Well-being and health of children in rural China: The roles of parental absence, economic status, and neighborhood environment

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Abstract: Millions of children are left behind in rural China to grow in absence of parents as a result of parental rural–urban migration. Previous studies have suggested that due to lengthy separation from their parents, left-behind children showed poorer well-being than did non-left-behind children. However, those studies have not considered the two groups' children's differences in terms of family economy and neighborhood environment, which are affected by the impact of parental migration. This study examined rural children's well-being, particularly their physical well-being, as functions of parental absence, family economic status, and neighborhood environment. From three rural areas of Henan Province, caregivers of 519 five- to nine-year-old answered questions regarding family economic status and parental absence status; one year later, the children were interviewed about their neighborhood environment, well-being, and health status. Results showed that parental absence affected children's health, whereas family economic status affected children's well-being, and the effect was partially mediated by the neighborhood environment. These results suggest the importance of family economic status and neighborhood environment in studies of parental migration and development of children in rural areas. Based on these results, we discussed practical strategies to improve the well-being of rural children with migrating parents under the profound environmental change in rural China.

Keywords**:** *well-being, rural children, parental absence, family economic status, neighborhood environment.*

1. Introduction

Since China introduced its open-door policy in the 1980s, millions of residents have flocked from villages to cities to seek better jobs (Cortes 2008). However, given the poverty situation and institutional barrier of the household registration system, many had to leave their children behind in their villages (Jordan, Ren, and Falkingham 2014). These children are generally labeled as rural left-behind children. According to a recent statistic (Ministry of Civil Affairs 2016), at the end of 2016, over 9 million children remained in rural areas while their parents were working in cities. The well-being of children growing up without the presence of parents continued being looked upon as a great

concern (Wang 2018). Previous studies have suggested that parental absence due to labor migration would be detrimental to children's mental and physical well-being (Chen and Chan 2016; Huang et al. 2015; Su, Li, Lin, and Zhu 2017).

1.1 Impacts of parental absence and familial poverty on the well-being of left-behind children

The impact of parental migration on children's well-being can be well explained by social capital theory (Guo 2012). Coleman (1990) defines social capital as "social resources inherent in social relationships that facilitate a social outcome". He also interprets family social capital as both the physical presence of adults in the family and the attention provided by adults to the children (Morrow 1999). In view of this conceptualization, family social capital is formed, accumulated, and developed in many parenting and family processes that can eventually influence child developmental outcomes (Leung & Shek 2015; Leung & Shek 2019). Parental absence due to labor migration, therefore, leads to shortage of family social capital, which may in turn bring about a dampening effect on children's well-being. Western researchers (Aguilera-Guzmán et al. 2004; Jones et al. 2004; Pottinger 2005; Graham et al. 2011) have found that the well-being of children living without parents is generally poorer than that of children living with parents. Scholars who pay attention to children in rural China also found that the left-behind children had less nutrition intake (Ning and Chang 2013), early onset of puberty (Chang and Lu 2018; Guo, Lu, Zhu, and Chang 2020), poorer physical health (Huang et al. 2015; Lei, Liu, and Hill 2018), higher level of aggression and risk-taking behaviors (Lu and Chang 2019), lower self-esteem (Zhan, Li, Liu, and Zhang 2014), lower self-concept (Wang et al. 2015), higher level of loneliness (Jia and Tian 2010), higher level of depression (Chen 2016; Liang, Wang, and Rui 2017), and more psychological problems (Zhao and Yu 2016) than did children living with their parents.

