

---

## Studies on Left-Behind Children in China: Reviewing Paradigm Shifts

Yan Ge Li Song Rockwell F. Clancy Yulin Qin

YAN GE Professor, Center for Law & Cognitive Science, KoGuan Law School, School of Media and Design, Institute of Social Cognitive and Behavioral Sciences, Shanghai Jiao Tong University

LI SONG Research Fellow & PhD Candidate, Laboratory for Social Cognition and Decision-making, Institute of Arts & Humanities, Institute of Social Cognitive and Behavioral Science, Shanghai Jiao Tong University

ROCKWELL F. CLANCY Lecturer, University of Michigan-Shanghai Jiao Tong University Joint Institute, Institute of Social Cognitive and Behavioral Science, Shanghai Jiao Tong University

YULIN QIN Professor, Center for Law & Cognitive Science, KoGuan Law School, Institute of Social Cognitive and Behavioral Science, Shanghai Jiao Tong University

**\*Correspondence Author:** Yan Ge, 518 Old Administration Building, 800 Dong Chuan Road, Shanghai, 200204, China; [yge@sjtu.edu.cn](mailto:yge@sjtu.edu.cn)

### Acknowledgement

This work was supported by Grant for Interdisciplinary Studies of Humanities and Sciences, Shanghai Jiao Tong University (13JCRZ03).

### Abstract

More than 60 million children have been left behind in rural China by parents going to work in cities. Given the effects of child-parent separation on development, this phenomenon has drawn considerable governmental and academic attention in recent years. Outlining developments with reference to relevant studies, this review characterizes the perspectives used to explore and understand this phenomenon in terms of three major paradigms: (1) the diagnostic approach, which takes for granted the assumption that child-parent separation would be the only cause of negative effects observed among left-behind children, and has focused primarily on measuring psychological and behavioral disorders among these “problematic kids”; (2) the advanced diagnostic approach, which

This is the author manuscript accepted for publication and has undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the [Version of Record](#). Please cite this article as [doi: 10.1002/cad.20267](https://doi.org/10.1002/cad.20267).

This article is protected by copyright. All rights reserved.

---

refines the previous approach by incorporating theories and techniques developed outside of China, elaborating on the early approach by bringing into consideration more factors and exploring the interactions between child-parent separation and these factors, particularly social ones; (3) the sociologically oriented approach, which provides the research with a much broader framework in terms of how to orient the phenomenon of left-behind children, especially the transformation of China's social and economic systems during the last thirty years of urbanization, where the reproduction of labor has been based on a "splitting family structure", such that problems associated with the phenomenon of left-behind children cannot be solved without systematic social and economic changes. Based on these analyses, future directions for research on left-behind children in China are also discussed.

### **Background: Studies on Left-behind Children, with Chinese Characteristics**

One of the central questions regarding child-parent separation (CPS) is whether and how separation impacts the psychological well-being and abilities of children who grow up away from one or both parents – in situations of divorce, single-parent families, migration, parents working away from home, or dying, for example – where children thereby receive less or no parental care.

In mainland China, researchers began taking note of CPS in the 1980's (Dong, Q., 1991; Yu, G. L., Zhang, D. Y., & Lin, C. D., 1998). At that time, however, little scholarly attention was paid to "left-behind children" (LBC), resulting from peasants leaving the Chinese countryside to work in cities, the central concern of this review. This changed in the early twenty-first century, after three decades of rapid economic growth coinciding with the emergence of social and economic problems in China, among which the gap between urban and rural populations is central. Many rural residents have had no choice but to move from the countryside to cities for better-paid jobs. Most of these workers, however, are unable to bring their children to the cities. This is due, in part, to China's long-standing household registration system, *hukou* in Chinese, which prevents migrant workers and their children from accessing social benefits, such as public education and government-subsidized medical care (Shen, Y., 2006; Chen, Y. F. 2005). Additionally, migrant workers are usually overworked and underpaid, having neither the time nor the money to take care of their children were they with them (Wu, N., 2004; Lou, J., Wang, W., & Gao, W. B., 2009; Duan, C. R., Lv, L. D., & Wang, Z. P., 2014). As a result, the majority of migrant workers leave their children in the countryside. Tragic stories related to these situations have been widely reported in the

---

news, including foreign media outlets such as CNN (April, 2014) and *The Economist* (“Left-behind children: a slow awakening”, 2016).

Given the background conditions associated with LBC in China, in this context, CPS would be idiosyncratic for two reasons.

First, the population affected by separation is enormous, including the children themselves, their parents, and extended families. CPS related to migration in China has occurred for over thirty years and, as such, the consequences of this phenomenon are likely profound and will be long lasting, influencing generations to come (Shen, Y., 2006; Cai, H., & Wang, J., 2007; Liu, J. M., 2008; Wang, J. H., & Huang, B. H., 2014). The China case is, therefore, largely unique but can provide valuable insights for better understanding the effects of CPS in general.

Second, because of the increasing economic gap between rural and urban areas, and the effects of the *hukou* system, CPS in China is a broader social rather than a specifically familial phenomenon. LBC in China generally refers to children who not only grow up without parent(s) but also are from the most disadvantaged social and economic groups. CPS with regard to LBC should be understood in terms of the complicated interactions between these social conditions and the psychological mechanisms of child-parent attachment/separation (Tan, S., 2011; Yan, B. H., 2014; Duan, C. R., Lv, L. D.; & Wang, Z. P., 2014).

To introduce the trajectory of relevant studies to non-Chinese-speaking readers – reflecting what has been done in the past and should be done in the future – this review addresses how LBC have been studied in China, outlining the theoretical assumptions and instruments researchers have employed, the questions with which they have been concerned, and the theoretical approaches they have used to explore and explain CPS with regard to the phenomenon of LBC in China.

### **Literature Selection**

Beginning with the phrase “left-behind children” (*liushou ertong*) and a few alternatives, such as “*liuhshou hai*” and “*liushou nongmingong zinu*”, we undertook a keyword and article title search in the China National Knowledge Infrastructure (CNKI), one of the most comprehensive databases of its kind, which covers more than 7,000 Chinese-language scholarly journals, academic degree theses, popular magazines and newspapers, and is the most widely used source for literature reviews of Chinese-language sources (Kang, H., Zhao, J., & Liu, J. Z., 2010; She, L., & Luo, G. F., 2009). The search yielded a

---

return of 6052 papers from scholarly journals during the period of 2000 to 2016, published in mainland China and in Chinese, illustrating the massive concern regarding the phenomenon of LBC in China.

As the basis for this review, we narrowed down the above results, estimating their usefulness in representing the trajectory of LBC studies, using the following process:

First, assuming the number of citations a paper receives can be used as an indicator of the amount of attention a paper has received from the research community, we used the CNKI search engine to determine the number of times these papers had been cited. Since papers published earlier have a greater chance of being cited – and using citation rates as a proxy for impact would disproportionately favor papers published earlier – we counted the number of times a paper was cited each year, and then we ranked papers published in the same year.

Second, we picked out the top 10% of papers cited from each year, yielding a total of 606 papers, assuming these papers are more influential than others published in the same year that ranked below the top 10% (Table).

