

Interpersonal Sensitivity and Subjective Well-Being of Migrant Workers' Accompanying Children: Role of Perception of Exclusion and Peer Support

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Introduction: To investigate the impact of interpersonal sensitivity on the subjective well-being of accompanying children of migrant workers and the role of perception of exclusion and peer support in the process.

Methods: A questionnaire survey was conducted among 304 migrant workers' accompanying children and 501 urban children in grades 4–9 in seven schools in Jiangxi Province, China. Hierarchical regression and bootstrap analysis were used.

Results: Interpersonal sensitivity not only had a significant direct negative effect on the subjective well-being of migrant workers' accompanying children ($\beta = -0.27$, 95% CI = $[-0.37, -0.17]$), but also had an indirect effect through perception of exclusion ($\beta = -0.06$, 95% CI = $[-0.11, -0.03]$). Peer support negatively moderated the relationship between interpersonal sensitivity and perception of exclusion ($\beta = -0.18$, 95% CI = $[-0.28, -0.08]$) and the mediating effect of perceptions of exclusion between interpersonal sensitivity and subjective well-being ($\beta = 0.06$, CI = $[0.02, 0.11]$).

Conclusion: The subjective well-being of migrant children is indeed lower than that of urban children, and one of the most important reasons is their higher interpersonal sensitivity. Interpersonal sensitivity not only directly reduces their subjective well-being, but also reduces it by triggering their perception of exclusion, while peer support can effectively mitigate this negative effect. Therefore, one way to improve the subjective well-being of these children is to reduce their excessive interpersonal sensitivity. Their parents should help them to adapt to urban life, to develop correct professional values and to deal correctly with “occupational stigma”, to overcome feelings of inferiority, while communities can create specialized activity centers to provide more social opportunities and psychological counseling services for these children.

Keywords: migrant workers' accompanying children, interpersonal sensitivity, perception of exclusion, peer support, subjective well-being

Introduction

In developing countries, rural migrant workers are increasingly moving to urban centers and playing a key role in the modernization process as industrial workers. At the same time, some of their offspring also make the transition, changing their household registration from rural to urban. These offspring live in urban areas, access education, and develop into accompanying children of migrant workers. According to the report “2022 Current Status of Children of China's Migrant Population: Facts and Data”, China hosts 14.30 million accompanying children of migrant workers during the compulsory education period. However, migration has significant economic, linguistic, and cultural impacts, which, combined with the rapid psychological maturation during this stage, may result in lower levels of subjective well-being among migrant workers' accompanying children. A meta-analysis shows that these children are more prone to severe mental health problems compared to their native urban counterparts.¹ In addition, studies indicate that migrant workers' accompanying children have significantly lower levels of self-concept than urban children of the same age, reflecting a profound sense of alienation and loneliness.² Furthermore, the subjective well-being of migrant workers' accompanying children is worse than that of their urban peers.^{3,4} Subjective well-being, which includes cognitive evaluations and

emotional responses to life events, is a critical measure of an individual's overall life satisfaction and positive development.⁵

The environment-personality interaction theory posits that individual psychological factors exert a more significant influence on subjective well-being than external environmental factors.^{2,6} Due to their disadvantaged socioeconomic status, migrant workers' accompanying children demonstrate heightened levels of interpersonal sensitivity,⁷ which refers to an individual's enhanced attentiveness and receptiveness to others' emotions and actions. Research has established a statistically significant association between interpersonal sensitivity and mental health,^{8,9} indicating that individuals with high interpersonal sensitivity are more prone to developing psychological issues like depression or anxiety.^{10,11} Nevertheless, there has been relatively little exploration of how interpersonal sensitivity impacts the subjective well-being of migrant workers' accompanying children.

Those with high levels of interpersonal sensitivity are more likely to perceive the behaviours of others as criticism, exclusion, and rejection.^{12,13} Nevertheless, social exclusion can impede the fundamental need to cultivate and maintain positive interpersonal relationships, which may consequently compromise mental health and overall well-being.¹⁴ Nonetheless, studies have revealed that social support can alleviate the adverse effects of stressful life events on individuals' well-being.¹⁵ Prior research has demonstrated that the perceived presence of strong support can serve as a buffer against the adverse effects of environmental stressors among immigrant adolescents.¹⁶ Conversely, certain studies have indicated that peer relationships may not have a significant impact on individuals' subjective well-being.¹⁷

This study examines the mechanism through which interpersonal sensitivity affects the subjective well-being of children accompanying migrant workers, drawing upon the environment-personality interaction theory. The study examines the mediating role of perception of exclusion and the moderating role of peer support in order to elucidate the underlying mechanisms and boundary conditions of this effect. The study finally concludes with recommendations for enhancing the subjective well-being of children accompanying migrant workers based on the conclusions.

Theoretical Analysis and Model Hypothesis

The Relationship Between Interpersonal Sensitivity and Subjective Well-Being

Subjective well-being pertains to an individual's assessment of life quality based on self-defined parameters, serving as a pivotal metric influencing the positive development of adolescents.¹⁸ Migrant workers' accompanying children in public school settings have reported diminished levels of subjective well-being when compared to their urban counterparts.^{3,4}

Within the framework of the environment-personality interaction theory, an individual's psychological dynamics wield a more profound impact on their subjective well-being than external circumstances.^{2,6} While certain studies have delved into the beneficial influences of protective elements like parent-child attachment, self-esteem, resilience, and emotion regulation on the subjective well-being of migrant workers' accompanying children,^{19–21} there exists a dearth of exploration concerning interpersonal sensitivity as a potential vulnerability factor. This knowledge gap hinders a comprehensive understanding of the determinants affecting the subjective well-being of migrant workers' accompanying children and constrains the array of feasible interventions.