In contrast to social capital theory, the neoclassical economic theory of migration (Becker 1981) sheds light on the positive aspect of labor migration. This theory has commonly acknowledged the positive effects of rural–urban migration because migration decisions are usually rational (Becker and Massey 1999; Hoddinott 1994). Previous studies have shown that family economic status would improve drastically because of remittances sent home by migrant workers. The money improved the material well-being of migrants' family members and their left-behind children (Adhikari et al. 2014). Evidence has been widely observed that remittances improve the health status of left-behind children in non-Chinese settings (Antman 2012; Bryant 2005; Yang 2008). Previous studies conducted in China also seem to reach similar conclusions: economic benefits from parental migration are positively

associated with their children's psychosocial functioning (Jia, Shi, Cao, Delancey, and Tian 2010), perceived satisfaction (Wen and Lin 2012), academic outcomes (Lee and Park 2010), and educational opportunities (Liang and Morooka 2004). These arguments and findings have suggested that in understanding the well-being of left-behind children, it is inadequate to focus solely on family social capital while ignoring the family economic capital.

1.2 The mediating role of neighborhood environment

While Coleman developed the concept of social capital, he also pointed out that "social capital exists within the family, but also outside the family" (Coleman 1990:334). As another form of social capital, neighborhood social capital often contains social cohesion, social connectedness, safety of a living environment, and the trust among residents within a community (Putnam 2000). Western studies have reported that children's mental health and physical health are positively associated with social cohesion (Aminzadeh et al. 2013), cooperation (Elgar, Trites, and Boyce 2010), trustworthiness (Meltzer, Vostanis, Goodman, and Ford 2007), and the sense of safety in the living neighborhood (Drukker, Kaplan, Feron, and Van Os 2003). In one study conducted in China, Wu et al. (2015) found that neighborhood social capital is positively correlated with left-behind children's mental wellbeing. These empirical studies have indicated that children's well-being is also influenced by neighborhood environment.

While social capital embedded in neighborhood networks is often regarded as potential resources for individuals to enhance their well-being (Putnam 1993), the accumulation of and access to neighborhood social capital is somehow restrained by individuals' economic status (Das 2004). This is primarily because individuals tend to maintain their social network on the basis of the reciprocal principle, which requires costs (Bourdieu 1983). Moreover, it may go without saying that people are inclined to interact with others who belong to similar socioeconomic backgrounds, which leads to a different stock of social capitals among different groups of people (Lin 2000). Previous studies have provided empirical evidence that people with higher economic status have greater access to social capital (Stanton-Salazar and Dornbusch 1995) and stronger social integration (Böhnke 2008) than those with a lower economic status. Given the profoundly changed rural environment (Biao 2007) and the rising intra-village inequality (Zhou, Han, and Stevan 2008) of rural China, it is thus necessary to explore how family economic status affects children's access to and accumulation of social capital in their neighborhood and in turn how it impacts their well-being.

Previous studies have increasingly suggested that the well-being of rural children was affected by the impact of parental absence (Zhao and Yu 2016), family economic status (Wen and Lin 2012), and neighborhood environment (Zhao, Zhou, Wang, Jiang, and Hesketh 2017). However, extant empirical studies in China mostly examined only one of those influential factors on rural children's well-being (Ren and Treiman 2016), rendering an incomplete understanding of left-behind children and insufficient advocacy for policy implementation. To fill this gap, this study adopted an ecological perspective which takes individual and environmental factors in affecting children's well-being into account (Shek and Leung 2013). It aims to investigate rural left-behind children's well-being and, in particular, their physical well-being as functions of parental absence, family economic status, and neighborhood environment. In sum, two research questions were raised as follow:

Research Question 1: Do parental presence, family economic and neighborhood environment respectively predict children's well-being? Based on the family social capital theory (Coleman 1990) that family social capital affects child development, we hypothesized that higher parental presence could predict higher level of well-being of children in rural China (Hypothesis 1a). In addition, based on the neoclassical economic theory of migration (Becker 1981) and previous studies that show economic hardship would impair child developmental outcomes (e.g. Wen and Lin 2012; Jia, Shi, Cao, Delancey, and Tian 2010), it was hypothesized that higher level of family economic status could predict higher level of children's well-being in rural China (Hypothesis 1b). Moreover, as neighborhood environment influences children's life quality and health (e.g. Aminzadeh et al. 2013; Wu et al. 2015), we hypothesized that higher neighborhood social capital could predict higher level of children's well-being in rural China (Hypothesis 1c).

