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# PARENT SATISFACTION WITH ECE IN RURAL CHINA

Parental Satisfaction with Early Childhood Education Services in Rural China:

A National Survey

### **Abstract**

This study aims to explore parental satisfaction with early childhood education service in rural China. Altogether 13,131 Chinese parents who were randomly sampled from the 12 rural areas of China completed the *Parent Satisfaction with Education Experiences Scale*. The results indicated that: (1) Chinese parental satisfaction with the teacher contact experience had the highest mean scores, whereas their satisfaction with school contact experience had the lowest ones; (2) there were no significant urban-rural differences in parental satisfaction; (3) there were two latent classes of parental satisfaction: the Low Satisfaction Parents were the poor-educated low-class families in central China and were born in the 1990s; the High Satisfaction Parents were the 1970s cohort from the moderately-educated high-income families in eastern China; and (4) there was a significant difference in parental satisfaction between the Eastern, Central, and Western China. These findings have implied that more efforts should be made to promote equity, equality, and social justice in the field of early childhood education.

*Keywords:* Chinese parent, rural, satisfaction, educational experiences, PSEE

## Parental Satisfaction with Early Childhood Education Services in Rural China:

### A National Survey

Early childhood education in rural China has been suffering from the ill-balanced development between urban and rural areas, thus lags far behind its urban counterparts in terms of quantity and quality (Li, Yang, & Chen, 2016). The minimal ECE budget has been reserved for public programs in urban China, serving affluent families and leaving rural preschoolers un-educated (Hu, Roberts, Jeong, & Guo, 2016). The central government has recognized the remarkable urban-rural disparity in ECE thus launched the ‘Great Leap Forward’ in 2010 to universalize ECE in China primarily in rural areas. To achieve the goal that 75% of preschoolers will receive three-year education by 2020, the government has invested 50 billion RMB (8.3 billion USD) in boosting the development of ECE in the rural areas of the central and western regions (Li, Yang, & Chen, 2016). Consequently, a recent study has found that Chinese parents are satisfied with the ECE service in urban China (Hong, Zhu, Wu, & Li, 2020). However, whether rural parents are satisfied with ECE service is still unknown. To fill the gap, this study aims to examine parental satisfaction with ECE service in rural China through a national survey with the *Parent Satisfaction with Education Experiences Scale* (PSEE; Fantuzzo, Perry, & Childs, 2006).

### **Parental Satisfaction with ECE services in China**

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Parental satisfaction has been documented as a reflection of parents' experiences, expectations and feelings towards ECE services ( Emlen et al., 2000; Hu, 2018; Scopelliti & Musatti, 2013). In the past decade, researchers have explored the multiple components of ECE programs such as family-school interactions, curriculum, environment, leadership and management, and so on (Jinnah & Walter, 2008; Hong, 2004). In particular, researchers tended to focus on the disadvantaged population such as parents in the rural areas who were suffering from social and educational inequality, thereby alarming the ECE institutions on which dimensions should be improved (Zhang et al., 2009; cited by Hu, 2018). To examine the cultural and social-contextual differences, scholars have developed different instruments to measure parental satisfaction across different countries (Hu, 2018). In China, Hong et al. (2020) validated *the Parent Satisfaction with Education Experiences Scale (PSEE*, Fantuzzo et al., 2006) and found it an effective and suitable measure of Chinese parental satisfaction. The Chinese version of PSEE (Fantuzzo et al., 2006; Hong et al., 2020) has three constructs of parental satisfaction, revealing not only their expectations and needs towards ECE service but also their perceived problems of the service (Hong et al., 2020). Therefore, this study would employ the PSEE to explore parental satisfaction with ECE services in rural China.

Recently, scholars have extensively explored the multidimensional factors that affect parental satisfaction in different countries (Hong et al., 2020; Hu, 2018). In China, for instance, Nyland et al. (2016) revealed that Chinese parental satisfaction was mainly determined by the perceived quality of programs and teachers. In other countries, parental satisfaction with ECE services could be influenced by various kinds of factors, including

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gender (Nyland et al., 2016), educational background (Kelesidou et al., 2016), employment status (Fantuzzo et al., 2006; Jang, Moore & Lin, 2014; Nyland et al., 2016), income (Jang, Moore & Lin, 2014; Nyland et al., 2016), and marital status (Fantuzzo et al., 2006). Therefore, Hu (2018) suggested that parents demographics might influence their satisfaction level towards ECE service in multiple ways, for instance, different opportunities to receive quality services resulting from varying socioeconomic status (SES). China is a country with a vast territory and a huge gap between the urban and the rural areas, and there might be some noticeable urban-rural gaps in the quantity and quality of ECE services. Therefore, this study will explore the urban-rural divide in parental satisfaction in China.

### **The Urban-Rural Gap in ECE Services in China**

In China, young children (Age 3-6) should go to kindergartens to take early childhood education (ECE). Rural China, however, has been suffering the loss of stand-alone kindergartens since 1995, which has caused a decrease of 40% classrooms throughout the country (Hu et al., 2016). As a replacement or compensation, the cheap, unlicensed, unregulated family programs have become widespread and popular in rural China (Hu et al., 2016). However, without a reliable, sufficient source of funding, these illegal programmes were operated on bare budgets and rated as low to unacceptable quality, and rural parents were not satisfied. This urban-rural gap has been repeatedly reported in previous studies (Hu & Roberts, 2013; Hu et al., 2016).

The urban-rural gap has been observed in many forms. First, urban children are afforded a much earlier start in ECE than rural children, as they can get to nursery classes at Age 2. On the contrary, most rural children can only go to preschool classes at Age 5 or 6, which is similar to American children starting kindergarten or first grade. Second, urban programs receive more public support and serve parents with more stable incomes, whereas rural programs have little or no support and served parents with unstable incomes (Hu et al., 2016). Third, about one-third of rural preschoolers (Aged 3-6) have been left behind to be cared for by their grandparents with little education, whereas most of the urban preschoolers have gone to different preschools to take early childhood education (Hu et al., 2016). This urban-rural gap in ECE has translated into a widening gap in student achievements (Rao, Jin, Jing, & Li, 2012). Therefore, filling this gap as early as possible has become a national concern and received extensive attention in China.