Interpersonal sensitivity, defined as a personality trait characterized by acute attunement to the behaviors and emotions of others,⁸ exhibits a statistically significant correlation with mental well-being. Existing research has illustrated that heightened levels of interpersonal sensitivity correlate with an increased susceptibility to psychological challenges such as depression and anxiety.^{10,11} Given the likelihood that children from migrant backgrounds, often originating from economically disadvantaged circumstances, may exhibit heightened interpersonal sensitivity,⁷ this study posits the following hypothesis:

Hypothesis 1: Interpersonal sensitivity exerts a noteworthy adverse impact on the subjective well-being of migrant workers' accompanying children.

The Mediating Role of Perception of Exclusion

Perception of exclusion refers to individuals' subjective sense of unfair treatment based on their identity or group affiliation. This can manifest through explicit rejection attitudes or observable behaviors.^{12,13,22} Individuals with heightened interpersonal sensitivity are more prone to experiencing elevated levels of perception of exclusion, making them vulnerable to feelings of criticism and rejection.

Perception of exclusion can trigger negative reactions and jeopardize individuals' psychological needs, leading to feelings of helplessness, hopelessness, and potentially resulting in psychological issues.^{23,24} Empirical evidence indicates that experiencing exclusion has adverse effects on the academic adjustment of individuals.²⁵ It can foster feelings of loneliness²⁶ and give rise to antisocial behavior.²⁷ Moreover, it can significantly impact their mental well-being²⁸ and overall sense of wellness. Furthermore, perceptions of exclusion not only directly impact individuals' subjective well-being but also influence their subjective well-being through the mediation of emotional identity within their group and their perception of group status.²⁹ Children experiencing high levels of perception of exclusion are more likely to exhibit low levels of subjective well-being across all dimensions.

In summary, this study proposes hypothesis 2: Perception of exclusion mediates the negative effect of interpersonal sensitivity on the subjective well-being of migrant workers' accompanying children.

The Moderating Role of Social Support

The buffering model of social support postulates that social support has the capacity to mitigate the adverse effects of stressful life events on an individual's subject well-being.¹⁵ Empirical research on older adults has demonstrated that substantial social support can ameliorate the detrimental impacts of abuse on the mental health of elderly women.³⁰ For migrant workers' accompanying children, their school peers represent the primary cohort with whom they have the most intimate interactions. Peer support within the school environment represents as a pivotal social support resource for migrant children of migrant workers.

Peers typically exhibit closer proximity and share similar thought patterns, which fosters frequent social engagement. Peer-based social support represents a critical psychological resource that facilitates the psychological resilience of young individuals.³¹

Empirical studies have demonstrated a correlation between heightened perceived peer support and diminished feelings of loneliness, as well as adverse impacts on emotional well-being. These subsequent effects have been shown to result in a reduction in depressive symptoms.¹⁵ Moreover, the assistance provided by peers can help to alleviate anxiety and negative emotions that arise from stress.³² Consequently, this research proposes that migrant workers' accompanying children who benefit from robust peer support encounter fewer negative consequences of interpersonal sensitivity on their perception of exclusion.

In essence, this study advances hypothesis 3: peer support serves as a moderator diminishing the adverse influence of interpersonal sensitivity on the perception of exclusion. In simpler terms, migrant workers' accompanying children who possess abundant peer support may undergo fewer adverse effects of interpersonal sensitivity on their perception of exclusion.

Mediation Model with Moderation

Social support has the capacity to alleviate the adverse consequences of stressful life events on an individual's well-being.¹⁵ Specifically, high levels of perceived support have the potential to act as a moderator in attenuating the impacts of environmental stressors.¹⁶ Positive peer support can diminish feelings of exclusion and mitigate the detrimental effects of interpersonal sensitivity on subjective well-being by reducing the perception of exclusion. Therefore, this study proposes hypothesis 4: Peer support negatively moderates the mediating effect of perception of exclusion between interpersonal sensitivity and subjective well-being. Essentially, a higher level of peer support corresponds to a weaker mediating effect, while a lower level of peer support corresponds to a stronger mediating effect.

The conceptual model for this study, illustrated in [Figure 1](#), suggests that interpersonal sensitivity positively influences an individual's subjective well-being (H1), with this relationship being mediated by the perception of exclusion (H2). Moreover, it is proposed that peer support will act as a negative moderator on the relationship between

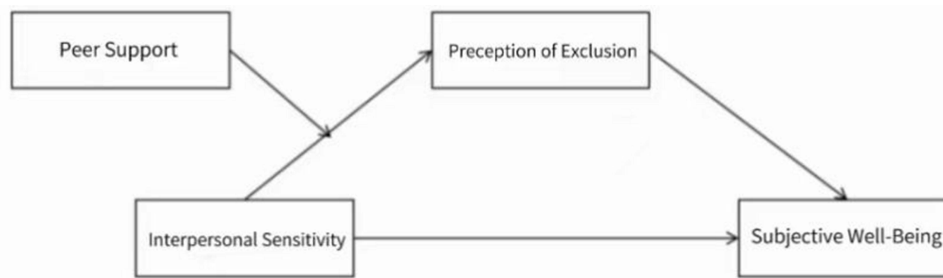


Figure 1 Conceptual model.

interpersonal sensitivity and the perception of exclusion (H3), based on the environment-personality interaction theory. It is hypothesized that peer support may moderate the mediating role of perception of exclusion in the relationship between interpersonal sensitivity and subjective well-being (H4). Specifically, perception of exclusion is expected to play a more pronounced mediating role in groups with low levels of peer support compared to those with high levels of peer support.