Research Question 2: Does family economy predict children's well-being through the function of neighborhood environment? Based on the work of Pierre Bourdieu (1990) which points out that economic capital and social capital can be mutually transformed and restricted, and social capital theory (Putman 2000) which indicates that neighborhood social capital is beneficial to public good, we hypothesized that children from better-off family would access more neighborhood social capital, which predicts higher level of well-being (Hypothesis 2).

2. Method

2.1 Participants

The sample consisted of 519 children (48.7% girls) and their caregivers. The mean age of the

children and their caregivers' mean age and education years are shown in Table 1. Participants were recruited from four rural primary schools in Henan province where the highest population of rural left-behind children in China is registered (National Women's Confederation Study Group 2013). Grade one and grade two students and their caregivers were invited for face-to-face interviews. At Time 1, data of demographic information, family economic status, and parental absence status were collected from 535 child-caregiver pairs. At Time 2, which is one year later, 519 students were interviewed about their neighborhood environment, health status, and subjective well-being. The attrition rate was 3%, and the missing students either transferred to other schools or moved to other living places.

2.2 Measures of demographic information, parental absence, and family economic status at Time 1

Parental Absence. Child informants were interviewed with questions relating to parental migration contingently. Sample questions included "who are you currently living with," "does your father/mother leave home to work in other places?," and "how often does your "father/mother come back home in one year?" Caregiver informants answered similar questions with the subject of the sentence changing to "the child" or "the child's father/mother." The answers were cross-checked, and inconsistent answers were reconfirmed with both parties until a consensus was reached. Eventually, the children were categorized into three groups and were coded as follows: 0 = children with both parents migrating, 1 = children with one-parent migrating, and 2 = children with non-migrating parents.

Family Economic Status. Caregivers were asked four self-constructed questions that measured family economic condition according to items developed by Griskevicius et al. (2011). The four items included "the overall family economic status" and the "the overall living conditions of your family compared with others in the same village", which were rated on a 5-point scale ranging from "the poorest" to "the richest;" "a rough estimation of households in your village that lead a better life than you," which was rated on a 5-point scale ranging from "very few" to "almost all"; and "the degree to which you need the government's financial assistance compared to other households in your village," which was rated on a 5-point scale ranging from "very little" to "very much." Negative wordings were reversely coded with higher scores indicating better economic status. The internal consistency reliability estimate was 0.92.

2.3 Measures of neighborhood environment, children's health, and subjective well-being at Time 2

Neighborhood Environment. Neighborhood environment was measured by the neighborhood cohesion scale and the neighborhood tie scale, which were subscales of the Community Survey of the

Project on Human Development in Chicago Neighborhoods (Earls, Brooks-Gunn, Raudenbush, and Sampson 2007). Neighborhood cohesion refers to the degree to which individuals identify with their neighbors and feel bound to support their community, whereas neighborhood tie refers to the interaction among individuals in a neighborhood. Informants were asked to identify the degree to which they agreed (from 1 = strongly disagree to 4 = strongly agree) on neighborhood cohesion items, which included "this is a united neighborhood" and "this is a close-knit neighborhood." Sample items of neighborhood tie included "how often do you and people in neighborhood do favors for each other?" and "how often do you and other people in neighborhood ask each other advice about personal things?" These items were rated on a 4-point scale from 1 = few to 4 = very often. The scores of neighborhood environment were the mean of items of the two scales. Scores of the two scales were also analyzed separately. The internal consistency reliability estimate of neighborhood environment was 0.77. The internal consistency reliability estimates of neighborhood cohesion scale and neighborhood tie scale were 0.75 and 0.67, respectively.

Health Status. We compiled 6 items to measure children's health status according to the KINDL-R, an instrument for assessing Health-Related Quality of Life in children aged 3 years and older (Ravens-Sieberer and Bullinger 1998). The compiled scale included five items referring to different situations on sickness or illness, and one item referred to a self-evaluation on the overall health status in the past year. Child informants were asked to use frequencies (from 1 = never to 5 = often) to describe their unhealthy situations, such as "in the past year, I felt uncomfortable (e.g., Stomachache and Headache)" and "in the past year, I had a cold, cough, or fever." The self-evaluation was rated on a 5-point scale (from 1 = very bad to 5 = very good) on their overall health status. The internal consistency reliability estimate was 0.69.