### **‘The Great Leap Forward’ of ECE Services in Rural China**

To thoroughly solve the problems in ECE development, the State Council released the blueprint for China’s education reform in 2010: the *Outline of China’s National Plan for Medium and Long-term Education Reform and Development (2010–2020)* (hereinafter referred to as ‘the Plan’). The Plan, for the first time in Chinese history, has gone through public discussion and consultation, reflecting the government’s confidence and determination to establish an education system to satisfy its people (Li, Yang, & Chen, 2016). It has established the three development missions and strategic goals for the development of ECE by 2020: (1) gross enrolment rate (GER) for preschoolers taking 1-year ECE must be 95 %,

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GER for those taking 2-year ECE must be 80 %, and GER for those taking 3-year ECE must be 70 %; (2) ECE shall be mainly funded, planned, and managed by the government, with families sharing part of the burden; and (3) all the children in rural China shall receive ECE, with all means and at all costs (Li, Yang, & Chen, 2016). Since then, all the governments have tried ‘all means’ to implement a universalized ECE in rural China. For instance, the development of ECE in rural China has become one of the six major tasks for education development before 2020. And a universal coverage of 1-year preschool education in rural areas will be achieved by 2020. In addition, many "3-year Action Plans in Developing Early Childhood Education" have been issued by multi-level authorities across China with a priority on the development of ECE in rural areas. Accordingly, the ‘Great Leap Forward’ of ECE in rural China has been observed in the past years (Li, Yang, & Chen, 2016). In 2018, for instance, there were 266,700 kindergartens in the nation with an annual increase of 4.60%, and 2,581,400 kindergarten teachers with an annual increase of 6.14% (Ministry of Education, 2019b).

In addition, the central government (2010) issued *Several Views on the Development of Preschool Education by the State Council*, urging the development of ECE through establishing a public service system jointly supported by both public and private systems. It asked local governments to solve the problem of inadequate and unfair distribution of public funding support in the development of ECE, suggesting four major strategies for action: (1) increase governmental financial input; (2) establish a funding mechanism; (3) subsidize the education of young children from poor and needy families, and (4) prioritize and promote the



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development of ECE in rural and western areas. Accordingly, the educational authorities jointly invested 8.3 billion USD into ECE during 2011–2015, with a focus on the development of ECE in the rural areas of the central and western China. According to the mid-stage review of the National Education Reform and Development of Long-Term Planning Programs (2010–2020) (GOC, 2011, 2015), two remarkable achievements have been made in rural China: First, increasing resources of ECE service have become available in rural areas than urban ones, which is beneficial for achieving social justice; Second, governmental funding for ECE development has rapidly increased since 2010, with a 1011.5 % increasing rate during the past five years in the rural areas (Hu, et al., 2016).

### **The Context of This Study**

Although the ‘Great Leap Forward’ in ECE has been observed since 2010, there are still many issues and problems challenging the social justice and sustainability of ECE in rural China areas (Li, Yang, & Chen, 2016). The quality of ECE in rural areas lags behind that of urban ones, and preschoolers in rural China can hardly enjoy quality ECE services (Hu et al., 2016). In addition, the new two-child policy launched in 2016 has enabled Chinese families to have a second child, which would be eventually challenging the development of ECE services in rural as well as urban China (Li, Yang, & Chen, 2016). Therefore, the Chinese government has prioritized "*Running Education to the Satisfaction of the People*" as the top goal of ECE development in China (Hu et al., 2016). However, to achieve a more satisfactory ECE system in China and to support the government's improvement plan, research is needed to reveal the realities of ECE in rural areas in terms of programme quality

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and parental satisfaction. In particular, a national survey on parent satisfaction with the ECE services in rural China will help to analyze the effectiveness of the ‘Great Leap Forward’ as well as the issues and challenges associated with the reform.

To fill this gap, this study will explore parental satisfaction with ECE service in rural China with the *Parent Satisfaction with Education Experiences scale* (PSEE; Fantuzzo et al., 2006), which was developed based on three parental involvement experiences: (1) the teacher contact experience; (2) the classroom contact experience; and (3) the school contact experience. This scale has been translated, revised and validated in China in a recent study on urban parents (Hong et al., 2020); this study will employ the validated version to conduct a national survey to explore the following questions:

1. Are Chinese parents generally satisfied with the ECE service in a rural area? Is there an urban-rural gap in parental satisfaction?
2. Are there any potential classes of parent satisfaction in a rural area? If yes, what are they?
3. What are the main factors influencing parent satisfaction with ECE service in rural China?

## **Method**

### **Participants**

Stratified cluster sampling approach was employed to recruit rural parents of 3- to 6-year-old children for this national survey study. First, we randomly selected six provinces

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to represent, respectively, the Eastern, Central, and Western China: Shandong, Liaoning; Henan, Shanxi; Sichuan, and Guizhou. Second, we randomly sampled two cities from each participating province, resulting in 12 participating cities. Third, we randomly sampled 50 kindergartens from each city and two classrooms from each kindergarten, resulting in 1200 classes of 600 kindergartens. Fourth, we sent out 42,000 questionnaires to all the registered children and their parents of the 1200 participating classes. Fifth, 40,646 questionnaires were completed and returned, indicating a high return rate of 96.8%. In this central government-funded study, all the questionnaires were distributed by the local education departments; thus, there were no significant differences in the response rates (less than 1%).