Materials and Methods

The study focuses on migrant workers who have been working outside their hometown for a period exceeding one year. It excludes parents who have been transferred for a duration of less than one year due to reasons such as medical treatment or education. A simple random sampling technique was employed to select seven primary and secondary schools from those with considerable migrant workers' accompanying children in Jiangxi Province, China. Pretesting revealed that students in grades 1 to 3 exhibited some difficulty in comprehending the scale items. However, students in grades 4 to 9 demonstrated an ability to comprehend the questionnaire accurately. The psychometric scales utilized in this study were applied to students in grades 4 to 6 of elementary school and were found to be properly interpreted.³³ Therefore, 15 classes in grades 3 to 9 were randomly selected from the selected schools. Prior to the survey, students with special circumstances, such as financial hardship, single parenthood, or illness of a significant relative in the family, were identified through the teacher in whose class they were enrolled, and data from these special samples were excluded after data collection. Informed consent was obtained from their parents/guardians.

The investigators underwent standardized training, followed a uniform guideline, introduced the study's purpose, and conducted the survey anonymously on a class-by-class basis, adhering to the principle of informed consent. A total of 876 paper questionnaires were distributed on-site, and 805 valid questionnaires were returned, representing a valid response rate of 91.9%. In response to the question "Where are you from?", students from rural areas were classified as children of migrant workers. The distribution of grades among the migrant workers' accompanying children was as follows: The study included 304 and 501 urban children. Of the respondents, 163 were male (53.62%), 139 were female (45.72%), and two did not disclose their gender. The percentage of students in each grade was as follows: 6.56% in fourth grade, 21.70% in fifth grade, 20.71% in sixth grade, 29.26% in seventh grade, 13.14% in eighth grade, and 8.63% in ninth grade.

Measures

The SCL-90 interpersonal sensitivity dimension³⁴ was employed to evaluate interpersonal sensitivity. This dimension comprises six items, including the item "I tend to feel shy and uneasy when interacting with individuals of the opposite gender". A 5-point Likert scale was employed for scoring, with higher scores indicating heightened interpersonal sensitivity. The Cronbach's alpha reliability coefficient for this study was 0.706.

The perception of exclusion was gauged through the Ostracism Scale, a tool developed by Stefan et al,³⁵ which encompasses nine items, such as "I wonder if my group members might try to avoid me". The items were rated on a 5-point Likert scale. Higher scores indicate a greater sense of exclusion. The Cronbach's alpha reliability coefficient in this study was recorded at 0.910.

The MSPSS, developed by Zimet,³⁶ was utilized to assess peer support. The MSPSS is comprised of four items, including “I receive the help and support I need from my friends”, which is rated on a 5-point Likert scale. Higher scores indicate greater levels of peer support. The Cronbach’s alpha reliability coefficient for this study was calculated at 0.804.

Subjective well-being was evaluated using the Bradburn Scale of Affect Balance,³⁷ which comprises eight items. The scale captures the subjective emotional states that individuals encounter in their daily lives through a 5-point Likert scale. A higher score on the scale indicates a heightened level of subjective well-being. The Cronbach’s alpha reliability coefficient for this study was determined to be 0.848.

Statistical Analysis

To evaluate the scales reliability and explore the impact of interpersonal sensitivity on subjective well-being, reliability analysis, correlation analysis, and hierarchical regression analysis were performed using SPSS 25.0. Additionally, the Process plug-in was employed to conduct a bootstrap test to examine the mediating role of perception of exclusion and the moderating role of peer support. The observed differences were found to be statistically significant at the 0.05 level.

Results

Comparison of Migrant Workers’ Accompanying Children and Urban Children

An independent samples *t*-test was conducted to compare the scores of migrant workers’ accompanying children and urban children on interpersonal sensitivity, perception of exclusion, peer support, and subjective well-being. The results presented in Table 1 indicate that the *p*-values for all four variables were less than 0.05, suggesting that there were significant differences between the scores of migrant workers’ accompanying children and urban children on all four variables. The study revealed that migrant workers’ accompanying children exhibited significantly lower scores for peer support and subjective well-being compared to urban children. Furthermore, migrant workers’ accompanying children had significantly higher scores for interpersonal sensitivity and perception of exclusion.

Common Method Bias Test

The Harman one-way test was employed to account for potential common method bias, given that the data for each variable were self-reported by the subjects and collected at a single time point. The results indicated that the first factor only explained 27.68% of the variance, which did not meet the 40% criterion. Consequently, it can be concluded that the data were not significantly affected by common method bias. Furthermore, to address the potential error in the Harman one-factor test, a marker variable with no theoretical relationship to the study was included. The model with the marker variable (BIC=25665.476) was compared to the original model (BIC=24488.759), and the latter was found to be significantly superior. This indicates that there is no significant issue of common method bias in the data.