Well-being. We employed 14 items from the Social Indicators of Wellbeing (Andrews and Withey 1976) to measure children's well-being. Child informants were asked to answer how satisfied (from 1 = dissatisfied to 4 = satisfied) they were with five aspects of their life, namely family, health, friends, recreation, and community. The examples of each aspect included "the adults in your family," "your daily exercise," "the things you do and the time you spend with your friends," "amusement in your daily life," and "the people who live in this community." The internal consistency reliability estimate was 0.86.

3. Results

Table 1 presents the demographic characteristics of the children's sample. For children living with their parent(s), the caregiver refers to their mother or father; by contrast, for children living without their parents, the caregiver refers to their grandfather, grandmother, or another relative. Among the sample of 519 children, 207 (40%) were living without both parents, 95 (18%) were living with one parent, and 217 (42%) were living with both parents. The mean score of family economic status was 2.96 (*SD* = 0.72), where the families of non-migrating parents were financially better off than those of one or both migrating parents. The mean scores of subjective well-being and health were 3.25 (*SD* = 0.59) and 4.16 (*SD* = 0.64), respectively. The subjective well-being shows no difference in the three groups of children, whereas the physical health status of children living with parents was significantly higher than that of children living without their parent(s).

Table 2 shows correlations of variables used in this study. In this report, we present parental presence, which means the number of parents accompanying their children, rather than parental absence. As shown in Table 2, family economic status is significantly correlated with parental presence, neighborhood environment, and children's well-being but shows no correlation with children's physical health. By contrast, parental presence is significantly correlated with children's health but shows no correlation with other variables. We also find that neighborhood environment is correlated with children's well-being. Because family economy, neighborhood environment, and children's well-being are all significantly associated with each other, it is justifiable to examine our second hypothesis—the mediating role of neighborhood environment on family economic status and children's well-being.

We used structural equation modeling (SEM) analysis to test hypothesis 2. Individual variables and subscale were used as indicators. The model has adequate goodness of fit ($\chi 2$ (41, n = 519) = 98.87, $p < 0.001$, comparative fit index = 0.98, Tucker–Lewis index = 0.98, root mean square error of approximation = 0.05, standardized root mean square residual = 0.03). Table 3 presents the correlations of all indicators used in the SEM analysis. As expected, three latent constructs, namely family economic status (i.e., overall status, life differences, better conditions, and social help), neighborhood environment (i.e., neighborhood tie and neighborhood cohesion), and children's well-being (i.e., family, health, friends, recreation, and community), were all significantly correlated with each other. The SEM results are depicted in Figure 1.

Insert figure here

Figure 1. Structural relationships among family economic status, neighborhood environment, and

childrens' well-being. *$p < .05$, ** $p < .01$, ***$p < .001$.

Although the $\chi 2$ test was significant, the $\chi 2$ -to-degree of freedom ratio ($\chi 2$ /df = 2.41) was adequate based on Wheaton et al's (1977) relative/normed chi-square ($\chi 2$/df). The criterion for acceptance of the $\chi 2$ -to-degree of freedom ratio is recommended by various scholars, ranging from less than 2 (Ullman 2006) to less than 5 (Schumacker and Lomax 2004; Tabachnick and Fidell 2007; Wheaton, Muthen, Alwin, and Summers 1977).

The family economic status was significantly associated with the neighborhood environment which, in turn, was significantly associated with the expected outcomes of children's well-being. The direct path leading from family economic status to children's well-being outcomes was not significant in the present model, indicating the mediation of neighborhood conditions. Two indirect paths were significant or substantial ($\beta = 0.16$, $p < 0.01$, for family economic status on neighborhood conditions; $\beta = 0.49$, $p < 0.001$, for neighborhood environment on children's well-being outcomes). These analyses demonstrate that family economic status influenced neighborhood environment either directly through diffused effects on children's well-being outcomes or indirectly by shaping neighborhood environment that in turn influences children's well-being outcomes.