From the 40,646 completed questionnaires, we identified 13,131 rural parents who were recruited from the 480 classes of the 240 rural kindergartens. The other 27,515 parents simultaneously sampled from the urban areas of the 12 cities were regarded as the counterpart of this rural sample and have been explored separately in a previous study (Hong et al., 2020). This study will compare the rural sample ( $N_1 = 13,131$ ) against the urban ones ( $N_2 = 27,515$ ) to identify the urban-rural gap in parental satisfaction.

In this study, the rural sample covered the Eastern (38.0%), Central (29.6%), and Western (32.4%) regions that were geographically representative of rural China. The majority (77.6%) of the respondents were mothers, few were fathers (21.1%) and grandparents (1.3%), with age ranging from 16 to 67 years old ( $M = 31.2$ ,  $SD = 5.7$ ). Very few of them were the 1970s (8.8%), and the 1990s accounted for 27.7%, whereas the majority (63.5%) was the 1980s cohort. Their educational profile ranged from junior secondary or below (42.8%), high

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school (32.9%), to university or above (24.3%). About 57.4% of the participants were in the low-income household, 38.2% were in the middle-income household, and 4.4% were in the high-income household. And the 240 participating kindergartens differed in the ownership and sponsorship, the majority (67.9%) kindergartens in this study was public kindergarten, and 32.1% was private kindergarten (See Table 1).

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 Insert Table 1 about here  
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## Measurements

**Demographic Questionnaire.** This part of survey mainly collected the demographic information of the participating parents: educational background (junior secondary or below, high school, university or above), age cohort (the 1970s, 1980s, & 1990s), and household income (low-income, medium-income, and high-income). The information about age cohort and household income was coded into categorical data according to the following scheme: (1) Age cohort: the 1970s cohort includes the parents born between January 1, 1970, and December 31, 1979; the 1980s cohort includes those born from January 1, 1980, to December 31, 1989; and the 1990s refers to that born from January 1, 1990, to December 31, 1999; (2) SES: the median household income (5,000 RMB per month) reported by the Chinese Statistical Bureau for the first half of 2018 was used. Below this level would be coded as low-income household (Ministry of Education of People’s Republic of China, 2018), between

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5,000-12,000 RMB per month would be coded as middle-income household, and above 12,000 RMB per month would be regarded as a high-income household. (3) Child's gender, age, number, etc. Besides, information about the geographical regions (eastern, central, and western region) and the kindergarten type (public kindergarten and private kindergarten) was also collected.

**Parent Satisfaction with Education Experiences Scale (PSEE).** The original version of PSEE is a 12-item 4-point Likert scale (*1-very dissatisfied, 2-dissatisfied, 3-satisfied, and 4-very satisfied*) (Fantuzzo et al., 2006). It was widely used to measure the level of parent satisfaction with early childhood education, which in particular focused on the three constructs of their experiences: the contact with teachers, classrooms, and kindergartens. The construct of teacher contact experiences measures the teacher-related events, such as telephone conversations with the teacher, notes sent home, and so on. The construct of classroom contact experiences focuses on parent contact with the classroom, including parent involvement in planning activities, volunteering in the classroom, and so on. The construct of school contact experiences describes parents' experiences with the school setting, including parent workshops or training opportunities offered by the kindergartens and communication with the kindergarten principal/administrators. In this study, we used the Chinese version of PSEE, which has proven satisfactory reliability and contextually applicable in the previous large-scale studies investigating 27,515 urban parents from urban China (Hong et al., 2020). To verify the applicability of this scale to rural samples ( $N_1 = 13,131$ ) in the context of urbanization in China, we tested the structural validity of the scale through the CFA. The

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results verified the three-factor structure as a model adequately fitted to the data,  $\chi^2 = 2362.33$ ,  $df = 51$ ,  $p < .000$ , CFI = 0.986, TLI = 0.981, RMSEA = 0.059 (90% CI [0.07, 0.08]), AIC = 2440.33, which indicated good model fits, such as CFI > 0.95 (Hu & Bentler, 1995); RMSEA < 0.08 (Gommel, Vandaele, & Tabeur, 2008); TLI, CFI > 0.90 (Müller et al., 2013). Also, correlation analysis indicated that the correlation matrix between PSEE and its three sub-dimensions ranged from .93 to .95,  $ps < .000$ .

### **Data cleaning and analysis methods**

All the survey data were collected and analyzed using IBM SPSS 25.0 software. First, data cleaning was conducted, and the very few missing values (<0.5%) were replaced with the mean of the concerned variable. Second, descriptive statistics and t-tests were conducted to explore the overall satisfaction of rural parents and the urban-rural differences in parental satisfaction to review the effectiveness of ECE reform in the context of urbanization. As this study had a relatively large sample size, the effect size should be interpreted with caution (Royall, 1986; Sullivan & Feinn, 2012). Third, the latent class clustering was used to generate the latent classes of Chinese rural parent satisfaction. Next, we used MANOVA analysis to explore the differences in parental satisfaction in different regions. And the relationship between the investment in different provinces and their satisfaction with ECE was also analyzed to explore the investment effectiveness. Finally, we examined the main predictors of three-construct of parent satisfaction with ECE in rural China through hierarchical regression analyses.

## Results

### Descriptive Analysis of PSEE in Rural China

**The overall parent satisfaction with ECE in rural China.** The majority (84.8%) of rural parents in China showed great satisfaction with ECE experiences, with the means of the overall score being higher than 3.0. Specifically, the experience satisfaction with teachers has the highest score ( $M = 3.25, SD = .51$ ), which was slightly higher than the classroom contact experience ( $M = 3.24, SD = .48$ ), and the level of satisfaction with school contact experience was relatively low ( $M = 3.17, SD = .49$ ). Among the 12 items, “workshops or training opportunities offered” ( $M = 3.14, SD = .57$ ), “contact I have had with other parents” ( $M = 3.17, SD = .53$ ), and “contact I have had with principal/ administrators” ( $M = 3.17, SD = .57$ ) recorded the lowest mean scores, indicating relatively low satisfaction with the school contact experience.