Third, two of the authors read through these 606 papers independently, evaluating them in terms of five criteria: (1) research questions that were either new or common at the time of publication; (2) findings that were new; (3) analytical methods and measurement instruments that were new or common; (4) theoretical models and frameworks that were new or common; (5) research procedures and conclusions that were clearly presented or common. The discrepancies between the two readers' evaluations were then discussed to determine points of overlap and agreement. Papers that met these criteria were considered representative and, thus, more likely to be cited, and we use these as exemplars in this review.

Fourth, in the process of reviewing these papers, we recognized the importance of ones not selected according to the citation-based method, some of which are also discussed below.

**Table Distribution of LBC Studies in Terms of Approaches**

Year	Top 10% of papers by citations	Diagnostic Approach	Advanced Diagnostic Approach	Sociological Framework	Others (commentary, advocacy, overview of overseas studies, policy & regulation suggestions, etc.)
2016	78	16 ( 20.5% )	31 ( 39.7% )	25 ( 32.1% )	6 ( 7.7% )
2015	76	24 ( 31.6% )	28 ( 36.8% )	19 ( 25.0% )	5 ( 6.6% )
2014	65	22 ( 33.8% )	26 ( 40.0% )	10 ( 15.4% )	7 ( 10.8% )
2013	67	32 ( 47.8% )	20 ( 29.9% )	13 ( 19.4% )	2 ( 3.0% )
2012	61	24 ( 39.3% )	24 ( 39.3% )	12 ( 19.7% )	1 ( 1.6% )
2011	57	29 ( 50.9% )	15 ( 26.3% )	7 ( 12.3% )	6 ( 10.5% )
2010	48	31 ( 64.6% )	10 ( 20.8% )	6 ( 12.5% )	1 ( 2.1% )
2009	43	27 ( 62.8% )	3 ( 7.0% )	7 ( 16.3% )	6 ( 14.0% )
2008	46	29 ( 63.0% )	9 ( 19.6% )	5 ( 10.9% )	3 ( 6.5% )
2007	36	20 ( 55.6% )	6 ( 16.7% )	9 ( 25.0% )	1 ( 2.8% )
2006	17	10 ( 58.8% )	4 ( 23.5% )	1 ( 5.9% )	2 ( 11.8% )

2005	8	3 ( 37.5% )	1 ( 12.5% )	0	4 ( 50.0% )
2000-2004	4	3 ( 75.0% )	1 ( 25.0% )	0	0
Total	606	270 ( 44.6% )	178 ( 29.4% )	114 ( 18.8% )	44 ( 7.3% )

### Who are China's LBC?

The term “left-behind children,” *liushou ertong* in Chinese, began appearing in the academic literature in the early 1990’s. Many credit Shangguan Zimu with coining the term, in a one-page article published in 1994 (Shangguan, Z. M, 1994; Xiao, Z. D., 2006). Since then, the term has been widely used in the Chinese media and academic institutions to refer to children under the age of 16 or 18, who live in **rural**, countryside areas, while one or both of their parents migrate to urban, city areas for purposes of work – although debates exist regarding criteria for picking out LBC, for example, whether the age range should be limited to 14, 16, or 17, and whether the absence of only one parent should be used as a criterion (Luo, G. F, 2005; Duan, C. R, & Yang, G., 2008; Tao, R., & Zhou, M. H., 2012).

### A Diagnostic Approach (Emerging around 2002)

Although the phenomenon of LBC emerged during the early 1980’s, it did not draw scholarly attention until 1994, when the first two preliminary papers on the topic were published. The number of papers increased slowly until 2004 – the year the State Ministry of Education organized a conference to address this problem – at which point the issue of LBC was, for the first time, officially on the government agenda (Tan, S., 2011; She, L. & Luo, G. F., 2009).

Focusing on the extent to which LBC are psychologically and behaviorally different from other children, most research-oriented papers from this early period took an approach we term “diagnostic”, based on an overly simplified cause-effect assumption (Wang, D. Y, 2002; Wang, D. Y., & Lin, H., 2003; Zhang, F., Wang, J., Yin, L., Ren, Z., 2003; Wang, Y. Q., Ma, X. L, Wang, T. H., 2005; Li, B. F., 2005; Zhou, Z. K., Sun, X. J., Liu, Y., & Zhou, D. M., 2005; Zhao, H., et al. , 2006; Wang, L. F., Zhang, S., Sun, Y. H., & Zhang, X. J., et al., 2006), and can be characterized in terms of three central features:

---

(1) Taking for granted the negative consequences of CPS as the only relevant theoretical assumption and diagnostic criterion in terms of which to investigate LBC and, for this reason, rarely referring to other theoretical perspectives as a hypothetical basis for/framework in terms of which to ground this orientation.

(2) Interested primarily in the negative attributes of LBC, measuring psychological, physical, and academic characteristics associated with being “left-behind”, using standard scales, self-designed questionnaires, and surveys, comparing LBC with other children or national averages, and portraying LBC as “problematic kids”.

(3) Employing a rather simple set of variables, usually closely pertaining to LBC themselves and their direct environments, such as gender, age, caregiver classification, and duration of separation, in investigating the effects of CPS, such that other potentially relevant variables were rarely considered.

For example, in a widely cited early study, Wang Dongyu (2002) used the Eysenck Personality Questionnaire (EPQ) to measure 206 LBC participants (ages 8 to 13) from four rural schools in Fuqing and Shaxian, two counties in Fujian province. The results showed that the E (Extraversion/ Introversion), N (Neuroticism/ Stability), and L (Lie/Social Desirability) scores of those participants departed significantly from national averages, and suggested LBC were likely to be more introverted, emotionally unstable, and less capable of dissimulation. The study also showed that, compared with LBC girls (N=88), LBC boys (N=118) were less introverted but more emotionally unstable. However, assuming CPS negatively influences development, the study made no further effort to examine the mechanisms as a result of which psychological problems occur and – aside from gender – did not examine the relation between other variables and CPS.

Within behavioral studies, the school performance of LBC has been a central concern of researchers, with most claiming CPS negatively influences such performance (Wang, Y. Q., Ma, X. L., & Wang, T. H., 2005; Yao, Y., 2005; Fan, F., & Sang, B., 2005). An early and also widely cited survey conducted in five counties in three provinces, Wu Ni and her research team recruited participants from one elementary school and one middle school in every county. Using questionnaires and interviews, they found school performance among LBC lower than averages (Wu, N., 2004). Classifying the types of caregivers of LBC into five categories – mother, father, grandparent(s), relative(s), and non-relative(s) – the survey also showed LBC received less care and guidance in learning when parent(s) were absent, such that these children had more psychological problems. Although this study suffered from

---

survey design and reporting problems – the authors did not even clearly report the number of participants and methods used to evaluate school performance and psychological problems – the caregiver classification has become a standard, widely used variable in assessing the effects of CPS on LBC (Zhou, Z., K., Sun, X. J., Liu, Y., & Zhou, D. M., 2005).

Although a large number of such early studies suffered from reporting problems, and the interpretations of their findings were often questionable, on the whole, they succeeded in portraying LBC as a psychologically and academically disadvantaged group, thereby gaining governmental attention (Xiao, Z. D., 2006). Meanwhile, conflicting findings began to emerge during this diagnostic period, and eventually necessitated adjustments to the approach itself.