4. Discussion

This study that includes a sample of 519 five- to nine-year-old school children is the first to explore children's well-being and health as a function of parental absence, their family economic status, and neighborhood environment with a longitudinal research design. The results of this study partially confirmed the hypothesis 1 set out that parental absence, family economy, and neighborhood environment are correlated with children's well-being and health. The results also validated our second hypothesis that family economic status affects children's well-being through the mediating effect of the neighborhood environment.

Interestingly, this study found that family economic status is adversely correlated with parental absence, being consistent with the findings of Xue, Wang and Wu (2014). Similarly, the educational level of the parents of children living without their parents was relatively lower than of those living with one or both parents. This suggests that parents from lower socioeconomic backgrounds tend to migrate to find jobs. By contrast, parents from well-off families can find jobs relatively easily or run their own businesses in their local areas. This also supports the neoclassical economic argument that migration decisions are often economically rational.

One of the most primary and significant findings is that family economic status and parental absence have different effects on children's developmental outcomes. Specifically, family economic status is positively associated with children's well-being, whereas parental absence is adversely associated with children's health. The association between family economic status and children's well-being is in line with the findings of previous studies (Buchmann 2000; Guo 2012; Hadi 1999) regarding the importance of household economic status for left-behind populations. However, in contrast to our hypothesis, family economy was found to have no correlation with children's health. This is perhaps because the use of illness or sickness as an indicator of children's health and migrant remittances may have mitigated health disparities because of economic disparities.

Parental absence is adversely associated with children's health. This supports the argument that while grandparents or relatives tried to take over the responsibility of guardianship for left-behind children, they failed to provide satisfactory supervision and monitoring (Huang et al. 2015; Ye and Pan 2011). Moreover, compared with those supervised by their own parents, those looked after by their grandparents seemed to receive only divided attention as grandparents had to take care of several grandchildren at the same time (Jiang and Feng 2017; Sun and Zhang 2013), which may explain why children faced more risks for falling ill. However, our study showed no correlation between parental absence and children's well-being. The result is consistent with the findings of some previous studies (e.g. Guo 2012; Ren and Treiman 2016; Xu and Xie 2015) but inconsistent with other ones (e.g. Jia and Tian 2010; Leung and Shek 2019). The inconsistence could possibly be attributed to the multi-dimensional concept of well-being (Wallander et al. 2001). The present study focused on material well-being, physical well-being, and social well-being, whereas the previous studies, which reported a significant relationship between parental absence and well-being, focused on mental well-being or productive well-being. In addition, it has been observed in the field that the virtual presence of parents via the use of the Internet may have improved the quality of relationship between left-behind children and their migrant parents (Liu and Leung 2017), which in turn may offset the negative impacts of parental absence on children's well-being in rural China.

We also identified that family economic status is influential for children's well-being through the mediating effect of the neighborhood environment. As shown in Figure 1, an inferior family economic status accompanies a lower level of neighborhood cohesion and neighborhood tie, leading to poorer well-being in various aspects of a child's life. Lin (2000) uses the theory "inequality in social capital"

to interpret this mechanism; that is, people in economically disadvantaged positions have less access to social capital than those in better economic positions, because people often interact with those of similar socioeconomic backgrounds. This reinforces their privileged economic status and necessary social networks. Given the rising wealth gap within Chinese rural communities (Li, Long, Tu, and Wang 2015), rural children from less wealthy families may thus feel less part of the local community or have become marginalized in extra-familial social activities and hence perceived their well-being as lower than that of children from well-off families.

