Article

Ecological Dilemmas and Mechanism Reshaping: A Multi-Dimensional Examination of the Development of Social Emotional Abilities of Infants and Toddlers Aged 0-3—Based on a Survey of 248 Parents in Hunan Province

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Abstract: The age of 0 to 3 years is a key stage in the development of social emotional abilities, which has a profound impact on the lifelong development of individuals. Based on the ecosystem theory, this study used a questionnaire survey method to investigate 248 parents of infants and toddlers aged 0-3 in Hunan Province, aiming to clarify the development status of their social emotional abilities and the dilemma of the collaborative education mechanism of the home society. The study found that: there is a significant deviation of "heavy cognition and light emotion" in the goals of parenting; urban and rural infants and toddlers show faults in their social emotional abilities, and rural children lag significantly in interpersonal communication and adaptability; there are structural dilemmas such as superficial communication and "desertification" of community support in the collaborative mechanism of home communities. To this end, the research proposes a systematic intervention path from family empowerment, home co-education to community support, with a view to providing a reference for building an effective early development support system.

Keywords: infants and toddlers aged 0-3; social emotional ability; home–childcare institution–community collaboration; ecosystem theory

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1. Introduction

The explosion of research in neurobiology has clarified the extent to which the interaction between genetics and early experience literally shapes brain architecture (National Scientific Council on the Developing Child, 2007 report). The age of 0 to 3 years is the "Golden Window" of brain development. The positive and responsive interaction between infants and toddlers, also including their main caregivers is the biological cornerstone of the development of social emotional ability. Social emotional abilities (i.e., specific skills), defined as the set of cognitive abilities, emotion-based knowledge, and behavioral competencies (i.e., skill levels) that facilitate adaptively employing prosocial processes and behaviors (i.e., "actions"), such as emotional regulation and sympathetic and empathetic response behaviors [1]. Social emotional ability is used as the core index to predict the future academic achievement and mental health of individuals.

In China, the state has issued a series of policy documents to emphasize the importance of early childhood development, such as the "Law of the People's Republic of China on the Promotion of Family Education" and "Guidelines for the Learning and Development of Children Aged 3-6", emphasizing moral education as the first and all-

round development, the social anxiety of "winning at the starting line" still keeps parents' attention firmly focused on early literacy, arithmetic and other dominant cognitive skills. As a hidden and difficult-to-quantify "soft power", social emotional ability is often marginalized in the prioritization of family education, forming a misunderstanding of "heavy cognition and light emotion" parenting. At the same time, with the increase in the proportion of dual-worker families, the responsibility for infants and toddlers' care has overflowed to the society, and the construction of a "family-childcare institution-community" collaborative education mechanism has become an inevitable demand of the times.

However, the reality is that the cooperation between the homeland and the society has mostly stayed at a shallow level and has failed to form an educational synergy. Especially in poor rural areas, most infants and toddlers are at risk of lagging in social and emotional development [2].

Ecosystem theory was proposed by the American psychologist Bronfen Brenner in the 1980s. The theory regards the entire society as a hierarchical ecosystem, emphasizes "people in the situation", and closely links the development characteristics of children with their growth environment, and refers to the changing environment in which people live and interact with it as a behavioral system. The ecosystem includes four systems: macro system, external system, mesoscopic system, and micro system. Among them, the micro-system is the environment in which children directly come into contact with and interact with, such as family, school, neighbors, peer groups, communities, etc. The micro-system will undergo subtle changes as children grow up, and it plays the most important guiding role in the process of children's socialization [3]. This study takes this theory as the core theoretical framework, trying to break through the limitations of previous research that only focused on the description of the status quo, and through empirical data to analyze in depth: In the specific social and cultural context of Hunan Province, how does the "near-end process" in the family microsystem (especially emotional parenting behavior) affect the social emotional abilities of infants and toddlers? How does the urban-rural binary structure work through these process variables? What are the structural fractures in the reality of the collaborative education mechanism of the homeland Society?