For example, using a popular Mental Health Test Questionnaire developed by Chinese psychologists, Yue Huilan and colleagues investigated the mental health of 422 LBC (female=185), 130 fourth-graders, 144 sixth-graders, 105 and 43 first-year and second-year middle school students, respectively, in Changxing and Deqing counties, Zhejiang province (Yue, H. L., Fu, X. T., Zhang, B., & Guo, Y. Z., 2006). This survey failed to find significant differences between LBC and national averages in any of the eight measures used, questioning the prevailing claims that LBC were deeply troubled psychologically.

In another study, Zhu Kerong and colleagues used a questionnaire (N=600) and interview (N=81) to examine the school performance of LBC in Jiangxi, Hunan, and Henan provinces. They used the School Performance Scale developed by Wang Yun, a Chinese educational psychologist, and found no significant differences between LBC and other participants. They examined second-year middle school students and fourth-year elementary school students, not only psychologically (motivation to study, perceived efficacy of study, and self-confidence regarding study) but also behaviorally (course grades) (Zhu, K. R., Li, Z.J., & Zhou, S.Q., 2002). Again, these findings conflict with the widely shared conviction that CPS unequivocally negatively affects school performance (Wang, Y. Q., Ma, X. L., & Wang, T. H., 2005; Yao, Y., 2005; Fan, F., & Sang, B., 2005).

To respond to such inconsistencies, several studies tried to introduce more variables and went beyond simplistic comparisons, to more fully and carefully examine the complexities of CPS in the context of LBC. In a study designed to examine the influences of family environments on LBC, Fan Fang and Sang Biao (2005) randomly recruited fourth-graders (female=67) from six classes in rural schools in Hunan province, and divided them into an LBC group, living with grandparents (N=41), or other relatives or friends, (N=18), and a control group, living with one or both parents (N=64). They used a localized



---

Family Environment Scale, China Version (FES-CV), Child Personality Questionnaire (CPQ), and Child Behavior Questionnaire for Teacher (CBQ), to measure the psychological well being and school performance of participants. The results showed (1) 44% of participants in the LBC group had behavioral problems compared with 17% in the control group; (2) The control groups had better school performance as evaluated by teachers; (3) The LBC group scored lower on 5 of the 10 total FES items. A regression analysis revealed that some of those FES scores negatively predicted school performance of LBC, notably, scores of family intimacy, educational level of caregiver, and success of caregivers and family organizations. The approach taken in this study moved beyond the simple classification of caregivers and included more complicated factors, taking the family environment and education level of caregivers, for example, into consideration.

Although ample research has been done regarding the underlying mechanisms of child-parent separation outside of China, and various theories have been introduced into China since the 1990's (Ye, Y. D., & Bai, L. Y., 2002; Xie, X. H, & Zhang H., 2012), unexpectedly, early studies of LBC rarely discussed those mechanisms and theories. Rather, most researchers seemed to have taken for granted the unconditionally negative effects following from CPS. Their mission, in most cases, was to diagnose LBC based on this overly simplified cause-effect assumption (Luo, G. F., & She, L., 2006; She, L. & Luo, G. F., 2009). Additionally, in this period of research, critical engagements were relatively weak, not only because they were few but also because these engagements possessed neither strong theoretical nor enough empirical support. As they initiated new trends within the LBC research and literature, however, these lines of thought are significant. This becomes clear when tracing the evolution of approaches to research on LBC that follow.

### **An Advanced Diagnostic Approach (Emerging around 2006 to 2007)**

With the diagnosis of differences between LBC and other children still the primary concern in the research community, a different perspective begins to emerge around 2006 to 2007. Since this perspective moves beyond simply diagnosing the negative effects of CPS on LBC, to more a comprehensive and nuanced approach to the phenomenon of LBC, we term this the “advanced diagnostic” approach. This approach begins to become apparent when two major tendencies emerge within studies on LBC.

The first consists in refinements to the earlier diagnostic approach, evident in: (1) Greater consideration of the role numerous factors play in relation to the effects of CPS on LBC, especially those extending beyond familial dimensions – family members and direct

---

caregivers, for example – towards more socially oriented dimensions – such as social support from peers and teachers, for instance (Yang, J. H., & Duan, C. R., 2008; Zhao J. X., Liu X., & Shen, J. L., 2008); (2) More sophisticated research methods, such as those developed to detect confounding effects generated by interactions between CPS and other factors – family spending on education, for example (Yang, J. H., & Duan, C. R., 2008; Hu, F., & Li, S. T., 2009; ); (3) Examination of the more nuanced effects of CPS – vigorously investigating the long-term effects of CPS on LBC (Li, X. M., Luo, J., Gao, W. B., & Yuan, J., 2009; Fan, X. H., & Fang, X. Y., 2010), as well as searching out factors contributing to and mechanisms in term of which LBC better cope with their situations (Jia, Y. H., 2008; Chen, L., Zhang, L. J., & Shen, J., 2009; Xu, J. C., & Deng, Y. P., 2008; Chen, X. X., Zhang, L. X., Luo, S. G., & Shi, Y. J., 2009).

The second consists in the introduction of more theoretical perspectives, guiding both the exploration of factors and interpretations of empirical findings related to CPS in the context of LBC (Xie, X. H, & Zhang H., 2012). Researchers within this period, for example, have explicitly advocated the “ecological perspective” – or “the people in situation” approach – and that of “ego-resilience”. The ecological perspective emphasizes how multiple factors contribute to the environments in which LBC live and are shaped (He, X. J., 2007). The ego resilience perspective considers why some LBC live in a healthy fashion despite CPS (Li, Y. X., Luo, P. C., & Tan, Y. M., 2008; Li, Z. K., 2009). Especially relevant is the way this evolution casts doubt on the presumed universally negative consequences associated with CPS, a premise underpinning the diagnostic approach (He, X. J., 2007; Shen, J. L. & Wu, Y., 2008; She, L., & Luo, G. F., 2009).

Given these theoretical and methodological changes – resulting in more knowledge regarding the multiple causes and mechanisms associated with the phenomenon of LBC, and a better understanding of how psychological and behavioral differences between LBC and non-LBC are shaped by complicated structures of the environment, aside from CPS alone – we use the title “advanced diagnostic” to designate the approach emerging in this period. Two studies concerning the influence of CPS on the school performance of LBC help to illustrate the interwoven nature of the preceding diagnostic and subsequent more advanced approaches.

In the first of these studies, Yang Juhua and Duan Chengrong randomly sampled 0.95% of the data from the 2002 national census to examine the educational opportunities available to three types of children, ages 11 to 14 (N=72,318): LBC, children living at home with their parents, and children migrating or “floating” with their parent(s) – *liudong ertong* in Chinese, referring to children from rural regions who migrate to cities and live there with

---

their parent(s). Representative of the advanced diagnostic approach, this research was explicitly guided by work from Gary S. Becker (1991), and Sara McLanahan and Gary F. Sandefur (1994), who suggest that financial resources – in addition to parental care and support – are significant to child development. Yang and Duan show that the chances of LBC staying in school are approximately 30% higher than those whose parents have not left, and that the chances of migrant children staying in school are the lowest – only about 2/3 of all other children. Additionally, the educational levels of parents and financial resources of families influence the educational opportunities of children, and this was true whether children were LBC or not. Finally, whether children were LBC or not, those with more siblings had less educational opportunities than those with fewer or none (Yang, J. H., & Duan, C. R., 2008).