Correlation Analysis

Table 2 illustrates the existence of significant correlations between a number of demographic variables and the study variables. These include gender, grade level, parental education, duration of accompanying migration, and source of migration. Consequently, the demographic variables were subjected to analysis as control variables. Among the children of migrant

Table 1 Comparison of Migrant Workers’ Accompanying Children and Urban Children (M+SD)

Variables	Urban Children	Migrant Workers’ Accompanying Children	t
Interpersonal Sensitivity	2.71+0.88	2.95+0.89	-3.81***
Perception of Exclusion	1.52+0.76	1.80+0.91	-4.65***
Peer Support	3.90+0.94	3.51+1.05	5.48***
Subjective Well-Being	3.70+0.82	3.37+0.97	4.29***

Notes: There are 304 migrant workers’ accompanying children and 501 urban children. ****p*<0.001, two-sided test.

Table 2 Means, Standard Deviations and Correlation Coefficients of Variables

Variables	x	s	1	2	3	4	5	6	7	8	9	10
1. Gender	1.54	0.50										
2. Grade	3.46	1.36	0.05									
3. Father's education	2.48	1.08	0.05	-0.17**								
4. Mother's education	2.31	1.16	0.02	-0.23**	0.72**							
5. Duration of accompanying migration	5.53	1.55	0.04	0.02	0.09	0.02						
6. Source of migration	3.44	0.50	0.03	-0.20**	0.15**	0.09	-0.19**					
7. Interpersonal Sensitivity	2.95	0.89	-0.09	0.04	-0.03	-0.03	0.02	-0.01				
8. Perception of Exclusion	1.80	0.91	-0.02	-0.01	-0.02	-0.03	-0.02	-0.01	0.24**			
9. Peer Support	3.51	1.05	-0.09	0.11	0.04	-0.04	0.12*	0.04	-0.10	-0.33**		
10. Subjective Well-Being	3.37	0.87	0.06	-0.07	0.08	0.04	0.13*	0.07	-0.36**	-0.39**	0.32**	

Notes: N=304, *p<0.05, **p<0.01, two-sided test.

workers, there was a significant positive correlation between interpersonal sensitivity and perception of exclusion ($r = 0.24, p < 0.01$) and a significant negative correlation between interpersonal sensitivity and subjective well-being ($r = -0.36, p < 0.01$). Moreover, a significant negative correlation was observed between perception of exclusion and subjective well-being ($r = -0.39, p < 0.01$). Each research hypothesis was initially tested.

Hierarchical Regression

Table 3 indicates that the duration of accompanying migration is a significant control variable that influences the subjective well-being of migrant workers' accompanying children. The longer the duration of accompanying migration, the higher the level of subjective well-being of these children ($\beta = 0.16, p < 0.01$).

Equation M5 indicates that interpersonal sensitivity has a significant negative impact on subjective well-being ($\beta = -0.35, p < 0.001$). The higher the level of interpersonal sensitivity, the lower the level of subjective well-being of migrant workers' accompanying children. Hypothesis 1 has been tested.

Table 3 Hierarchical Regression Analysis

Control variables	Perception of Exclusion			Subjective Well-Being		
	M1	M2	M3	M4	M5	M6
Gender	-0.01	0.01	-0.02	0.07	0.03	0.04
Grade	-0.03	-0.03	0.02	-0.02	-0.01	-0.02
Father's education	0.02	0.02	0.06	0.06	0.06	0.06
Mother's education	-0.05	-0.05	-0.07	-0.02	-0.03	-0.04
Duration of accompanying migration	-0.04	-0.04	-0.01	0.16**	0.16**	0.15**
Source of migration	-0.04	-0.04	-0.01	0.10	0.10	0.09
Independent variable						
Interpersonal sensitivity		0.24***	0.80***		-0.35***	-0.28**
Mediating variable						
Perception of exclusion						-0.32**
Moderating variable						
Peer Support			0.28			
Interaction item						
Interpersonal sensitivity *Peer support			-0.84***			
R ²	0.01	0.06	0.20	0.04	0.16	0.26
F	0.20	2.57*	8.00***	2.09	8.00***	12.37***
ΔR ²	0.01	0.05	0.14	0.04	0.12	0.10

Notes: N=304, *p<0.05, **p<0.01, ***p<0.001, two-sided test.

The results of Equation M2 indicate that interpersonal sensitivity has a significant positive impact on the perception of exclusion ($\beta=0.24$, $p<0.001$). The greater the level of interpersonal sensitivity, the more pronounced the level of perceived exclusion of accompanying children. Equation M6 demonstrates that when both interpersonal sensitivity and perception of exclusion are entered into the equation, interpersonal sensitivity still has a significant negative effect on subjective well-being ($\beta= -0.28$, $p<0.001$). Furthermore, the perception of exclusion has a significant negative effect on subjective well-being ($\beta= -0.32$, $p< 0.001$), indicating that perception of exclusion partially mediates the effect of interpersonal sensitivity on subjective well-being. Hypothesis 2 has been tested.

The results of Equation M3 demonstrate that when interpersonal sensitivity, peer support, and their interaction terms are included in the model simultaneously, interpersonal sensitivity still has a significant positive effect on the perception of exclusion ($\beta= 0.80$, $p< 0.001$). Furthermore, the interaction term has a significant negative effect on the perception of exclusion ($\beta= -0.84$, $p< 0.001$), indicating that peer support plays a moderating role between interpersonal sensitivity and the perception of exclusion. Hypothesis 3 has been tested.