**The urban-rural differences in parental satisfaction.** The independent sample t-test indicated that the satisfaction score of urban parents was significant higher than that of rural parents in classroom contact experience,  $t(40, 644) = 3.768, p < .001, 95\% CI [0.012, 0.038], d = 0.037$ . The effect size was non-significant, as small, moderate and large effect sizes were classified as 0.20, 0.50 and, 0.80 respectively (Cohen, 1988). In addition, there were no significant differences in the scores of teacher contact experience,  $t(40, 644) = 0.874, p = .382, 95\% CI [-0.008, 0.020], d = .009$ , and that of school contact experience,  $t(40, 644) = -0.120, p = .905, 95\% confidence interval of the difference [-0.014, 0.013], d = .001$ . Then,

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MANOVA analysis was conducted to explore the possible effects of urban-rural differences, and no significant effects were found, Wilks'  $\lambda = .962$ ,  $F(3, 40642) = 19.581$ ,  $p < .001$ ,  $\eta^2 = .001$ . In summary, no significant urban-rural differences were found the parental satisfaction.

**Latent Class Analysis of PSEE in Rural China**

To explore the potential characteristics of parent satisfaction with ECE, the latent class analysis was conducted to the seven major variables including geographical region, age cohort, educational background, household income and mean scores of the three-construct satisfaction. A similar analytic strategy has been adopted by previous studies to generate the latent profile (Bergman, Magnusson, & El-Khoury, 2003; DiStefano, 2012), which focus on classification of individuals in order to better understand the within-group differences.

Table 2 presents the statistical results of different LCA models. The results indicated that the 2-class model of PSEE exhibited the best LMR ( $p < .001$ ) and BLR ( $p < .001$ ) results and the highest Entropy. The 3-class model provided marginally lower AIC and BIC values than the 2-class solution, and the LMR indicated that it was not significantly better than the 2-class model. Therefore, this 2-class solution was found the best-fitting and most parsimonious model (Collins & Lanza, 2009). And the two classes represented 72.5% and 27.5% of the sample, respectively.

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Insert Table 2 about here



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Accordingly, the differences between the 2-class and the population distribution were analyzed using Chi-square. As shown in Table 3, the 2-class differed significantly in the geographical regions [ $\chi^2(2, n = 13131) = 496.09, p < .001$ ], age cohort [ $\chi^2(2, n = 13131) = 65.76, p < .001$ ], educational background [ $\chi^2(2, n = 13131) = 24.93, p < .001$ ], and household income [ $\chi^2(2, n = 13131) = 64.01, p < .001$ ].

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Insert Table 3 about here

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**Class 1: Low Satisfaction Parents.** As shown in Figure 1, this group was characterized by lowest satisfaction on teacher contact experiences ( $M = 3.06, SD = .30$ ), classroom contact experiences ( $M = 3.03, SD = .23$ ), and school contact experiences ( $M = 2.95, SD = .27$ ). Their major features included: located in central area (79.8%) (Henan and Shanxi in this study), the 1990s age cohort (77.0%), poor educated (73.7%) with junior secondary or below, and low-income family (75.2%).

**Class 2: High Satisfaction Parents.** This group had the highest score on teacher contact experiences ( $M = 3.87, SD = .42$ ), classroom contact experiences ( $M = 3.86, SD = .41$ ), and school contact experiences ( $M = 3.75, SD = .47$ ). This group features included: located in the eastern China (38.4%) (Shandong and Liaoning in this study), the 1970s age cohort (34.1%), relatively high educated with high school (30.9%) and university or above (30.6%), and high-income family (33.4%).

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 Insert Figure 1 about here  
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### **Region Differences in Parental Satisfaction**

MANOVA analysis was conducted to explore the possible effects of geographical regions, education background, age cohort, household income and kindergarten type. No significant effects were found except for that of geographical region (eastern, central, and western region). In particular, we examined the major effects in the overall satisfaction and found a significant effect of region, Wilks'  $\lambda = .962$ ,  $F(6, 26252) = 87.17$ ,  $p < .001$ ,  $\eta^2 = .02$  (i.e., small effect size,  $\eta^2 = .01$ ; moderate effect size,  $\eta^2 = .06$ , and large effect size,  $\eta^2 = .14$ ; Cohen, 1988; Portney & Watkins, 2009), and power to detect the effect was 1. Next, significant region differences were found for the three constructs: teacher contact,  $F(2, 13128) = 196.27$ ,  $p < .001$ ,  $\eta^2 = .03$ , power = 1; classroom contact,  $F(2, 13128) = 214.61$ ,  $p < .001$ ,  $\eta^2 = .03$ , power = 1; and school contact,  $F(2, 13128) = 253.93$ ,  $p < .001$ ,  $\eta^2 = .04$ , power = 1. Last, the Post hoc analysis indicated that the three dimensions of parent satisfaction were differentiated by geographical region: parental satisfaction in the eastern was significantly higher than that in the central ( $ps < .001$ ) and western regions ( $ps < .001$ ) in all the three constructs. There were no significant differences between the central and western regions ( $ps > .05$ ), but the central parent satisfaction levels were the lowest.

Besides, analysis of interaction effects was also conducted, using region (Eastern/Western/Central) separately by kindergarten type (public/private), educational

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background (junior secondary or below, high school, university or above), age cohort (the 1970s, 1980s, & 1990s), and household income (low-income, medium-income, and high-income) models for between-subject factors. The analyses revealed no significant effects except for region by kindergarten type interaction for all the three constructs: teacher contact,  $F(3, 13127) = 129.34, p < .001, \eta^2 = .03, \text{power} = 1$ ; classroom contact,  $F(3, 13127) = 140.01, p < .001, \eta^2 = .03, \text{power} = 1$ ; and school contact,  $F(3, 13127) = 166.04, p < .001, \eta^2 = .04, \text{power} = 1$ .