The authors interpreted these results in terms of observations by Becker and others. The higher rates of LBC staying in school could be explained with reference to increased family resources: The parent(s) of LBC receive higher pay in cities, and this money would contribute to their children's education, although this advantage might disappear when money sent home is allocated among several children. In fact, an early study also "diagnosed" that living with siblings might result in worse school performance among LBC, but it gave no explanation for why this would be the case (Wang, D. Y., & Wang, L. F., 2005). Compared with the earlier studies, that of Yang and Duan is distinct, since the authors (1) were explicitly guided by established theories rather than a simplistic assumption regarding the universally negative effects of CPS, (2) explored mechanisms that could help LBC and parents to better cope with the negative consequences of CPS, and (3) made an effort to better understand and explain inconsistencies within previous findings of school performance by LBC.

The second of these studies, conducted by Liu Yingxia and Ji Yueqing (2008) in Baoying county, Jiangsu province, also investigated variables associated with the school performance of LBC, including absent parent(s), housekeeping work load, farming work load, the educational levels of parent(s), and family educational spending. Based on data from questionnaires answered by 142 students, sampled randomly from four middle schools, the authors found (1) no significant difference was observed in school performance among LBC before and after their parent(s) left to work; (2) the absence of mothers increased the farming work load; (3) the absence of fathers increased the housekeeping work load; (4) the absence of fathers significantly increased the amount of money spent on education; and (5) the absence of mothers significantly decreased the amount of money spent on education.

---

Additionally, children whose fathers were absent scored higher than children living with both parents, although children whose mothers were absent scored lower than children living with both parents. In addition, no gender difference was observed among LBC participants in school performance.

This Jiangsu study is noteworthy, since it not only examined a larger number of variables – such as the housekeeping and farming workloads – but also addressed educational spending specifically. A model based on Mexican data proposed by William Kandel (1999, 2001) has shown that money sent back to Mexico by parent(s) working in the United States increased educational spending and, consequently, resulted in better school performance by children. This study not only lends support to that model but also provides an alternative way of explaining inconsistent findings from previous studies within China: Educational differences between children living with or without parents could be explained in terms of the amount of money sent back for educational purposes specifically.

In terms of the addition of new variables to explore the effects of CPS on LBC, the increasing attention given to social support is especially relevant: Versus variables such as family members and caregivers, social support is a more socially oriented variable. Although interest in social support also appeared in early studies (Guo, X. D., Li, Y. Q., Wang, L. N., & Shen, J. L., 2006), it gradually drew greater interest, coinciding with the introduction of the ecological perspective (Gao, W. B., Wang, Y., Wang, W, Z., & Liu, Z. K., 2007; Bu, W., 2008; Zhao, J. X., Liu, X., & Shen, J. L., 2008; Li, Y. X., Luo, P.C., & Nie, G. H., 2009; Sun, X. J., Zhou, Z. K., Wang, Y., & Fan, C.Y., 2010). Using a localized Children Depression Inventory (CDI), Children Loneliness Scale (CLS), and Social Support Network Questionnaire, one such study was designed to investigate relations between levels of depression and loneliness, and social support (Zhao, J. X., Liu, X., & Shen, J. L., 2008). The authors recruited 400 students, ages 11 to 16 years old (female=162), from 17 classes in elementary and middle schools in rural Henan province. Among the participants, 90 lived apart from both parents, 128 lived apart from one parent, and 182 lived with both parents. The authors classified types of social support into four categories: support from mothers, fathers, classmates, and teachers. A variable-centered analysis showed that support from teachers and fathers predicted loneliness in LBC participants, and support from mothers and classmates predicted depression, with the length of separation time moderating these relations. A person-centered analysis showed that levels of depression and loneliness were much lower in LBC participants with high support ratings in all four categories, suggesting that support from parent(s), classmates, and teachers could alleviate depression and loneliness among

---

LBC. Although this study largely followed the early diagnostic approach, more socially oriented factors were introduced into the analytical framework; in refining the diagnostic approach, studies more closely scrutinized the relations of CPS to broader, more encompassing structures of social relations.

During this same period, interest in the enduring, long-term effects of being left behind grew considerably. Aimed at detecting any enduring influences of being left behind, a relatively simple study administered the Center for Epidemiologic Studies Depression Scale, State Trait Anxiety Inventory, Simplified Coping Style Questionnaire, Self-Esteem Scale, and College Student Personal Relationship Synthetically Diagnostic Scale to 4540 students from two colleges in Chengde, Hebei province (Li, X. M., Luo, J., Gao, W. B., & Yuan, J., 2009). The results showed that LBC participants scored higher in anxiety and depression, and lower in interpersonal relations and positive coping skills. Additionally, as had been discovered in previous studies, the age at which one was left behind, duration of separation, and frequency of contact between child and parent(s) all moderated these scores: The younger the age at which one was left behind, longer the separation, and less frequent the contact, the worse were the scores.

In sum, this advanced diagnostic approach is characterized by refinement with regard to the nature, and increase in the number, of variables used to explore the effects of CPS on LBC. To do so, theory and research from outside of China were incorporated and play an increasingly significant role (Zhao, J. X., Liu, X., & Zhang, W. X., 2013; Tang, M. J., 2014; Yin, et al. 2014; Zhang, L., Wang, Q. Y., Zhao, J. X., 2014; Hou, Y. N., 2015; Wu, Z. H., & Li J. M., 2015; Cui S., Zhou Z., Kong X. Z., 2015; Luo, X.L., & Li T. R., 2015; Zhao, J.X., Yang, P., Ma, J. L., & Huang, C.C., 2016; Wang Y. L., Yao Z. H., & Jiang J. W., 2016; Yang, Q., Yi, L.L, & Song W. W. , 2016; Zhu, S. Q., 2016) (Table).

### **A Sociological Framework (Emerging around 2006 to 2007)**

Evolving from the diagnostic and advanced diagnostic approaches explained above, in recent years studies on LBC have generally become more refined and elaborate, evident in the integration of sophisticated research designs, adoption of nuanced theoretical frameworks, and expansion into novel research domains related to the phenomenon of LBC. Additionally, a number of studies, many of which have been produced by sociologists and economists rather than psychologists alone, have come to increasingly focus on the broader social dimensions of LBC, integrating more sociological frameworks into their analyses.

---

However, it remains to be seen how the psychological approaches – either diagnostic or advanced diagnostic – will further converge with these sociological approaches.

In tracing the refinement of the previous approaches and emergence of a sociologically oriented perspective, a number of studies are illustrative. These include studies: (1) regarding the influences of CPS on psychological well-being and school performance (Ling, H., et al. , 2012; Tao, R., & Zhou, M. H., 2012 ; Li, Y. S., 2013), (2) based on the perspective of ego-resilience (Xu, L. P., & Fang, Q., 2012; Yao, X. Y., 2012; Wu, F., & Yang, W. W., 2011; Liu, Q. Y., 2016), (3) giving greater attention to more social factors (Chen, X., 2012; Zhao, J. X., Liu, X., & Zhang, W. X., 2013), and (4) oriented in terms of “life course theory”, examining the influences of CPS on the adaptation of LBC to labor markets and urban life (Yang, X. Q., & Xu, Y., 2011; Liu, H. X., et al., 2015; Yang, J., Zhang, C. X., 2015; Tang, Y. C., & Fu, P., 2011; Liang, H., 2011; Yang, H. Q., & Zhu, Q. Z., 2011; Liu, Y. L., 2013; Xie, D. H., 2016).