In summary, the research findings largely support the hypothesis that the function of parental absence, family economy, and neighborhood environment will impact children's well-being and physical health. Their well-being and health problems are, respectively, affected by family economy and parental absence, while neighborhood environment could mediate the impact of family economic status on the well-being of children. Nevertheless, one should be cautioned about the limitations of such interpretations. First, the child informants in the sample were quite young, mostly around six years old, which makes it difficult to predict their well-being and health as they become older, especially when gender difference has yet to reach a level that would affect their well-being and health. Therefore, a study with a larger sample of informants of wider age brackets can yield fuller explanations on relationships among the children's well-being and health, their family economic status, and parental absence.

Second, although rigorous efforts were made to improve the sampling design and process, the child informants in this study were only from four counties in one province in China, making it not generalizable at the national level. Thus, a national study in the future would be appropriate. Third, this study shows a negative association between parental migration and family economic status, which is inconsistent with some previous studies that reported a positive association (e.g., Li, Liu, and Zang 2015; Wen, Su, Li, and Lin 2015) but consistent with some other studies that reported a negative association (e.g., Xue, Wang, & Wu, 2014). On one hand, money remitted by migrant parents improved family economic conditions and caused the positive association; on the other hand, parents became migrant workers because of their poor financial conditions in hometown and they left home to work in cities for earning more money, whereas parents who were in good financial conditions can stay in hometown with their children. Chen et al. (2017) revealed that regional economic status moderated the relationship between parental migration and family economic status in a meta-analysis. Therefore,

inconsistent results may be caused by different regional economic status.

Fourth, while this study explores the mediating effect of the neighborhood environment between family economic status and children's well-being, there might be other mechanisms at work. For example, Chen, Yang and Ren (2015) found that rural families with left-behind children reported less positive neighborhood relationship than did intact families. Their study implied that parental absence might be the moderator of the relationship between neighborhood relationship and children's well-being. With more parental presence, children and family's involvement in the neighborhood could be higher and children would have more opportunities to participate in extra-familial activities; thus, they may achieve a higher level of well-being.

Despite these limitations, the findings of this research have drawn attention to gaps in the current literature. They allow a more rounded understanding of dilemmas migrant parents often face in providing for their children's better overall well-being. As family economic status is key to these children's well-being, migrant families that are often relatively poor need to keep working in cities to send remittance home to mitigate the negative impacts of poverty on their children's well-being. However, their efforts do not necessarily lead to an improved physical health status for their children because of the inadequate and insufficient attention offered by other caregivers, such as grandparents and relatives, in their absence. This is indicative of what Wang (2018) described earlier: the conflict between "taking care of family" (looking after children at home) and "earning money" (working away from home) that migrant workers face is quite prevalent.

To solve the conflict, strengthening psychosocial competency of rural children is a potentially helpful way. Positive youth development (PYD), for example, can promote youngsters' multiple psychosocial competencies and facilitate the stock of internal and external developmental assets (Shek, Dou, Zhu, and Chai 2019). In recent years, PYD programs have been implemented in Hong Kong (Ma, Shek and Chen 2019) and mainland China (Shek, Zhu, Leung, Lee & Wu 2019; Zhu and Shek 2020) with remarkable success. PYD programs should also be introduced to rural areas of China, helping rural children, particularly the left-behind ones, to cope with the plights and developmental challenges they are facing.

Considering the positive association between the neighborhood environment and children's well-being, programs and interventions that aim to improve rural children's well-being should focus more on the betterment of rural environments as well. The strategy of improving rural neighborhood

environments has not only been supported by both qualitative and quantitative studies (Jiang 2007; Wu et al. 2015) but has also been applied in building community institutions such as the "left-behind children's home" (Zhang 2012) with the aim to give children a platform to build their own social networks. However, one should note that family economic status can be a precondition for children to develop, accumulate, and take advantage of neighborhood resources. This means that programs and interventions at the neighborhood level cannot ignore the economic disparity in rural China. Otherwise, not only will the additional resources injected fail to improve the well-being of the children from poor families, but their "inequality in social capital" may also be increased, leading to their further marginalization or exclusion.