2. Research Methods

In this study, a hierarchical random sampling method was used to select parents of infants and toddlers aged 0-3 at different administrative division levels in Hunan Province as the survey subjects. A total of 248 valid questionnaires were collected in the study. The demographic characteristics of parents are as follows: in terms of gender, there are 45 male parents (18.1%) and 203 female parents (81.9%); in terms of region, the sample consists of 174 urban families (70.2%) and 74 rural families (29.8%); in terms of age, most of them are concentrated in the 25-35 age group (n = 193), accounting for 77.8%; in terms of educational background, those with college and undergraduate degrees are the main ones (n = 161), accounting for 64.9%; in terms of family structure, 56.9% (n = 141) are nuclear families, 35.1% (n = 87) are large families (stem families, i.e., multigenerational families), and 8.1%(n = 20) are single-parent or other family structures. The age distribution of infants and toddlers is as follows: 0-1 years old (n = 42, 16.9%), 1-2 years old (n = 86, 35.1%) and 2-3 years old (n = 119, 48.0%); in terms of the enrollment rate of the child care institutions, 99 infants and toddlers (39.9%) have enrolled, while 149 (60.1%) have not enrolled.

The questionnaire was designed based on the dimensions of international scales such as ASQ: SE-2 and ITSEA, and localized and adapted to fit the Chinese cultural context. The content covers basic information, parenting concepts and behaviors, infant social and emotional ability scores, and the current situation of home and society linkage. SPSS 26.0 software is used to perform descriptive statistics, independent sample t-tests and related analysis of the data.

3. Research Results and Analysis

3.1. Descriptive Statistics: Status Quo and Deviation in Family Microsystems

As the most basic and enduring microsystem for infants and toddlers, the family's parenting style, emotional atmosphere, and interaction quality directly determine the level of development of children's social-emotional abilities. The survey data revealed a deeply worrying phenomenon: the "high expectations" of parents in their subjective will are in stark contrast to the "low response" in actual behavior, and there are serious cognitive biases.

First, utilitarian bias of parenting goals. As shown in Table 1, in the prioritization of educational goals, parents show a clear tendency to "heavy cognition and light emotion". 65.3% of parents (n = 162) list "language expression ability" or "self-care ability in life" as the primary training goal, while only 18.1% of parents believe that "emotional management" or "interpersonal communication" are the most important. This value orientation has directly led to the tilt of family resource allocation-parents are more willing to invest time in literacy cards than in emotional guidance.

Table 1. Priority distribution of parenting goals (N = 248).

Education target category	Preferred number of people (n)	Proportion (%)
Language expression/intellectual development	112	45.2%
Self-care in life/physical exercise	50	20.2%
Emotional management/personality development	45	18.1%
Interpersonal communication/social adaptation	25	10.1%
Others	16	6.5%
Total	248	100%

Second, lack of emotional coping strategies. When infants and toddlers show negative emotions such as anger and sadness, parents' coping strategies directly reflect their emotional parenting style. Data show that only 27.8% of parents (n = 69) adopt the "be patient and ask why" strategy. On the contrary, 41.9% of parents (n = 104) tend to "divert their attention"(such as giving mobile phones and snacks). Although this strategy can temporarily stop crying, it deprives children of the opportunity to learn emotional regulation. More seriously, a total of 30.2% of parents (n = 75) adopt the strategy of "punitive discipline" or "permissive approach". This kind of "emotional rejection" or "emotional disapproval" behavior can easily lead to children's emotional depression or behavioral externalization problems. Further analysis of the impact of different coping strategies on infants and toddlers' emotional regulation ability found that the average score of emotional regulation ability of infants and toddlers whose parents adopt "be patient and ask why" is 3.7(SD = 0.68), which is significantly higher than that of infants and toddlers whose parents adopt "divert attention"(M = 2.9, SD = 0.72) and "criticize education or letting go"(M = 2.3, SD = 0.65) ($F = 42.36$, $p < 0.001$).

Third, limited social interaction. Social interaction is an important carrier for the development of social emotional abilities, but surveys have shown that the social environment of infants and toddlers in Hunan Province is relatively closed. 58.1% of parents (n = 144) "never" or "occasionally (1-2 times a month)" take their infants and toddlers to participate in age-appropriate social activities, resulting in a closed social environment for most children before entering the school. The average score of parents on the "emotional regulation ability" of infants and toddlers is only 2.8 points (out of 5 points). The closed social environment directly affects the development of infants and toddlers' interpersonal communication and social adaptation abilities. The average score

of interpersonal communication ability of infants and toddlers who often participate in peer social activities is 3.6 (SD = 0.70), which is significantly higher than that of infants and toddlers who rarely participate in social activities (M = 2.5, SD = 0.68) ($t = 8.72$, $p < 0.001$). At the same time, the average score of social emotional ability of infants and toddlers in open social environments is 3.3 (SD = 0.69), which is significantly higher than that of infants and toddlers in closed environments (M = 2.4, SD = 0.71) ($t = 7.93$, $p < 0.001$).