Two studies are especially noteworthy, since they raised concerns regarding endogenous factors and employed propensity score matching (PSM) to control for them (Tao, R., & Zhou, M. H., 2012; Li, Y. S., 2013), which were either largely ignored or mistreated in early LBC studies. Tao and Zhou, for example, recruited 1010 participants (fourth and sixth year elementary school students=697, second-year middle school students=313, female= 457, age range 8 to 17 years old, and average age =12) with stratified random sampling from twelve rural schools, in four counties, Anhui and Jiangxi province, to investigate the academic performance of LBC. After pairing LBC with non-LBC participants, and using more restricted criteria to control for endogenous factors, the authors found the academic performance of LBC was worse than those of the non-LBC participants, and the negative impact of CPS was greater among boys than girls. These findings were consistent with some earlier studies (Wu, N., 2004; Wang, Y. Q., Ma, X. L., & Wang, T. H., 2005; Yao, Y., 2005; Fan, F., & Sang, B., 2005), but inconsistent with others (Zhu, K. R., Li, Z. J., & Zhou, S. Q., 2002; Hu, F., & Li, S. T., 2009; Yang, J. H., & Duan, C. R., 2008).

To further explore the influences of increased family income on school performance, the same authors showed that increased income failed to offset the negative effects of parental absence. More specifically, shown with a regression analysis, although increased income could contribute to better school performance among LBC, the authors found this effect would only occur when income increased to an unrealistically high level. Refining the approach with a more elaborate PSM method, this study retested the Mexican model (Kandel, & Kao, 2001), and also challenged findings from the previous Chinese study that claimed the money sent back by parents working in cities could improve the school

---

performance of children at home (Yang, J. H., & Duan, C. R., 2008; Hu, F., & Li, S. T., 2009), thereby presenting a more nuanced picture regarding the relation between trade-offs in parental presence/absence and financial resources available for education.

The evolution of the sociologically oriented approach is also evident in studies concerning the long-term effects of being left behind, oriented in terms of life course theory, comparing LBC with migrant children (Yang, X. Q., & Xu, Y., 2011; Liu, H. X., Wang, J., 2015; Yang, J., Zhang, C. X., 2015). As both children left behind and those migrating with their parents to cities are essentially the result of China's process of rapid urbanization (Duan, C. R., Lv, L. D., & Wang, Z. P., 2014), increasing attention has been paid to the psychological effects of these phenomena on not only LBC, but also migrant children and their adaptability to urban environments (Tang, Y. C., & Fu, P., 2011; Liang, H., 2011; Liu, Y. L., 2013; Xie, D. H., 2016). Studies in this direction have yielded valuable findings, both answering and raising important questions.

For example, adopting a life course approach, and assuming being left behind is a significant event that would have an impact on the rest of one's life (Settersten, & Mayer, 1997), Liu Yulan investigated "life opportunities" available to LBC and migrant children versus other children in migrant-labor markets (Liu, Y. L., 2013). Life opportunities were measured in terms of the age at marriage, first child, education levels, types of initial occupations, and early occupational achievements. Based on both foreign studies of immigrants and Chinese studies of LBC and migrant children, the author hypothesized that being left behind or migrating would negatively influence life opportunities. Analyses of data from 2026 participants in the Zhujiang Delta and 2106 in the Yangzi River Delta showed that the life opportunities of LBC and migrant children were not as poor as previously assumed: LBC and migrant participants got married and had their first children later, and received higher levels of education and first-job salaries than their non-LBC/-migrant counterparts. These results appear to conflict with previous observations showing disadvantages to LBC and migrant children in the labor market.

In a regression analysis, the author further showed moderating effects of being left behind and migrating on life opportunities, caused by factors such as how long children were left behind and the amount of time they migrated, the age at which they were left behind/migrated, and whether the companies in which they worked were private, public, or foreign owned. Additionally, the earlier the age at which one migrated, the more life opportunities one had; children left behind for more than nine years had fewer life opportunities. The author claimed migrating with parents early in life appears to have a

---

positive impact on development. In addition to its focus on the enduring effects of CPS and use of LBC and migrant children as participants, this study is significant because it offers evidence that undermines the common perception that left-behind and migrant children are unconditionally disadvantaged in education and work opportunities. However, it should be noted that the author only measured job opportunities within low-end labor markets, and participants were only sampled from young adults identified as “new peasant workers”.

These findings, therefore, imply a relation between LBC and migrant children, and less skilled, underpaid labor markets. The study did not address this implication, but it became a serious concern in subsequent studies, to which we turn shortly (Huang, B. H., 2014; Wang, J. H., & Huang, B. H., 2014).

After young adults who were LBC or migrant children join the labor force, are they loyal to their employers – or, how frequently do they change jobs? This question is important because many LBC have entered the labor market as adults and, in terms of working behaviors, studies have noted a gap between their generation and that of their parents (Liang, H., 2011; Shao, C., & Zhang, Y., 2012). Several authors have showed that, compared with the older generation, the younger generation of migrant workers change jobs more frequently. On average, as observed by a team of sociologists from Tsinghua University, younger workers change jobs every 2.1 years, whereas older workers change jobs every 6.2 years (Xie, D. H., 2016). To study the influences of being left behind or migrating on frequencies in job changes, Xie Donghong, based on data from a 2015 Migrant Worker Survey in the Beijing Area (N=1200), found that migrant workers who were left behind or migrated as children changed jobs more frequently. Moreover, the longer the experience of being left behind or migrating, the more frequently job changes occurred, and male workers changed jobs more frequently than female workers.

The clearest sign of the transition to a more sociologically oriented approach to LBC studies is a review published in 2011 (Tan, S., 2011). In this fairly comprehensive review, Tan Shen classified Chinese LBC studies into two phases, characterized by descriptions of LBC, and their further refinement and theorization, respectively. But the author points towards another, distinct dimension: considering the phenomenon of LBC in terms of “the whole set of system design and arrangement” in which it occurs, which explains the “splitting structure of family” – a framework borrowed from a study on 19<sup>th</sup> century Russia carried out by Micheal Burawoy. According to Tan and several others (Duan, C. R., Lv, L. D., & Wang, Z. P., 2014; Wang, J. H., & Huang, B. H., 2014), this familial structure is the result of a “model of labor reproduction.” More specifically, keeping their children at home – thereby resulting



---

in the “splitting structure of family” – can reduce the living costs of migrating parent(s) working in cities, lowering their salaries and, thus, creating an army of low-paid laborers who have provided China with a competitive advantage in the globalized market. Based on such analyses, the author asserts that, rather than CPS as the primary problem to which the phenomenon of LBC gives rise, the latter is a surface phenomenon reflecting deeper societal structures. Tan claims that some temporary measures the government has employed, such as LBC boarding schools, can even make the situation worse, by increasing the financial burdens of already economically disadvantaged families (Tan, S., 2011).