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### Predictors of Parent Satisfaction in Rural China

Spearman correlation analysis was conducted to explore the variables correlated with parental satisfaction in rural China. As shown in Table 4, the following variables were found significantly correlated with the three dimensions of parent satisfaction ( $ps < .01$ ):

Educational background (junior secondary or below, high school, and university or above), age cohort (the 1970s, 1980s, & 1990s), area factor (Urban/Rural), and region factor (Western / Central / Eastern).

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 Insert Table 4 about here  
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Next, we conducted 3-step hierarchical regression analyses with the enter method to predict the TCE, CCE, SCE scores. The independent variables were nested at three levels: (1) family level: Educational background (junior secondary or below, high school, and university or above), age cohort (the 1970s, 1980s, & 1990s); (2) area factor: Urban/Rural (Rural = 0, Urban = 1); and (3) region factor: Western = 0, Central = 1, Eastern = 2. Accordingly, family variables (educational background and age cohort) were entered in Step 1. In Step 2, the area factor (Urban/Rural) was entered. In Step 3, the region factor (Western/Central/Eastern) was entered.

The changes in  $R^2$  between the three steps indicated that: (1) educational background and age cohort could jointly significantly explain 0.2%, 0.2%, and 0.1% of the TCE, CCE, and SCE scores, respectively. And the educational background was found the negative predictor of parent satisfaction; (2) area factor could significantly predict only 0.1% of the three dimensions of PSEE, which is the lowest percentage in this study; (3) in contrast, region factor could explain 1.5%, 1.6%, and 1.9% of variations in the TCE, CCE, and SCE, respectively, which are 15 to 19 times of the explanatory power of Area factor (urban/rural).

In summary, this set of hierarchical regression analyses found that region factor was the critical predictor of the parent satisfaction in rural China, the higher the economic development level, the more satisfied parents were. In addition, the family factors, including age cohort and educational background, although had a positive impact on parental satisfaction, could only interpret 0.1% to 0.2% of the variation. Among them, educational background showed a negative predictive effect on parental satisfaction. The higher the

education level, the lower the parent satisfaction. Finally, the area factor showed the least interpret rate on parental satisfaction, and urban parents had higher satisfaction with ECE services than rural parents (See Table 5).

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Insert Table 5 about here  
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### **Discussion**

As the first national survey of rural parents in China, this study aimed to understand whether they were satisfied with the ECE service during 2016-2019, using the Chinese version of *Parent Satisfaction with Education Experiences Scale* (PSEE) (Fantuzzo et al., 2006). Generally, most of the rural parents were satisfied with their ECE experience, and the urban-rural gap is significantly closing. However, the regional differences between the Eastern, Central, and Western China have emerged, reflecting the unbalanced development and varying effectiveness of investment in ECE. This section will discuss the findings and their implications for policymakers and early childhood researchers.

#### **Rural Parents Are Generally Satisfied with ECE Services**

This study found that the majority (84.8%) of rural Chinese parents were satisfied with their ECE experience. This is an excellent signal to the Chinese governments at all levels, who have been under enormous pressure to rapidly and drastically develop ECE in rural areas by the year 2020. This finding implies that all the efforts they have made since the

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year of 2010 are paying off, and eventually, they are closing to the 2020 goal of universalizing ECE in the whole country. There are, at least, four major causes for this remarkable achievement. First, China has seen rapid urbanization of rural areas in the past decade, and more and more rural families are transforming into urban ones since 2010. This urbanization campaign has much promoted the development of ECE in rural areas. Second, more and more financial support from the central and provincial governments has been in place to facilitate the development of ECE in rural China. A vast number of new preschools/kindergartens were established, and more student teachers were financially motivated to work in rural areas (Yang & Rao, 2020). Accordingly, rural Chinese parents are most satisfied with their contact experience with teachers. Third, mobile phone and the Internet technology have become extremely popular in rural China, and the easy-to-use communication apps such as WeChat, Weibo, QQ and others have become a part of rural parents' daily life (Alexandros, Kapiki, & Mou, 2015). This IT revolution has dramatically facilitated communication as well as the co-education between teachers and parents, making parental involvement more convenient, instant, and effective. Fourth, the Chinese governments have launched the National Training Program for all the ECE teachers in the country (Ministry of Education of People's Republic of China, 2011) and provided extensive and robust support to those rural teachers. Accordingly, the teachers in rural kindergartens/preschools in China have attained rapid professional development in the past decade and acquired better cooperation and communication with their parents technically and professionally (Yang & Rao, 2020). However, this study also found that at present, the rural

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parents were not so satisfied with the contact at the kindergarten level. And the training for parents, as well as the communication with the principal/ administrators, were not so satisfactory, indicating that there might be a gap between the quality of kindergarten service and that expected by parents. In future, more training for kindergarten principal/ administrators should be provided, with a focus on improving their communication effectiveness with parents.

### **Urban-Rural Gap in the Latent Classes of Parental Satisfaction**

This study has identified two classes of parental satisfaction in rural China: the low versus the high satisfaction class. First, the Low Satisfaction Class of rural parents was the 1990s cohort living in central China, with junior secondary or below degree and low income. Similarly, the Low Satisfaction Class in urban China (Hong et al., 2020) also featured the parents in central China. But the difference between the two classes is that the rural parents of low satisfaction were 1990s, about ten years younger than the parents of low satisfaction in urban China. Nevertheless, both the rural and urban parents of Low Satisfaction Class were middle-income, thus faced greater pressures on work, interpersonal communication, and housing loans (Yang, 2019). And the educational resources available to their children were also limited in central China, which had led to the difficulty in fulfilling the high expectations of many families and consequently the dissatisfaction with the level of ECE services (Hong et al., 2020). Remarkably, both the rural and urban parents with low satisfaction were located in central China, which implies that central China has been left behind in this 'Great Leap Forward' and needs to do more to catch up.

