-standing discriminatory practices by actors in relatively advantaged positions—including urban residents, local governments, and employers—may reinforce structural inequalities and perpetuate social exclusion. Addressing discrimination against migrant workers requires not only regulatory interventions but also broader normative change. Policies and public initiatives should encourage values of equality, mutual respect, and social inclusion, thereby strengthening social cohesion and reducing stigmatization within urban communities.

Third, community-level interventions should be strengthened to facilitate social integration and rebuild interpersonal trust among migrant workers. Local communities constitute a primary context in which migrant workers develop social networks and interpersonal relationships. When mutual stereotypes and

social distance exist between migrant workers and urban residents, both groups may become embedded in segregated social circles, limiting opportunities for meaningful interaction and trust-building. Community-based programs that promote interaction, shared participation, and resource integration can help bridge these divides, enhance interpersonal trust, and support the social inclusion of migrant workers within urban neighbourhoods.

5. Conclusion

Based on the China Family Panel Studies (CFPS) 2016 dataset, this study empirically examines the impact of social discrimination on the mental health of migrant workers. The research found that discrimination based on income and household registration status significantly and negatively affects the depression and life satisfaction of migrant workers, indicating that social discrimination is detrimental to the promotion of migrant workers' mental health. A heterogeneity test reveals that social discrimination has a greater negative impact on the mental health of first-generation and male migrant workers compared to their second-generation and female counterparts. A mechanism analysis suggests that social discrimination negatively affects the mental health of migrant workers by damaging interpersonal trust.

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Ethics Statement: This study is based on secondary data obtained from the China Family Panel Studies (CFPS), a publicly accessible and anonymised dataset. Ethical approval for data collection and use of the CFPs was granted by the institutional review board at Peking University. As such, no additional ethical approval was required for the analyses conducted in this research.

Data Availability Statement: All data generated or analysed during this study are openly accessible.

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