Sociologists have enthusiastically endorsed this perspective of labor/class reproduction, as well as its implications for understandings of migrant workers and their children in China (Shen, Y., 2006; Lv, P., 2006). Supported by various analytical paradigms – for example, from Karl Marx and Pierre Bourdieu to Karl Polanyi and Paul Willis – both qualitative and quantitative research projects have appeared in this vein (Xiong, Y. H., 2010; Zhou, X., 2011; Huang, B. H., 2014). Unlike either the diagnostic or advanced diagnostic approaches, these studies focus on how LBC and migrant children have been marginalized in school and society at large, constituting a subculture directed against education and society and, thereby, undermining conditions for the possibility of their own social mobility. Consequently, these youth are unable to move upwards, reproducing themselves as a new generation of laborers, enhancing the structures of a society in which they occupy the lower class – a paradox of cultural reproduction, as Paul Willis refers to it.

### **Concluding Remarks**

This review has examined the evolution of LBC studies in China, outlining the theoretical assumptions, methods, and frameworks characteristic of the different periods of approaches into which these studies fall, diagnostic, advanced diagnostic, and sociologically oriented. Studies oriented in terms of the diagnostic approach illustrate psychological and behavioral problems among LBC, based on an overly simplistic cause-effect assumption, those of the advanced diagnostic approach explore a greater number of factors, which help to better understand the complexity of CPS in relation to LBC in China, and those of the sociologically oriented approach place the phenomenon of LBC within the broader perspectives of societal structures and forms of labor reproduction. Together these studies demonstrate the importance and seriousness of the phenomenon of LBC for LBC themselves, their families, and the future of society as a whole. Nevertheless, many

---

significant problems remain, four of which we address here, to highlight future directions for LBC studies in China.

First, although numerous studies exist employing the diagnostic and advanced diagnostic approaches, these have resulted in inconsistent findings. Even though several meta analyses have been performed, they draw conclusions based on only a very small number of relevant studies – 8 studies in the analysis by Wang, F. S. et al. (2010), 6 in the analysis by Lin, X. H. et al. (2010), and 12 in the analysis by Liu, X. et al. (2013) – and do not engage in exploring reasons for why and how inconsistencies arise. As suggested by Yan Bohan (2014), LBC studies as a whole lack a relatively unified methodological framework in terms of which to formulate a set of highly focused questions and measures to explore LBC, guiding the accumulation of evidence and answering these questions – for example, sorting out previous findings regarding specific challenges LBC might encounter, such as loneliness, anxiety, or school performance. As a result, findings at present are too dispersed to frame shared scholarly questions and, thereby, arrive at widely accepted conclusions within the research community.

Second, most researchers now understand that the phenomenon of LBC is essentially a social one, and cannot be comprehensively understood without a broader, systematic, and social perspective. Meanwhile, a large number of studies employing either the diagnostic or advanced diagnostic approaches have failed to systemically compare LBC with non-LBC in rural areas, migrant children in cities, or migrant children with city children in urban areas. Studies should, therefore, expand to include such broader, multi-population/-geographic comparisons: LBC and non-LBC in rural areas, migrant and city children in urban areas, LBC in rural and migrant children in urban areas, non-LBC in rural and city children in urban areas. Methodologically, such comparisons would help to control for endogenous factors – such as the economic gap between rural and urban areas, and social discrimination against people living in or coming from rural areas – to discern the effects of CPS on LBC more accurately.

Third, studies employing the diagnostic and advanced diagnostic approaches fall, by and large, within the domain of psychology – clinical, developmental, educational, and social psychology. The rise of the sociologically oriented approach poses potential challenges to psychologists: their abilities to integrate this foreign perspective into their own research paradigms. In this regard, studies on LBC in China might better integrate psychological and sociological perspectives, to the extent that the integration of these perspectives could yield insights leading to a more comprehensive understanding of the phenomenon of LBC in

---

China. Such integration would be crucial, as resulting studies would be capable of more precisely distinguishing the psychological effects of CPS on LBC from those of a more social nature – such as cultures of discrimination – as well as learning more about these effects and their interactions more broadly. The success of this integration hinges, to a large extent, on the quality of studies described in the preceding paragraphs.

Finally, LBC studies in China should continue to better connect with international research on CPS. This connection applies as much to the necessity of Chinese researchers borrowing ideas from abroad to further refine their research and theorize their findings as international researchers taking cognizance of LBC studies in China and the capacity of these findings to contribute to understandings of CPS and LBC at large. Studies along these lines might identify new topics to further explore, such as the relation of cultural, social, economic, and political dimensions to CPS in the case of LBC. Such dialogues would benefit both Chinese and international researchers, providing insights to better understand and cope with the effects of CPS on LBC both in China and worldwide.

#### Reference

April, M. (2014, February 5). China raises a generation of 'left-behind' children. *CNN*.

Retrieved from

<http://edition.cnn.com/2014/02/04/world/asia/china-children-left-behind/>

Becker, Gary. S. (1991). *A Treatise on the Family*. Cambridge, MA: Harvard University Press.

Bu Wei (2008). An analysis on the social support of left-behind children. *China Youth Study*, 6, 25-30.

Cai He, & Wang Jin (2007). A study on migrant workers' permanent migration intentions. *Sociological Studies*, 6, 83-113.

Chen Liang, Zhang Lijing, & Shen Jie (2009). The effect of parenthood of left-behind children in rural areas on their subjective well-being. *Chinese Journal of Special Education*, 3, 8-12.

Chen Xi (2012). Social capital and deviant behaviors of left-behind children. *Zhejiang Social Sciences*, 5, 86-93.

Chen Xinxin, Zhang Linxiu, Luo Sigao, & Shi Yaojiang (2009). Migration of the parents and the school achievement of the rural students: Evidence from Shaanxi and Ningxia. *Chinese Journal of Population Science*, 5, 103-110.

---

Cui Song, Zhou Zheng, Kong Xiangzhi (2015). Influence of parent absence on nutrition and health of left-behind children by parent absence: A PSM based analysis. *Rural Economy*, 2, 103-108.

Dong Qi (1991). A study on the adaptability of children of divorced family. *Psychological Development and Education*, 3, 12-18.

Duan Chengrong, Lv Lidan, & Wang Zongping (2014). Research on left-behind children's home education and social education. *Peking University Education Review*, 3, 13-29

Duan Chengrong, & Yang Ge (2008). The left-behind children in rural China. *Population Research*, 32(3), 15-25.

Fan Fang, & Sang Biao (2005). Absence of parental upbringing and liushou children's personality, academic achievements as well as behavior problems. *Psychological Science*, 28(4), 855-858.

Fan Xinghua, & Fang Xiaoyi (2010). A comparison of problem behaviors between parent-present children and parent-absent children in different care-taking modes. *Chinese Journal of Clinical Psychology*, 18(2), 232-234,237.

Gao Wenbin, Wang Yi, Wang Wenzhong, & Liu Zhengkui (2007). Social support and interpersonal relationships in school of children left in rural areas. *Chinese Mental Health Journal*, 21(11), 791-794.