Integration Analysis of Mediating and Moderating Effects

The moderated mediation model, designated as Model 7, was subjected to validation in SPSS 25.0 through the utilization of the Process plug-in and the Bootstrap method. The analysis of 5000 bootstrap samples revealed a significant direct negative effect of interpersonal sensitivity on subjective well-being ($\beta= -0.27$, 95% CI = $[-0.37, -0.17]$). The study found that interpersonal sensitivity had a positive effect on the perception of exclusion ($\beta = 0.19$, 95% CI = $[0.09, 0.30]$). Additionally, the perception of exclusion had a negative effect on subjective well-being ($\beta = -0.30$, 95% CI = $[-0.40, -0.20]$). Finally, the study found that there was a significant indirect effect of interpersonal sensitivity on subjective well-being through perception of exclusion ($\beta = -0.06$, 95% CI = $[-0.11, -0.03]$). The study demonstrated the direct and mediating effects of interpersonal sensitivity on subjective well-being.

Furthermore, it was demonstrated that peer support played a moderating role in the relationship between interpersonal sensitivity and perception of exclusion ($\beta = -0.18$, 95% CI = $[-0.28, -0.08]$), as illustrated in Figure 2. At low levels of peer support, the positive effect of interpersonal sensitivity on the perception of exclusion among migrant workers' accompanying children was greater ($\beta=0.39$, 95% CI= $[0.24, 0.53]$). As the level of peer support increased, the positive effect of interpersonal sensitivity on the perception of exclusion gradually decreased and disappeared completely at high levels of peer support ($\beta=0.01$, 95% CI= $[-0.14, 0.16]$). The study demonstrates the moderating effect of peer support.

Meanwhile, peer support exerts a negative moderating effect on the mediating effect of the perception of exclusion between interpersonal sensitivity and the subjective well-being of migrant workers' accompanying children. The moderating mediating effect holds with $\beta=0.06$, CI= $[0.02, 0.11]$.

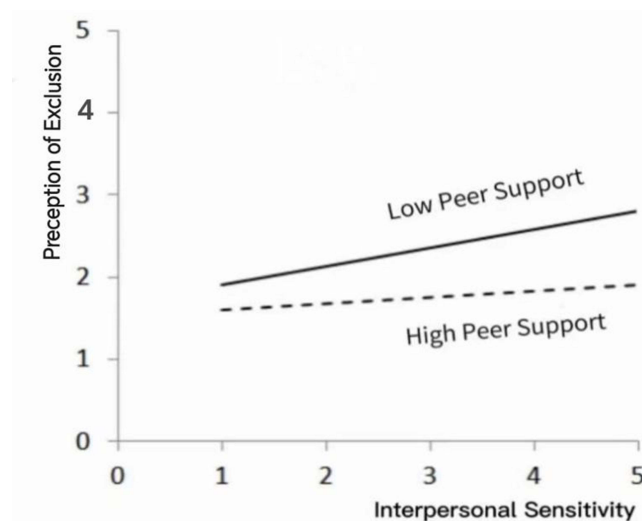


Figure 2 The moderating effect of peer support between interpersonal sensitivity and perception of exclusion.

Table 4 Effect of Interpersonal Sensitivity on Subjective Well-Being at Different Levels of Peer Support

Peer Support	Effect	BootSE	LLCI	ULCI
Low (-1.0446)	-0.12	0.04	-0.21	-0.07
Medium (0.0000)	-0.06	0.02	-0.11	-0.03
High (+1.0446)	-0.01	0.02	-0.05	0.05

Notes: Low peer support takes the value of -SD and high value is +SD. LLCI is the lower limit of the confidence interval and ULCI is the upper limit of the confidence interval.

Table 4 shows that for migrant workers' accompanying children with low levels of peer support, interpersonal sensitivity had a significant negative effect on their subjective well-being through perception of exclusion ($\beta = -0.12$, 95% CI = [-0.21, -0.07]). However, for migrant workers' accompanying children with high levels of peer support, interpersonal sensitivity did not significantly affect subjective well-being through perception of exclusion ($\beta = -0.01$, and 95% CI = [-0.05, 0.05]).

Discussion

Theoretical Significance

Level of Subjective Well-Being of Migrant Workers' Accompanying Children

This study demonstrated that the current subjective well-being of migrant workers' accompanying children in Jiangxi province is moderate overall and significantly lower than that of urban children. Previous studies have found that conclusions consistent with the present study,^{3,38} however, other studies have also found no significant difference between migrant workers' accompanying children and urban children in terms of mental health outcomes. The present study not only provided new data support for the former type of research, but also revealed an important reason. Migrant workers' accompanying children had significantly higher interpersonal sensitivity and perception of exclusion and lower peer support, compared to urban children. Additionally, there is a positive correlation between the duration of migration and the level of subjective well-being in migrant workers' accompanying children, which is consistent with previous research.⁴ As the duration of relocation increases, individuals gradually adapt to urban life and become more integrated into the local community. Interactions with neighbours, teachers, and classmates leads to a lower sense of inferiority and an increased sense of belonging, which enhance their subjective well-being.

Effects of Interpersonal Sensitivity on Subjective Well-Being

Previous studies have often focused on the positive effects of self-esteem, psychological resilience, and emotion regulation as protective factors on migrant workers' accompanying children's subjective well-being. However, this study explored the effects of interpersonal sensitivity as a vulnerability factor on their subjective well-being. The findings suggest that interpersonal sensitivity reduces their subjective well-being, which expands our knowledge of the antecedent variables of subjective well-being. Previous studies have indicated that migrant workers' accompanying children may develop higher levels of interpersonal sensitivity and lower levels of subjective well-being.³⁹ The study, based on the environment-personality interaction theory, further revealed the mechanisms and found that interpersonal sensitivity has a negative impact on their subjective well-being in two paths. It not only directly reduces their subjective well-being, but also impairs it by elevating perception of exclusion. Migrant workers' accompanying children with interpersonal sensitivity are more likely to have negative self-perceptions and highly attuned to the emotions of others and may experience discomfort during social interactions. As a result, they may experience stress in social situations.¹⁹ This deepens our understanding of the effect of interpersonal sensitivity on their subjective well-being.