3.2. Analysis of Differences: Capacity Faults under the Binary Structure of Urban and Rural Areas

First, the structural difference between the subject of education and the input. Urban and rural families are significantly differentiated in terms of the composition and investment time of the main body of education. Among the 174 urban families, parents are more inclined to refined training under "intensive motherhood". 56.9% (n=99) of urban infants have entered child care institutions to receive professional education. Furthermore, 72.4% of urban parents participate in parenting together, and 35.1% of fathers spend more than 21 hours a week with their children. In stark contrast, among the 74 rural families, the enrollment rate of child care institutions is 0%, indicating a complete lack of professional educational resources. 67.6% of rural families have their grandparents as the main caregivers. The phenomenon of absent fathers is prominent, with 62.2% of rural fathers spending less than 10 hours a week with their children. The focus of rural parenting is mostly on survival needs such as diet and living, and only 8.1% of families often take young children to participate in social activities.

Second, significant gaps in social emotional abilities. Independent sample t-test shows that there are significant differences in the total score of social emotional ability between urban and rural infants and toddlers ($t = 6.12$, $p < 0.001$, Cohen's $d = 0.85$). The social emotional ability of urban infants and toddlers (M = 3.4, SD = 0.71) is significantly higher than that of rural infants and toddlers (M = 2.6, SD = 0.69). In terms of sub-dimensions (as shown in Table 2), the gaps between urban and rural areas in "interpersonal communication" ($d = 1.1$) and "social adaptation" ($d = 1.0$) are particularly obvious. This data strongly supports the conclusion that the lack of peer interaction and professional guidance in rural areas (due to the 0% enrollment rate) has negatively impacted children's social adaptability. In addition, there are significant differences in "emotional regulation" ($d = 0.6$) and "prosocial behavior" ($d = 0.5$) between urban and rural areas. Further analysis of different age groups found that the urban-rural gap gradually expands with age, indicating that the cumulative effect of the "urban-rural dual structure" on resource allocation is gradually revealed with the growth of infants and toddlers.

Table 2. Differences in social emotional ability between urban and rural infants and toddlers.

Dimensions	Urban(M±SD)	Rural(M±SD)	t-value	p-value	Cohen's d
Emotional regulation	3.5±0.70	2.9±0.68	5.23	<0.001	0.6
Interpersonal communication	3.6±0.69	2.5±0.67	9.45	<0.001	1.1
Social adaptation	3.4±0.72	2.4±0.65	8.87	<0.001	1.0
Prosocial behavior	3.3±0.71	2.8±0.69	4.65	<0.001	0.5
Total score	3.4±0.71	2.6±0.69	6.12	<0.001	0.85

3.3. The Structural Dilemma of the Collaborative Education Mechanism of the Homeland Society

In an ideal ecosystem, families, child care institutions and communities should be connected through a close system to form a synergy in educating people. However, the survey results revealed the serious failure of this mechanism in reality.

First, superficial communication of child care institutions. Although 39.9% of infants and toddlers (n = 99) have been admitted to care (all from urban areas), care institutions

have failed to effectively play a professional support role even for this limited group. 58.6% of the communication frequency between institutions and families is once a month or less, making it difficult to conduct in-depth discussions on early childhood development. Furthermore, 74.7% of the communication content focuses solely on life care (eating/sleeping) and knowledge enlightenment, ignoring the core dimension of social emotions. Only 18.2% of institutions provide emotional and social-related professional guidance, and only 25.3% of parents often participate in institutional activities. This data suggests that even for the minority of families with access to childcare, the "educational partnership" is largely absent.

Second, community support faces "desertification". As the core component of the external system, the community has a serious shortage of resources. Overall, 67.7% of families reported that the community had never provided public welfare activities such as in-person parenting guidance, and 75.4% had failed to obtain parenting counseling or venue support. The situation in rural communities is even more severe. Consistent with the "zero enrollment" finding, 89.2% of rural parents stated that the community had not carried out any parenting-related activities, and professional resources were almost blank, creating a "resource desert" for rural infants.