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Figure.1

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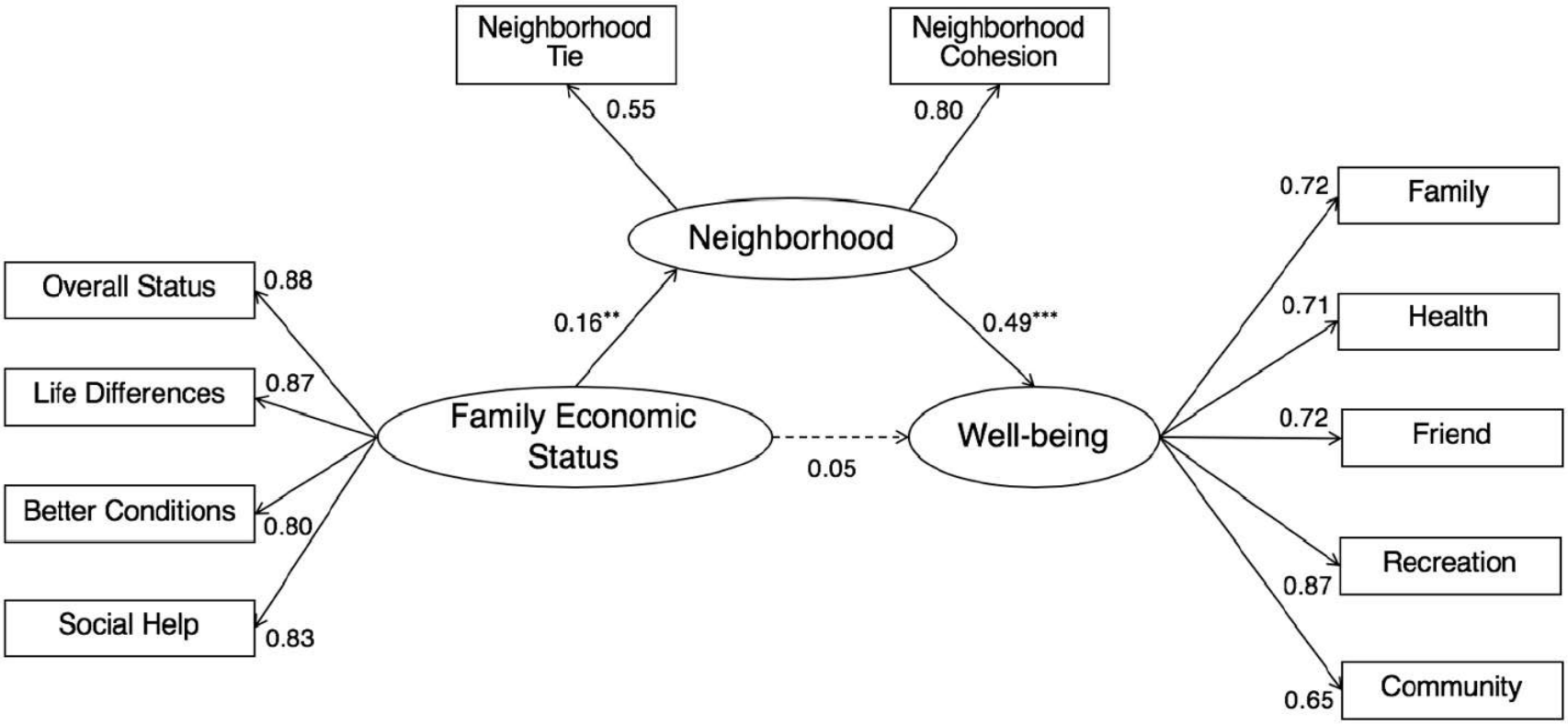

Figure 1. Structural relationships among family economic status, neighborhood environment, and childrens' well-being. *$p < .05$, ** $p < .01$, ***$p < .001$.

Table 1.