Guo Xuedong, Li Yaqin, Wang Lina, & Shen Jiliang (2006). Moderator effects of social support on relationship between life events and mental health of junior high school students. *Chinese Journal of Clinical Psychology*, 14(5), 530-531.

He Xiujian (2007). Mental health of the children left home in rural area: An ecological perspective. *Journal of Hebei Youth Administrative Cadres College*, 73, 25-28.

Hu Feng, & Li Shantong (2009). The impact of parents' migration on their children's education: An empirical based on migrant workers in five cities. *Management World*, 2, 67-74.

Huang Binhuan (2014). Double disembeddedness and the class formation of new generation of migrant workers. *Sociological Studies*, 29(2), 170-188.

Hou Yuna( 2015). Parental labor migration and left-behind children's development in rural China: Empirical evidence based on propensity score matching. *Education & Economy*, 1, 59-65

Jia Yonghong (2008). A study on left-behind children's misbehaviors in central China. *Youth Studies*, 4, 1-6.

---

Kandel, William (1999). The impact of U.S. migration on Mexican children's educational attainment, *CICRED*, working paper, 305-328.

Kandel, William, & Kao, G.(2001). The impact of Temporary Labor Migration on Mexican Children's Educational Aspirations and Performance. *International Migration Review* , 35(4), 1205-1231.

Kang Hui, Zhao Juan, & Liu Jianzhong (2010). Bibliometric analysis of study on rural children left behind in China between 2007 and 2009. *Modern Agricultural Science and Technology*, 3, 395-397.

Left-behind children: A slow awakening. (2016, February 20). *The Economist*. Retrieved from <http://www.economist.com/news/china/21693268-government-recognises-huge-problem-now-it-must-tackle-it-slow-awakening>

Li Baofeng (2005). A study on the psychological problems in left-behind children and the intervention. *Education Exploration*, 5, 82-83.

Li Xiaomin, Luo Jing, Gao Wenbin, & Yuan Jing (2009). Research on negative emotions, coping style, self-esteem and interpersonal relationship of college students with left-behind experience. *Chinese Journal of Clinical Psychology*, 17(5), 620-622.

Li Yongxin, Luo Pengcheng, & Nie Guanghui (2009). The impact of personality characteristics and social support on resilience of left-behind children. *Journal of Henan University ( Social Science)*, 46(6), 127-130.

Li Yongxin, Luo Pengcheng, & Tan Yamei (2008). A study on left-behind children's psychological resilience. *Journal of Henan Normal University (Philosophy and Social Sciences Edition)*, 48(1), 13-18.

Li Yunsen (2013). Self-selection, migration, and children educational performance: evidence from an underdeveloped province in rural China. *China Economic Quarterly*, 12(3), 1027-1048.

Li Zhikai (2009). Relationship between ego-resiliency and social support of parent-absent children. *China Journal of Health Psychology*, 17(4), 440-442.

Liang Hong (2011). Migrating-out and left-behind in the view of life course: A comparative analysis of the characteristics of the second-generation migrant workers. *Population Research*, 35(4), 17-28.

Lin Xihua, Shen Min, Wang Lin, & Wang Youjie (2010). Meta-analysis on the mental health of the left-in-hometown children in rural china. *Acta Medica, Huazhong University of Science and Technology*, 39(2), 228-231.

- 
- Ling Hui, Zhang Jianren, Zhou Lijian, Yi Yan, Hong Wanyan, & Wen Jing (2012). Impact of the age and duration separated from parents on left-home-kids' behaviors and emotions. *Chinese Journal of Clinical Psychology*, 20(5), 674-678.
- Liu Haixia, Wang Jiu, Lin Lin, Hu Naibao, Han Chunlei, & Sun Hongwei (2015). A survey of mental health of college students who used to be left-behind children. *Chinese Journal of Health Statistics*, 32(4), 636-641.
- Liu Jingming (2008). Changing patterns of inequality of educational opportunity in basic education in China. *Social Sciences in China*, 5, 101-116.
- Liu Qingying (2016). The influence if different left-home conditions on ego-resilience of left behind children. *Journal of Higher Education*, 7, 55-57.
- Liu Xia, et al. (2013). Meta-analysis on mental health of left-behind children. *Chinese Journal of Children Health*, 21(1), 68-70.
- Liu Yingxia, & Ji Yueqing (2008). The impact of parents' migration on their children's academic performance: An empirical study based on students in Baoying county in Jiangsu province. *Gansu Agriculture*, 267, 54-56.
- Liu Yulan (2013). Migration experience in childhood and early adulthood life chances: A life course perspective. *Population Research*, 37(2), 93-101.
- Luo Guofen (2005). From 10 million to 130 million: what is the exact number of left-behind children. *Youth Studies*, 2, 3-6.
- Luo Guofen, & She Ling(2006). A reflection of the surveys of left-behind children. *Youth Exploration*, 3, 13-15.
- Luo Jing, Wang Wei, & Gao Wenbin (2009). Review of the studies on rural left-behind children in China. *Advances in Psychological Science*, 17(5), 990-995.
- Luo, Xiaolu, & Li Tianran (2015). The effect of a family's social-economic status on left-at-home children's peer relationship. *Chinese Journal of Special Education*, 2, 78-83.
- Lv Peng (2006). The grassroots of production and the reproduction of the grassroots. *Sociological Studies*, 2, 230-242.
- McLanahan, S., & Sandefur, G. F. (1994). *Growing up with a Single Parent*. Cambridge, MA: Harvard University Press.
- Settersten, R. A., & Mayer K. U. (1997). The measurement of age, age structuring, and the life course. *Annual Review of Sociology*, 23(1997), 233-261.
- Shangguan Zimu (1994). More attention should be given to left-behind children. *China Scholars Abroad*, 6, 39-39.

---

Shao Cen, & Zhang Yi (2012). A comparative study of family migration in floating population between the generations before-80's and post-80's. *Youth Studies*, 4, 1-11.

She Ling, & Luo Guofen (2009). Commentary of the researches on the rural left-behind children. *Journal of Henan University (Social Science)*, 49(6), 137-146.

Shen Jiliang, & Wu Yue (2008). Psychological development of left-behind children: a second thought of the environment. *Journal of Henan University (Social Science)*, 48(01), 9-13.

Shen Yuan (2006). The social transformation and reformation of Chinese working class. *Sociological Studies*, 21, 13-26.

Sun Xiaojun, Zhou Zongkui, Wang Ying, & Fan Cuiying (2010). Loneliness of children left in rural areas and its relation to peer relationship. *Psychological Science*, 33(2), 337-340.

Tan Shen (2011). A review of studies of left-behind children. *Social Sciences in China*, 1, 138-149.

Tang Meijing (2014). Research on social support of rural left-behind children from the social support network perspective. *Journal of Social Work*, 1, 128-134

Tang Youcai, & Fu Ping (2011). Left-behind children and their socialization: a dynamic perspective. *Academic Journal of Zhongzhou*, 184, 108-113.

Tao Ran, & Zhou Minhui (2012). A study of the relation between left-behind children's academic performance and the absence of their parents. *Management World*, 8, 68-77.

Wang Dongyu (2002). A study on the personality characteristics and educational strategy of left-behind children. *Health Psychology Journal*, 10(5), 354-355.