Moderation of Peer Support

This study tested the buffering model of social support and found that peer support can mitigate the negative impact of interpersonal sensitivity on the perception of exclusion, ultimately improving migrant workers' accompanying children's subjective well-being. The results revealed the boundary condition of the effect of interpersonal sensitivity on migrant

workers' accompanying children's subjective well-being, which is important for improving their overall well-being. For migrant workers' accompanying children with low peer support, interpersonal sensitivity had a greater negative effect on their perception of exclusion, however, for those with high peer support, interpersonal sensitivity did not have a significant effect on their perception of exclusion, and did not negatively impact their subjective well-being through perception of exclusion. This findings support and extends the buffering model of social support, which suggest that social support can buffer the negative effects of negative events on individuals subjective well-being. In other words, social support can also mitigate the negative effects of negative psychological characteristics on subjective well-being. Previous study pointed out that migrant workers' accompanying children with high levels of peer support experience a reduced impact of stressful events on their feelings of loneliness and social anxiety.⁴⁰ The study also further found that peer support can mitigate the adverse effects of negative psychological factors on perception of exclusion and subjective well-being in migrant workers' accompanying children.

Practical Implications

First, the interpersonal sensitivity of migrant workers' accompanying children should be reduced, as it is an important influencing factor on the subjective well-being. Rural migrant workers should face their profession correctly, help their children to develop correct professional values and to deal correctly with "occupational stigma", overcome feelings of inferiority, and reduce their interpersonal sensitivity. On the other hand, rural migrant workers should spend more time with their children, communicate with them, make them feel loved and encouraged, cultivate a sense of security, help them adapt to the new environment as soon as possible. Communities can establish specialized children's activity centers to provide more social opportunities and psychological counseling services for migrant workers' accompanying children. At the same time, the Government can introduce relevant policies to encourage enterprises and social organizations to participate in activities to care for this group by sponsoring extracurricular activities or vocational experience programmes to help these children gain a better understanding of society and enhance their self-confidence. Also, positive stories and achievements of migrant workers' accompanying children can be publicized on media platforms to change society's stereotypes about this group. Through these comprehensive measures, the interpersonal sensitivity of migrant workers' accompanying children can be effectively reduced, thereby improving their subjective well-being.

Secondly, the perception of exclusion, as a mediating variable through which interpersonal sensitivity affects the subjective well-being of migrant workers' accompanying children, should be reduced. Teachers should treat students equally, avoid excluding or ignoring migrant workers' accompanying children, and set an example for urban children. Schools should provide psychological counseling for migrant workers' accompanying children who have a high perception of exclusion. Furthermore, parents can participate in volunteer activities, engage in school life, enhance communication with teachers and other parents, and create a more inclusive and friendly environment for their children. Additionally, communities can organize multicultural activities to help children understand and respect different cultures, reducing perception of exclusion resulting from cultural differences. Finally, perception of exclusion is not always based on exclusion facts but also on individual cognitive biases; therefore, teachers and parents should help migrant workers' accompanying children develop a correct attribution awareness.

Third, peer support can mitigate the adverse effects of interpersonal sensitivity on the perception of exclusion and subjective well-being of migrant workers' accompanying children. In daily teaching processes, schools should strive to ease the distinction between migrant workers' accompanying children and urban children, and to cultivate relationships between the two groups of students with different identities by promoting interaction through various class activities. The implementation of a "buddy system" or "mentorship program" can facilitate the pairing of migrant workers' accompanying children with urban students of a similar age, thereby encouraging mutual assistance and learning. Moreover, the involvement of senior students as mentors, tasked with providing guidance and assistance in learning and life, is recommended for migrant workers' accompanying children. Additionally, online support communities can be established to provide a sense of belonging and support in the virtual space. The combination of offline activities and online communication can effectively enhance the level of peer support, thereby mitigating the adverse impact of interpersonal sensitivity on subjective well-being.

Research Limitations and Prospects

There are limitations in this study that need to be addressed. First, the research was conducted solely in the central region of China, which may affect the generalizability of the findings due to regional sociocultural differences. To increase the credibility of the conclusions, future research should expand the scope of the survey to include data from other provinces. This study is a cross-sectional design. To better examine the causal relationship between variables, future studies should adopt a longitudinal research design to reduce common method bias. Regarding mediation mechanisms, it is important to note that perception of exclusion only partially mediated the relationship between interpersonal sensitivity and subjective well-being of migrant workers' accompanying children. Future studies should consider other mediating variables, such as self-esteem and coping styles. Additionally, while this study focused on the moderation of peer support, it is important to acknowledge that parental and teacher support are also crucial sources of social support for migrant workers' accompanying children. Future research can include parental support and teacher support in the model and analyze the boundary conditions of interpersonal sensitivity on subjective well-being.