Mean (SD) of Demographic Characteristics of the Sample

Characteristics	Frequency (%)				F or χ^2	*p*
	All (*n*=519)	Both parents absent (*n*=207)	One parent absebt (*n*=95)	Both parent present (*n*=217)		
Gender						
Male	266 (51.3)	102 (49.3)	48 (50.5)	116 (53.5)	0.38	*n.s.*
Female	253 (48.7)	105 (50.7)	47 (49.5)	101 (46.5)		
Age						
Child	6.93 (0.75)	6.86 (0.75)	6.97 (0.82)	6.98 (0.72)	1.34	*n.s.*
Father	33.72 (5.01)	33.08 (4.58)	33.98 (5.23)	33.72 (5.01)	2.85	*n.s.*
Mother	32.99 (4.87)	32.28[a] (4.49)	33.29[b] (5.29)	33.55[b] (4.96)	3.88	0.02
Caregiver	45.02 (13.38)	53.58[a] (10.90)	38.08[b] (10.94)	39.89[b] (12.09)	97.63	< 0.01
Years of education						
Father	9.08 (2.52)	8.58[a] (2.28)	9.21[b] (2.67)	9.50[b] (2.61)	8.45	< 0.01
Mother	8.48 (2.84)	7.65[a] (2.75)	8.66[b] (2.86)	9.20[b] (2.71)	16.90	< 0.01
Caregiver	6.98 (4.22)	5.17[a] (4.35)	8.06[b] (3.36)	8.22[b] (3.74)	31.47	< 0.01
Economic status	2.96 (0.72)	2.80[a] (0.72)	2.93[a] (0.66)	3.12[b] (0.71)	10.86	< 0.01
Neighborhood environment	2.88 (0.58)	2.88 (0.58)	2.82 (0.63)	2.85 (0.60)	0.33	*n.s*
Wellbeing	3.25 (0.59)	3.23 (0.57)	3.29 (0.61)	3.26 (0.61)	0.37	*n.s.*
Health	4.16 (0.64)	4.08 [a] (0.66)	4.18 [b] (0.63)	4.23 [b] (0.62)	3.06	< 0.05

Note: Within a row, numbers that share the same superscripted letter are not significantly different from each other, whereas those with different superscripted letters are significantly different from each other. *n.s.* indicates not significant.

Table 2.

Means, SDs, and correlations of variables used in the study

	1	2	3	4	5	6	7
1 Age							
2 Gender	0.02						
3 Family economy	-0.08	-0.05					
4 Parental presence	0.07	-0.04	0.20**				
5 Neigh-Environment	-0.05	-0.08	0.13**	-0.21			
6 Well-being	0.11*	-0.05	0.12**	0.03	0.35**		
7 Health	0.13**	-0.05	0.04	0.11*	0.05	0.25**	
Mean	6.93	0.49	2.96	1.02	2.86	3.25	4.16
SD	0.75	0.50	0.72	0.91	0.60	0.59	0.64

Table 3.

Correlation matrix of indicators used in SEM analysis

	1	2	3	4	5	6	7	8	9	10	11
1. Family	–										
2. Health	0.52**	–									
3. Friend	0.47***	0.53***	–								
4. Recreation	0.66***	0.59***	0.63***	–							
5. Community	0.42***	0.50***	0.48***	0.45***	–						
6. Overall Status	0.06	0.12**	0.06*	0.10†	0.10**	–					
7. Life Difference	0.08†	0.10*	0.07*	0.09	0.09**	0.90***	–				
8. Better Condition	0.05	0.09*	0.07	0.09**	0.09**	0.76***	0.73***	–			
9. Social Help	0.06	0.10*	0.06	0.09**	0.12***	0.72***	0.72***	0.73***	–		
10. Neighborhood Tie	0.23***	0.25***	0.16***	0.21***	0.14***	0.14***	0.17***	0.13***	0.11**	–	
11. Neighborhood Cohesion	0.25***	0.39***	0.26***	0.33***	0.28***	0.11**	0.07†	0.10***	0.08**	0.44***	–
Mean	3.26	3.35	3.35	3.22	3.14	2.94	2.98	2.83	3.08	2.80	3.17
SD	0.80	0.70	0.72	0.70	0.87	0.70	0.72	0.79	0.97	0.76	0.70

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, † $p < 0.10$.