Wang Dongyu, & Lin Hong (2003). A study on 284 middle school left-behind children's mental health in Fujian Province. *Chinese Journal of School Health*, 24(5), 521-522.

Wang Dongyu, & Wang Lifen (2005). A research on the related factors of the mental health of parent-absent middle school students. *Psychological Science*, 28(2), 477-479. .

Wang Fengsheng, et al. (2010). SCL-90 test result on the left-behind children in rural area: a meta-analysis. *Journal of Hygiene Research*, 39(2), 224-227.

Wang Jianhua, & Huang Binhuan (2014). The left-behind experience and job mobility of the new workers: how the system of migrant worker jeopardizes itself. *Chinese Journal of Sociology*, 34(5), 88-104.

Wang Liangfeng, Zhang Shun, Sun Yeheng, & Zhang Xiujun(2006). The current situation of loneliness of left-behind children in countryside. *Chinese Journal of Behavioral Medicine and Brain Science*, 15(7), 639-640.

---

Wang Yulong, Yao Zhihong, & Jiang Jinwei (2016) Parent-child attachment and emotion regulation ability of rural left-behind children: Duration separated from parents as moderator. *Chinese Journal of Clinical Psychology*, 3, 550-553.

Wang Yuqiong, Ma Xinli, & Wang Tianhe (2005). Are left-behind children “problem children”? *China Statistics*, 1, 59-60.

Wu Fan, & Yang Weiwei (2011). Left-behind children and migrant children: From the perspective of resilience theory. *Population Research*, 35(6), 90-99.

Wu Ni (2004). A survey report on the education of home-remaining child in rural areas. *Educational Research*, 297, 15-18.

Wu Zhihui, & Li Jingmei (2015), The investigation report of survival status for left-behind children in rural areas. *China Agricultural University Journal of Social Sciences Edition*, 1, 65-74.

Xiao Zhengde (2006). A review of the latest studies on the education of left-behind children. *Social Science Front*, 1, 246-249.

Xie Donghong (2016). The effect of left-behind experience on job mobility of new generation of migrant workers: A survey in Beijing in 2015. *South China Population*, 31(135), 1-9.

Xie Xinhua, Zhang Hong (2012). Researches of migrating and left behind children abroad and their implications. *Youth & Juvenile Research*, 1, 36-43.

Xiong Yihan (2010). Grassroots, schools and class reproduction. *Open Times*, 1, 94-110.

Xu Jiancai, & Deng Yuanping (2008). The effect of the experiences of rural home-left life on the development of college students' personality. *Journal of Changchun University of Science and Technology (Social Sciences Edition)*, 21(6), 123-126.

Xu Liping, & Fang Qian (2012). View on college students with the left-behind experience from the perspective of mental resilience. *Journal of Xinyu University*, 17(2), 119-121.

Yan Bohan (2014). A review of studies on left-behind children on multiple perspectives. *Academic Forum*, 284, 129-134.

Yang Huiquan, Zhu Qizhen (2011). Sociological approach to educational strategies for rural family with left behind children: A case study from the theory of life course perspective. *Population and Development*, 3, 63-72.

Yang Juhua, & Duan Chengrong (2008). A comparative analysis of educational opportunities for migrant, stay and other children in rural China. *Population Research*, 32(1), 11-20.



---

Yang Jun, & Zhang Chengxia (2015). An analysis on features of value of once-left -behind college students. *Journal of Yichun University*, 37(10), 118-121.

Yang Qing, Yi Lilan, & Song Wei (2016). Relation of loneliness to family cohesion and school belonging in left-behind children. *Chinese Mental Health Journal*, 3, 197-201.

Yang Xiaoqing, & Xu Yan (2011). On the relationship between the subjective well-being and self-worth of higher vocational school students left at home during their childhood by their parents seeking employment in cities. *Chinese Journal of Special Education*, 133, 13-17.

Yao, Xiaoyan (2012). A study of rural left behind children from ego-resilience perspective. *Journal of Guiyang University (Social Sciences)*, 3, 38-41.

Yao Yun (2005). Problems and educational solutions concerning children staying in the countryside. *Theory and Practice of Education*, 25(4), 41-43.

Ye Yiduo, & Bai Liying (2002). Study of parents-child relationship and its influence on child development at home and abroad. *Journal of Fujian Normal University (Philosophy and Social Sciences Edition)*, 115, 130-136.

Yin Fuquan, Tang Zhenghua, Lin Yingying, Zhang Weiyuan, Wu Junduan, Tan Yuyu, Tan Lina, Liu Jianbo (2014). Left-behind children, migrant children, rural and urban children's Behavioral Problems. *China Journal of Health Psychology*, 5, 750-752

Yu Guoliang, Zhang Dengyin, & Lin Chongde (1998). The influence of children of learning disabilities of family resources on their cognitive development and learning motivation. *Acta Psychologica Sinica*, 30(2), 174-181.

Yue Huilan, Fu Xiaoti, Zhang Bin, & Guo Yuezhi (2006). A survey of the left-behind children's mental health. *Educational Practice and Research*, 10, 4-6.

Zhang Feng, Wang Jie, Yin Lanqing, & Ren Zhihong (2003). An analysis of the living standard of some migrant children in Wuxi City. *Chinese Journal of Child Health Care*, 11(5), 352-353.

Zhang Li, Wang Qianyu, Zhao Jingxin (2014). Caregiver's support, beliefs about adversity and loneliness in rural left-behind children. *China Journal of Health Psychology* 2014, 5, 350-353

Zhao Hong, Luo Jianguo, Li Zuowei, Huang Yiyin, Liu Liang, Wen Hong, Zhong Kun, Zhou Biyang, & Xu Feng (2006). Control study of personality and self-consciousness in children of civilian workers. *China Journal of Health Psychology*, 14(6), 633-634.

Zhao Jingxin, Liu Xia, & Shen Jiliang (2008). Left-home adolescents' perception of social support networks and their associations with individual depression and loneliness :

---

variable-centered and person-centered perspectives. *Psychological Development and Education*, 1, 36-42.

Zhao Jingxin, Liu Xia, & Zhang Wenxin (2013). Peer rejection, peer acceptance and psychological adjustment of left-behind children: the roles of parental cohesion and children's cultural beliefs about adversity. *Acta Psychologica Sinica*, 45(7), 797-810.

Zhao Jingxin, Yang Ping, Ma Jinling, & Huang Cuicui (2016). Perceived discrimination and positive /negative emotion of left-behind children: The protective role of parent-child cohesion. *Psychological Development and Education*, 3, 369-376.

Zhou Xiao (2011). Counter-school culture: A comparative study of "Lads" and "Zidi". *Chinese Journal of Sociology*, 31(5), 70-92.

Zhou Zongkui, Sun Xiaojun, Liu Ya, & Zhou Dongming (2005). Psychological development and education problems of children left in rural areas. *Journal of Beijing Normal University (Social Sciences)*, 1, 71-78.

Zhu Kerong, Li Jingchun, & Zhou Shuqin(2002).Analysis rural left-behind children's school performance and policy suggestions. *Education Science*, 18(4), 21-24.

Zhu Siqin(2016). The influence of parental absence on psychological health among rural left-behind children. *Jinan Journal(Philosophy & Social Science Edition)*, 2, 84-94.