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Second, the High Satisfaction Class was the 1970s rural parents living in Eastern China, with a high school and university degree or above and a higher income. Coincidentally, the urban parents of high satisfaction were also residing in Eastern China, with a bachelor's degree or above and higher income (Hong et al., 2020). The only difference was the age cohort: the urban parents of high satisfaction were the 1990s cohort who were less than Age 30 and were surveyed for their first child. In contrast, the rural parents of high satisfaction were the 1970s cohort, who were close to their 50s thus might have attained some family and educational capital. In addition, the region of Eastern China is very advanced in the development of ECE and has performed much better than the Central and Western regions of China (Li, Yang, & Chen, 2016). Therefore, both the rural and urban parents in this region tended to be the most satisfied with high-quality ECE service and were more willing to participate in the cooperation of the homeland, and ultimately show higher satisfaction.

### **The Ongoing Battles in Rural China**

This study found that the 'Great Leap Forward' campaign had made some remarkable achievements in rural China. However, this does not mean that the campaign has no problems and challenges. Instead, there are some battles to be continued in the following years. The first and foremost battle is to fight against the regional differences and the associated educational inequalities, and the second one might be establishing scientific evaluating and monitoring mechanism to assure accountability and effectiveness.

First, this study found a significant regional difference in parental satisfaction with ECE services: the rural parents from Eastern China were the most satisfied, the Central the



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least, and the Western the Medium. This finding is consistent with that of Hong et al. (2020) who found that the urban parents from Eastern China were the most satisfied, the Central the least, and the Western the Medium. This regional difference should be caused by the imbalanced development of ECE services in the Eastern, Central, and Western regions (Hong, Luo & Cui, 2013). All the findings jointly indicated that Central China might have been left behind in the ECE development. This regional difference, however, does not correspond to that in economic development. In terms of economic development level, Eastern China is most developed, followed by the central, and Western China is the most disadvantaged. This mismatch between ECE and economic developments might be caused by the dramatic input into the Western region made by the central government. While Eastern China is very rich, thus could solve their ECE development problems, and Western China has got first-aid from the central government, Central China is suffering indeed. Therefore, the central government needs to reflect its strategy and pays more attention to the Central part of the country to fight against the educational inequalities in the field of early childhood education.

Second, this study found that many provinces had high investment but low parental satisfaction. This finding indicated that scientific evaluating and monitoring mechanism should be established to assure the effectiveness and accountability of financial investment. Li, Yang and Chen (2016) have also proposed to develop a scientific tool to increase the accountability and efficiency of financial investment. They found that in China, high input did not come with high output in the field of early childhood education. In China, regions are associated with different levels of economic development. This study found that parental

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satisfaction in the eastern region with higher economic levels was higher than that of other areas. To further explore the relationship between parental satisfaction and regional finance, the comparison of parental satisfaction in different regions with different levels of government input revealed that the ECE investment in the different province did not show a positive linear relationship with parent satisfaction (See Figure 2). According to the education development and funding statistics of the Ministry of Education in China (Ministry of Education of People's Republic of China, 2018, 2019a; Finance Department of Ministry of Education, 2018), the current expenditures of ECE's per capita expenditures were ranked from high to low in Sichuan, Liaoning, Shandong, Guizhou, Shanxi, and Henan. However, parental satisfaction in other provinces was significantly different from actual funding except for Liaoning and Guizhou. Sichuan provinces had the highest investment but lowest parent satisfaction. In some provinces, the investment was low, but parent satisfaction was high (Shandong and Shanxi).

All these findings indicated that without scientific mechanism and evidence-based strategies, the injection of the enormous budget would not necessarily improve the quality of ECE service. This battle, however, is not an easy one in the unique sociopolitical context of China. Li and Lu (2018) found that China followed 'the rule by law' under the rule of the Communist Party of China (CPC) and all the final decision of policymaking lied with CPC. While CPC is fully engaged in the battle against poverty in Western China, the parents and their children in the central region might have been neglected. Therefore, this inequality in early childhood education is still, a severe problem in today's China that deserves further

studies and quick solutions.

### **Conclusions, Limitations, and Implications**

As the first national survey on parental satisfaction with ECE service in rural China, this study has found that the rural parents were generally satisfied with the teacher contact experience, followed by classroom contact experience, and school contact experience. And the MANOVA analysis revealed no significant differences between rural and urban parents. Second, it has identified two classes of parent satisfaction in rural China: the “Low Satisfaction Parents” came from the poor-educated low-class families in central China and were born in the 1990s; the “High Satisfaction Parents” were the 1970s cohort from the moderately- educated high-income families in eastern China. Last, a significant regional difference was found in parental satisfaction with ECE services, and high-investment provinces do not always lead to higher parent satisfaction.

This study, however, has some limitations. First, this national survey study just sampled the parents, leaving their children unexplored. Therefore, children’s developmental outcome was not employed to evaluate the product of ECE service. Second, more private kindergartens/preschools should have been sampled to fairly reflect the real component of ECE services in rural China. Third, the multidimensional evaluation, instead of sole reliance upon questionnaire data, should be conducted to avoid response biases such as the social expectation effect from different populations. Last, this is a national survey study which can generate representative evidence; however, a follow-up qualitative research to provide an in-depth understanding of the target phenomenon is needed.

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Nevertheless, the findings of this study have many implications for policymaking in Chinese and even non-Chinese societies. The most important implication is that ‘aggressive’ national policies play a critical role in developing early childhood education in a hierarchical and bureaucratic society like China. In Western China, especially in rural areas, Chinese parents were satisfied with the ECE service. This finding indicates that all the efforts have paid off, and China is reaping what it has sown. The second implication is that the Central China region is suffering thus deserves more attention and input. In a country with great diversity and disparity like China, there are always inequalities in the development between the urban and rural areas and between the rich and poor regions. The ruling party of this country has prioritized the fighting against poverty and has dramatically improved the quality and quantity of ECE services in Western China. Now, they need to pay more attention to those middle-income families located in Central China, which has been neglected for decades in the national planning of ECE development (Hong et al., 2019). This neglect should be corrected as soon as possible.