Third, multiple obstacles to the linkage mechanism. The collaborative education mechanism of the Homeland Society faces four major obstacles: blurred cognition, blocked communication, prevarication of responsibility, and dislocation of supply and demand. 85.1% of parents have no understanding of "Homeland community linkage" at all. 64.9% believe that information communication is not smooth, and 58.1% point out that the responsibilities of the three parties are not clear. Crucially, 72.2% of parents have strong linkage needs (such as lectures, parent-child activities), but the actual satisfaction rate is less than 10%, exposing the structural shortcomings of the public service supply side.

4. Countermeasures and Suggestions

4.1. Micro-System Reshaping: Empowering Family Parenting Competence

First, implement the "Emotion Coaching" parent empowerment plan. The childcare institution cooperates with the community to set up compulsory parent courses, reconstruct the training content, and focus on teaching emotion coaching. Emotion Coaching, proposed by American psychologist John Gottman, uses moments of heightened emotion and resulting behaviour to guide and teach the child and young person about more effective responses. Key elements involved in Emotion Coaching include: becoming aware of the child's emotions. Recognising the emotion as an opportunity for intimacy and teaching; Listening empathetically, validating the child's feelings; Helping the child find words to label the emotion; Setting limits and exploring strategies to solve the problem at hand [4]. This plan aims to reverse the concept of 'heavy wisdom and light affection' upbringing.

Second, strengthen the return and participation of the role of father. Fathers play an important role in children's attachment formation, moral judgment, and game interaction, and their participation directly affects children's emotional safety and social adaptation [5]. Strengthen the guidance of public opinion at the macro-system level, promote the unique value of father's participation in children's social development(such as adventurous spirit and sense of rules) through the media, and break the stereotype of "outside the male protagonist and inside the female protagonist". Childcare institution should regularly hold activities such as "Dad's Day" and "Father-child sports Meeting" to increase the father's presence in the parenting microsystem through semi-compulsory methods and improve the family parenting structure.

4.2. Microsystem Activation: Building a Seamless Homeland Bond

According to ecosystem theory, with the continuous growth of infants and toddlers, child care institutions have gradually become the microsystem that has the greatest impact on the development of infants and toddlers other than the family.

First, build a digital home co-education platform. As a digital means, WeChat groups have transformed the way people interact from face-to-face communication to human-computer interaction. In addition, cooperation with enterprises can develop a "growth file cloud platform" based on WeChat mini programs to achieve high-frequency interaction with daily feedback. The feedback content not only includes basic information such as diet and daily life, but also focuses on recording the emotional events and coping methods of infants and toddlers (such as "Today's child cried due to the collapse of building blocks, and teachers used empathetic comfort methods"). Through data sharing, this ensures consistency of family and institutional education strategies and reduces adaptation difficulties for young children [6].

Second, promote the professional transformation of child care institutions. Incorporate social and emotional development indicators such as ASQ:SE-2 into the organization's regular evaluation system, and establish the position of "parenting consultant" to provide parents with one-to-one personalized guidance regularly to answer questions about emotional management and social development. Promote the transformation of child care institutions from "custodians" to "family education partners" to play a professional leading role.

4.3. Microsystem Empowerment: Building a Child-Friendly Community Ecology

First, build a "15-minute parenting life circle." Urban communities should revitalize idle spaces and set up "children's homes" and "parent-child picture book halls"; rural communities can use village committees or idle school buildings to establish "care centers for left-behind children" to provide safe social playgrounds. Activities such as "community parent-child day," "parent-child market," and "picture book drama performances" are regularly held to increase the frequency of peer interaction between infants and toddlers, break down the social isolation of the nuclear family, and provide a wider area for the social development of infants and toddlers [7].

Second, implement the sinking project for early rural development. In 2015, the China Development Research Foundation launched the "Huiyu China (Early Childhood Education Program in Mountain Villages)" The results showed that two years of home visit intervention increased the probability of children's intelligence screening being "normal" by 51.4%, and various other indicators improved to varying degrees. Regarding cultivating the social emotional abilities of infants and toddlers, we can draw on the successful experience of "Huiyu China" to select and train women with a certain level of education in rural areas to serve as "social and emotional ability development instructors" and carry out home-entry guidance and door-to-door teaching services to make up for the lack of professional resources. The government can fund the establishment of a mobile early education service team, which regularly tours remote towns and villages to deliver educational aids and assessment kits related to social and emotional ability training, thereby narrowing the urban-rural resource gap.