Conclusion

Subjective well-being is an important indicator of an individual's overall life satisfaction and positive development. However, migrant workers' accompanying children had a moderate level of subjective well-being, which was significantly lower than that of urban children. Interpersonal sensitivity is one of the variables influencing their subjective well-being. Because of their higher interpersonal sensitivity, they were more likely to perceive social exclusion, which reduced their subjective well-being, while peer support could buffer the negative effect of interpersonal sensitivity. This suggests that migrant children's perception of exclusion arise from interpersonal sensitivity in the interpersonal interactions, while positive interpersonal interactions can also reduce their perceptions of exclusion. It reveals the effects and mechanisms of interpersonal sensitivity on subjective well-being of migrant children, and validate the theory of environment-personality interaction. In addition, the results also suggest that in order to improve the subjective well-being of migrant children, it is important to reduce their interpersonal sensitivity and rejection perceptions by increasing their sense of security, establishing a positive attitude toward life and a correct attributional style, etc., and it is also necessary to improve peer support for migrant children by downplaying the difference between migrant children and non-migrant children and cultivating classmate relationships.

Future research should further investigate whether and how interpersonal sensitivity affects the subjective well-being of migrant workers' accompanying children through other psychological factors (such as self-esteem and coping styles), and how different types of social support (such as family support, teacher support) influence the relationship between interpersonal sensitivity and their subjective well-being. This can help build a more comprehensive theoretical model to more accurately predict and explain their subjective well-being.

Data Sharing Statement

Data will be made available on request from the corresponding author.

Ethics Statement

The ethical approval organization for our manuscript is the Ethics Committee of the School of Economics and Management, East China Jiaotong University. Ethical approval number is 20231102. Informed consent was obtained from their parents/guardians. We obtained only verbal informed consent and the ethics committee approved the consent process. Our study complies with the Declaration of Helsinki.

Informed Consent Statement

Informed consent was obtained from their parents/guardians because the participants were below 18 years in the study.

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Disclosure

The authors report no conflicts of interest in this work.

References

1. X XD, Xu Y, Zhao JZ, et al. Good personality and subjective well-being: presence of meaning in life perceived social support as mediators. *Int J Environ Res Public Health*. 2022;19(21). doi:10.3390/ijerph192114028
2. Zhang SS, Liu W. Personality: the influencing factor of subjective well-being. *Psychol Res*. 2011;4(2):3–7.
3. Xie YT, Zeng SL. Meta-analysis on subjective well-being of floating children in 2006-2017. *Chin Health Service Manag*. 2019;1:69–71.
4. Wang YN, Wang DD. On the current situations of migrant children's subjective well-being. *J Nanjing Univ Posts Telecom Soc Sci*. 2015;17(3):91–98. doi:10.14132/j.cnki.nysk.2015.03.012
5. Chai XY, Guo HY, Lin DH, et al. The emotion regulation strategies and the psychological well-being among migrant children in China: the roles of self-esteem and resilience. *J Psychol Sci*. 2018;41(1):71–76. doi:10.1619/j.cnki.1671-6981.20180111
6. Chen LX, Yang F. Social support and loneliness among Chinese rural-to-urban migrant children a moderated mediation analysis of the roles of social competence and stress mindset. *Int J Environ Res Public Health*. 2022;19(23). doi:10.3390/ijerph192315933
7. Chudzicka-Czupala A, Zalewska-Lunkiewicz K. Subjective well-being, general self-efficacy and coping with stress in former psychiatric patients preparing for the peer support role: an exploratory study. *Health Qual Life Outcomes*. 2020;18(1). doi:10.1186/s12955-020-01348-6
8. Marin TJ, Miller GE. The interpersonally sensitive disposition and health: an integrative review. *Psychol Bull*. 2013;139(5):941–984. doi:10.1037/a0030800
9. Du JL, Li ZC, Jia GD, et al. Relationship between mental health and awareness of the knowledge on mental health in left-behind middle school students. *Medicine*. 2019;98(11):e14476. doi:10.1097/MD.00000000000014476
10. Bell V, Freeman D. A pilot trial of cognitive behavioural therapy for interpersonal sensitivity in individuals with persecutory delusions. *J Behav Ther Exp Psychiatr*. 2014;45(4):441–446. doi:10.1016/j.jbtep.2014.06.001
11. Mogi T, Yoshino A. The multiple diagnoses of comorbid anxiety disorders and higher interpersonal sensitivity predict treatment-resistant depression. *Asian J Psychiatr*. 2017;26:131–135. doi:10.1016/j.ajp.2017.02.005
12. Davidson J, Zisook S, Giller E, et al. Symptoms of interpersonal sensitivity in depression. *Compr Psychiatry*. 1989;30(5):357–368. doi:10.1016/0010-440X(89)90001-1
13. Marin T. *Specific features of stressful experiences, dispositional interpersonal sensitivity, and biological stress mediators in children and adolescents* [Doctoral dissertation]. Vancouver: The University of British Columbia; 2010. doi:10.14288/1.0071395.
14. Li C, Jiang S. Social exclusion, sense of school belonging and mental health of migrant children in China: a structural equation modeling analysis. *Child Youth Services Rev*. 2018;89:6–12. doi:10.1016/j.childyouth.2018.04.017
15. Sun Y, Lin SY, Chung KKH. University students' perceived peer support and experienced depressive symptoms during the covid-19 pandemic: the mediating role of emotional well-being. *Int J Environ Res Public Health*. 2020;17(24):9308. doi:10.3390/IJERPH17249308
16. Borraccino A, Berchiolla P, Dalmaso P, et al. Connectedness as a protective factor in immigrant youth: results from the Health Behaviours in School-aged Children (HBSC) Italian study. *Int J Public Health*. 2020;65(3):303–312. doi:10.1007/s00038-020-01355-w
17. Shen L, Xiang YH, Wo JZ. Relationship of senior high school students' subjective well-being with self-control, interpersonal interaction, mental health. *China J Health Psychol*. 2010;7:837–841. doi:10.13342/j.cnki.cjhp.2010.07.040
18. Diener E. Subjective well-being. *Psychol Bull*. 2009;95(3):11–58.
19. Xu HB, Peng LX, Wang Z, et al. Interpersonal sensitivity on college freshmen's depression: a moderated moderation model of psychological capital and family support. *Int J Psychol*. 2022;52(4):327–335. doi:10.3389/fpsy.2022.921045
20. Yao TT. *The relationship between parent-child attachment and subjective well-being of migrant children: the chain mediating effect of self-efficacy and mental toughness in emotional* [Master's thesis]. University of Jinan; 2020.
21. Yuan KM, Li BL, Liang LC, et al. Cumulative contextual risk and subjective well-being in migrant children: the compensatory effect and protective effect of individual protective factors. *Psychol Dev Educ*. 2021;37(4):546–557. doi:10.16187/j.cnki.issn1001-4918.2021.04.11
22. Major B, Quinton WJ, McCoy SK. Antecedents and consequences of attributions to discrimination: theoretical and empirical advances. *Adv Exp Soc Psychol*. 2002;34:251–330. doi:10.1016/S0065-2601(02)80007-7
23. Liu X, Zhao JX, Shi BG. Dual effects of perceived discrimination and its psychological mechanism. *Psychol Dev Educ*. 2011;27(2):216–223. doi:10.16187/j.cnki.issn1001-4918.2011.02.013
24. Chang BR, Lin PD, Ou YL, et al. The effects of social exclusion on prosocial behavior: the mediating role of materialism. *Chin J Appl Psychol*. 2021;28(2):157–166.
25. Zhang Y, Tan DL. The relationship between perceived discrimination and school adaptation in migrant children: hope as a moderator. *Chin J Spec Educ*. 2019;5:59–64.
26. Liu D, Yu X, Wang Y, et al. The impact of perception of discrimination and sense of belonging on the loneliness of the children of Chinese migrant workers: a structural equation modeling analysis. *Int J Ment Health Sys*. 2014;8(1):1–6. doi:10.1186/1752-4458-8-52
27. Jia X, Liu X. Perceived discrimination and antisocial behaviour among Chinese rural-to-urban migrant adolescents: mediating effects of social support. *Int J Psychol*. 2017;52(4):327–335. doi:10.1002/ijop.12280
28. Han YC, Wen HF, Cheng SH, et al. Relationship between perceived discrimination and mental health of migrant children: a meta-analysis of Chinese students. *Acta Psychol Sinica*. 2020;52(11):1313–1326. doi:10.3724/SP.J.1041.2020.01313