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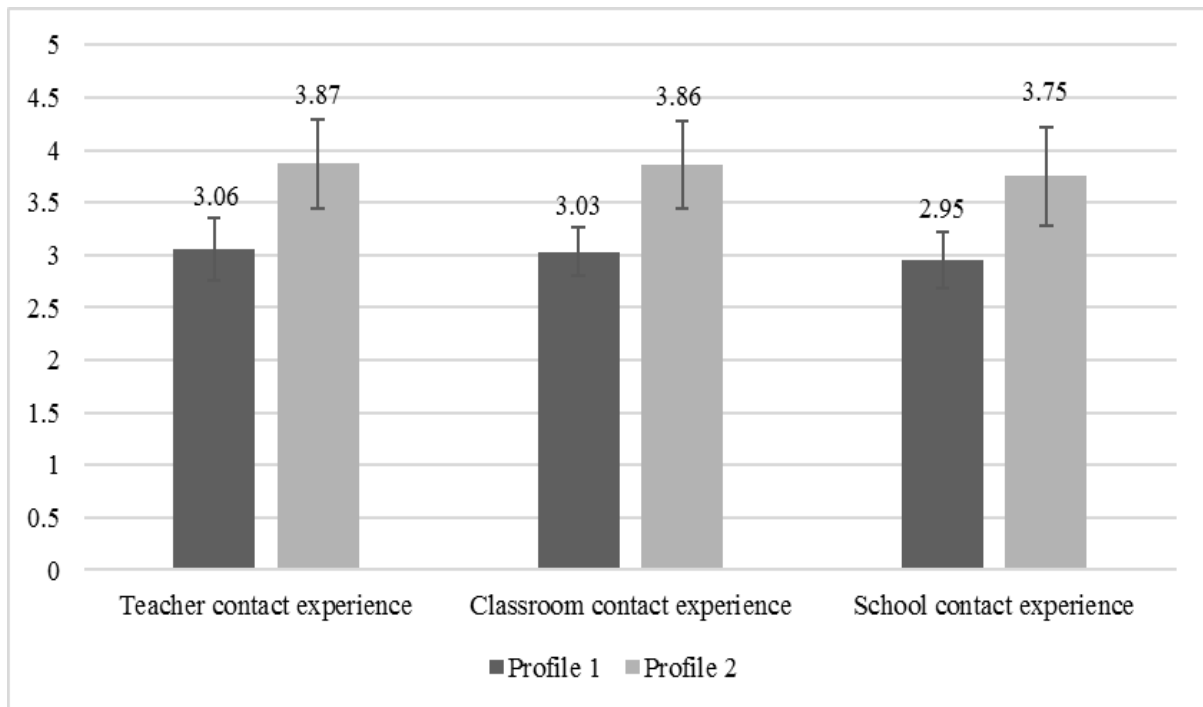
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*Figure 1.* Comparison of the mean scores of parental satisfaction with teacher contact experience, classroom contact experience, and school contact experience (bars represent standard deviation) between the two latent classes of rural parents. **Class 1 = Low Satisfaction Parents,  $n = 9532$ ; Class 2 = High Satisfaction Parents,  $n = 3599$ .**

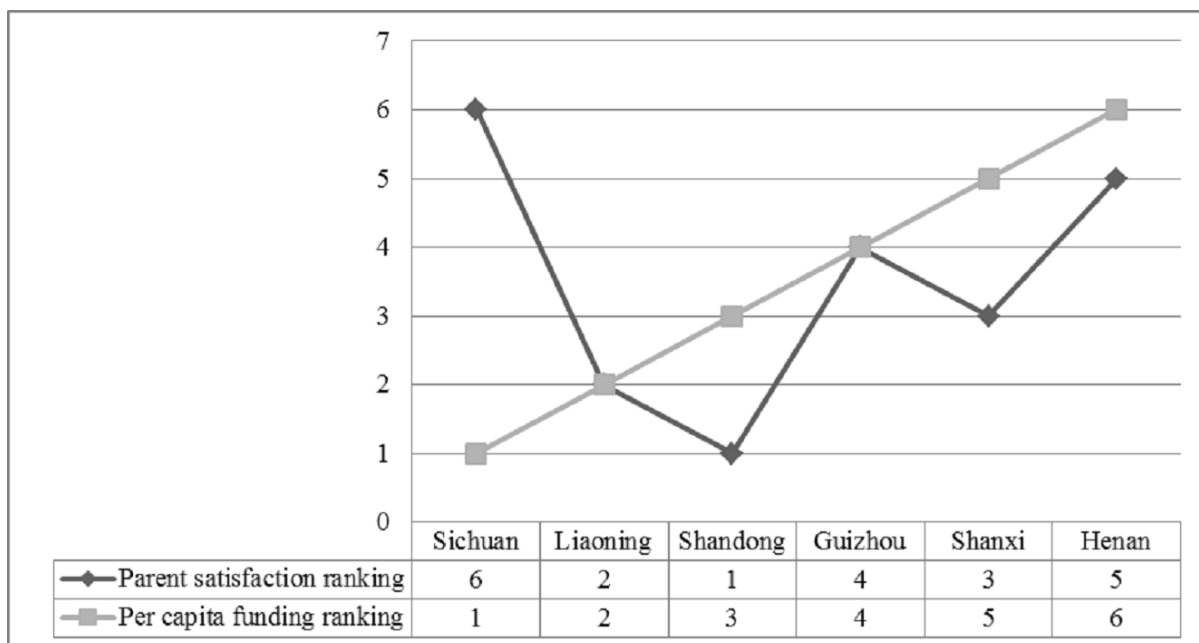


Figure 2. Ranking of parental satisfaction and per capita expenditure of ECE in each participating province