4.4. Macro-System Support: Improving Policy Guarantees and Cultural Reshaping

First, strengthen top-level design and cross-departmental collaboration. Refine the implementation rules of the "Law of the People's Republic of China on the Promotion of Family Education" for children aged 0-3, and clarify the statutory responsibilities and funding guarantee mechanisms of streets and communities in collaborative education. Establish a multi-department joint meeting system involving health, education, Women's Federation, and other departments to coordinate and solve the division between childcare and education, forming policy synergy.

Second, create a social atmosphere of "whole-person education." Popularize brain science and child development knowledge through authoritative media, correct the utilitarian view of parenting, and help parents recognize the biological basis and long-term value of social emotional abilities. Establish an urban-rural pairing support mechanism, encourage urban high-quality kindergartens to cooperate with rural childcare centers, share high-quality curriculum resources through digital means, and gradually narrow the urban-rural development gap [8].

5. Conclusion

Guided by ecosystem theory and based on a survey of 248 parents of infants and toddlers aged 0–3 in Hunan Province, this study reveals key challenges in the development of children's social-emotional abilities and the operation of the family-community collaborative education mechanism. Family upbringing shows a utilitarian bias of "heavy cognition and light emotion" in terms of goals, coping strategies, and social interaction arrangements. Urban-rural differences in caregiving subjects, resource investment, environmental support, and other factors lead to significant disparities in the social-emotional abilities of infants and toddlers, with rural children lagging significantly in interpersonal communication and social adaptation; moreover, these gaps continue to expand with age. The collaborative education mechanism among families, childcare institutions, and communities faces structural problems such as superficial communication, "desertification" of community support, and poor linkage channels. As a result, it fails to form effective educational coordination. In view of these problems, it is necessary to build a multi-level intervention system: reshape the family microsystem by improving parenting capabilities and promoting parental participation; activate family-institution collaboration through digital platforms and the professional transformation of childcare institutions; build a child-friendly community ecology through the "15-minute parenting life circle" and rural resource sinking projects; and strengthen macro-system support through policy refinement and cultural reshaping.

Overall, fostering the social-emotional development of young children requires a systemic, coordinated, and culturally responsive approach. By integrating efforts across family, institutional, community, and policy domains, a more supportive and equitable early development ecosystem can be constructed. This lays a solid foundation for children's future social adaptation and holistic development.

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References

1. V. W. Harris, J. Anderson, and B. Visconti, "Social emotional ability development (SEAD): An integrated model of practical emotion-based competencies," *Motivation and Emotion*, vol. 46, no. 2, pp. 226–253, 2022, doi: 10.1007/s11031-021-09922-1.
2. L. Shanshan, W. Boya, C. Peng, T. Lei, and S. Yaojiang, "Trend and risk factors of early childhood social emotional development: based on the survey findings from poor rural China," *Journal of East China Normal University (Educational Sciences)*, vol. 37, no. 3, p. 33, 2019, doi: 10.16382/J.CNKI.1000-5560.2019.03.003.
3. U. Bronfenbrenner, "Toward an experimental ecology of human development," *American Psychologist*, vol. 32, no. 7, pp. 513, 1977. doi: 10.1037/0003-066X.32.7.513.
4. J. M. Gottman and J. DeClaire, *Raising an emotionally intelligent child: The heart of parenting*, Simon & Schuster, 1997. ISBN: 9780684838656.
5. M. E. Lamb, Ed., *The role of the father in child development*, John Wiley & Sons, 2004. ISBN: 9780471231615.
6. X. Luo, Using WeChat to explore parents' perspectives on early years education in China, Ph.D. dissertation, The University of Edinburgh, 2019.
7. S. Zhou et al., "The effect of a community-based, integrated and nurturing care intervention on early childhood development in rural China," *Public Health*, vol. 167, pp. 125–135, 2019. doi: 10.1016/j.puhe.2018.11.010.
8. D. Emmers et al., "Early childhood development and parental training interventions in rural China: a systematic review and meta-analysis," *BMJ Global Health*, vol. 6, no. 8, 2021. doi: 10.1136/bmjgh-2021-005578.