29. Liu X. Influences of perceived personal and group discrimination on the subjective well-being among Chinese migrant children. *J Psychol Sci.* 2013;36(1):116–121. doi:10.16719/j.cnki.1671-6981.2013.01.007
30. Xu JY. Elder abuse and mental health: the modifying effect of social support. *Chin J Dis Control Prev.* 2019;23(11):1323–1327. doi:10.16462/j.cnki.zbjbkz.2019.11.005
31. Cheng ZJ. Peer support: a new approach to transforming the educational paradigm of student development. *High Educ Explor.* 2015;3:27–30.
32. Hou L, Zhang Z. Stress sources and anxiety symptoms of medical graduate students: the mediating role of negative emotion and the moderating role of social support. *Chin J Behav Med Brain Sci.* 2019;12:1108–1112.
33. Chen CY, Chen IH, O'Brien KS, et al. Psychological distress and internet-related behaviors between schoolchildren with and without overweight during the COVID-19 outbreak. *Int J Obesity.* 2021;45(3):677–686. doi:10.1038/s41366-021-00741-5
34. Wang WD, Wang XL, Ma H. *Manual for the Mental Health Assessment Scale.* Beijing: Chinese journal of mental health; 1999.
35. Thau S, Derfler-Rozin R, Pitesa M, et al. Unethical for the sake of the group: risk of social exclusion and pro-group unethical behavior. *J Appl Psychol.* 2015;100(1):98–113. doi:10.1037/a0036708
36. Zimet GD, Dahlem NW, Zimet SG, et al. The multidimensional scale of perceived social support. *J Pers Assess.* 1988;52(1):30–41. doi:10.1207/s15327752jpa5201_2
37. Campbell A. Subjective measures of well-being. *Am Psychologist.* 1976;31(2):117–124. doi:10.1037/0003-066X.31.2.117
38. Chen Y, Yu X, Ma'rof AA, et al. Social identity, core self-evaluation, school adaptation, and mental health problems in migrant children in China: a chain mediation model. *Int J Environ Res Public Health.* 2022;19(24):16645. doi:10.3390/ijerph192416645
39. Lai YC. Migrant children's security and its relationship with interpersonal sensitivity. *J Shijiazhuang Univ.* 2020;22(3):150–153. doi:10.13573/j.cnki.sjzxyxb.2020.03.026
40. Wang H, Xiong YK, Liu X. The protective roles of parent-child relationship and friend support on emotional and behavioral adjustment of migrant adolescents. *Psychol Dev Educ.* 2018;34(5):614–624.

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