Table 1

*Participants Characteristics (N = 13,131)*

Demographic characteristics	<i>N</i>	%
Geographical area		
Eastern region	4990	38.0%
Central region	3887	29.6%
Western region	4254	32.4%
Kindergarten types		
Public kindergarten	8922	67.9%
Private kindergarten	4209	32.1%
Relationship to child		
Mother	10189	77.6%
Father	2771	21.1%
Grandparents	171	1.3%
Educational background		
Junior secondary or below	5624	42.8%
High school	4323	32.9%
University or above	3184	24.3%
Age cohort		
1990s	3634	27.7%
1980s	7834	63.5%
1970s	1151	8.8%
Household income		
Low household income	7534	57.4%
Medium household income	5025	38.2%
High household income	572	4.4%

Table 2

*Comparison of the fit index of different Latent class models*

Model	AIC	BIC	aBIC	Entropy	LMR ( <i>p</i> )	BLRT ( <i>p</i> )	Latent class probability
<b>2-class</b>	<b>126492.03</b>	<b>126753.93</b>	<b>126642.70</b>	<b>0.937</b>	<b>&lt;.001</b>	<b>&lt;.001</b>	<b>.725/.275</b>
3-class	124353.77	124750.36	124581.93	0.751	>.05	<.001	.274/.392/.334
4-class	123469.59	124000.86	123775.23	0.798	<.001	<.001	.270/.329/.388/.013
5-class	122634.91	123300.86	123018.04	0.784	<.001	<.001	.119/.013/.151/.331/.386
6-class	121806.40	122607.05	122267.01	0.863	>.05	<.001	.118/.175/.114/.014/.151/.429
7-class	121451.90	122387.24	121990.00	0.864	>.05	<.001	.176/.014/.101/.429/.113/.111/.057

Table 3

*Latent Class Clustering Analysis of Parent Satisfaction in Rural China (N = 13,131)*

Variable	Class 1 <i>n</i> = 9532	Class 2 <i>n</i> = 3599	$\chi^2$
Geographical area			496.09***
Eastern area	61.6%	38.4%	
Central area	79.8%	20.2%	
Western area	77.1%	22.9%	
Age cohort			65.76***
1990s	77.0%	23.0%	
1980s	71.6%	28.4%	
1970s	65.9%	34.1%	
Educational Profile			24.93***
junior secondary or below	73.7%	26.3%	
High school	69.1%	30.9%	
University or above	69.4%	30.6%	
Household income			64.01***
Low-income	75.2%	24.8%	
Medium-income	69.3%	30.7%	
High-income	66.6%	33.4%	

*Note.* Class 1 =Low Satisfaction Parents; Class 2 = High Satisfaction Parents.

\*\*\*  $p < .001$ .

Table 4

*Summary of Correlation Analysis between Contributors and PSEE*

Measure	1	2	3	4	5	6	7
1. Edu background	—						
2. Age cohort	0.145**	—					
3. Area factor	0.422**	0.170**	—				
4. Region factor	0.121**	0.234**	0.077**	—			
5. TCE	0.017**	0.047**	0.025**	0.132**	—		
6. CCE	0.020**	0.045**	0.039**	0.133**	0.834**	—	
7. SCE	0.018**	0.038**	0.017**	0.145**	0.797**	0.846**	—

*Note.* Educational background (junior secondary or below, high school, and university or above); Age cohort (the 1970s, 1980s, & 1990s); Area factor (Rural = 0, Urban = 1); Region factor (West = 0, Central = 1, East = 2); TCE = Teacher contact experience; CCE = Classroom contact experience; SCE = School contact experience

\*\*  $p < .01$ .



Table 5

*Summary of Hierarchical Regression Analyses Predicting Parental Satisfaction*

Variable	$\beta$	$R^2$	$\Delta R^2$	$F$ value
<i>Teacher Contact Experience</i>				
Step1		.002	—	45.32***
Edu background	-.022***			
Age cohort	.017***			
Step 2		.003	.001	35.46***
Area factor	.022***			
Step 3		.018	.015	186.33***
Region factor	.129***			
<i>Classroom Contact Experience</i>				
Step1		.002	—	44.12***
Edu background	-.013*			
Age cohort	.011*			
Step 2		.003	.001	40.96***
Area factor	.032***			
Step 3		.019	.016	191.97***
Region factor	.130***			
<i>School Contact Experience</i>				
Step1		.001	—	43.31***
Edu background	-.019***			
Age cohort	.012*			
Step 2		.002	.001	35.19
Area factor	.024***			
Step 3		.021	.019	222.78***
Region factor	.143***			

*Note.* Educational background (junior secondary or below, high school, and university or above); Age cohort (the 1970s, 1980s, & 1990s); Area factor (Rural = 0, Urban = 1); Region factor (West = 0, Central = 1, East = 2).

\*\*\*  $p < .001$ . \*  $p < .05$ .

## Conflict of Interest

This research was fully funded by Major Projects of the National Social Science Fund of China (Project #: 17ZDA123). Correspondence about this paper should be addressed to Ms. Wenting Zhu, Beijing Normal University, Beijing, China (email:201831010027@mail.bnu.edu.cn). Email to other authors could go to Xiumin Hong: xiuminhong@163.com; Dandan Wu: dandan.wu4@students.mq.edu.au; and Hui Li: philip.li@mq.edu.au

All of the authors listed above have made contributions appropriate for assumption of authorship, and have consented to the byline order, and have agreed to submission of the manuscript in its current form.

The manuscript has not been published previously and is not being simultaneously submitted elsewhere. In addition, we have complied with American Psychological Association ethical standards in the treatment of our samples.

The data reported in the submitted manuscript have not been presented in any situations and there are no any real or potential conflicts of interest that could be seen as having an influence on the research. No reproduction of copyrighted material is evident in this manuscript hence there is no need to apply for any necessary permission.

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