



Parent-Child Communication About Educational Aspirations: Experiences of Adolescents in Rural China

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Abstract

The importance of parents in the transmission of educational aspirations to children is well-established. However, little is known about the quality of parent-child communication about educational aspirations and how this communication relates to children's educational aspirations in socioeconomically disadvantaged families in rural China. In this study, we sought to gain insight into parent-child communication around educational aspirations from the perspective of Chinese rural adolescents. Twenty-three grade-9 students were recruited from middle schools in Songzi, a poor rural county in central China. Participants comprised 12 boys and 11 girls aged 14 to 16 years ($M = 14.65$ years, $SD = 0.59$). Students completed one-to-one qualitative interviews about parent-child communication and their educational aspirations in June 2020. Thematic analysis revealed that adolescents' educational aspirations were strongly influenced by their parents' beliefs and aspirations for them, with fulfilling parental aspirations and achieving economic success being important influences on rural adolescents' educational aspirations. However, parent-child communication quality was undermined when parents had an authoritarian communication style and when parents were absent due to rural-urban migration, in which case adolescents reported stress and perceived lack of support in achieving their goals. In addition, mothers were viewed as playing a more vital role in communication than fathers. The implications of the findings for school and community-based interventions promoting rural parents' ability to communicate effectively with their children about academic concerns are discussed.

Keywords Educational aspirations · Parent-child communication · Rural youth · Left-behind children · Interviews

Highlights

- This is the first qualitative study to explore parent-child communication around educational aspirations in Chinese rural families.
- Adolescents identified fulfilling parental aspirations and achieving economic success as the main influences on their aspirations.
- An authoritarian parenting style and/or parental absence were related to poor quality parent-child communication.
- Most rural adolescents reported being stressed and lacking support in achieving their educational goals.
- Caregivers with an authoritarian style need support to improve their communication skills to positively motivate rural youth.

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Educational aspirations, namely, the idealistic values that reflect the educational attainment one hopes to achieve, are an important predictor of adolescent academic achievement and behavioral outcomes (Khattab 2015). The important role of parents in shaping adolescents' aspirations has been highlighted in recent research (e.g., Froiland 2021). It has also been argued that parent-child communication can function as social capital in the form of information, opportunities, and resources to help young people think about their future (Eng 2012; Park 2008). In China, rural

parents' expressed aspirations for high educational outcomes for their children have been shown to be related to their children's educational aspirations (Chen et al. 2023). However, existing studies on the educational aspirations of Chinese rural students rely greatly on quantitative data (e.g., Huang and Gong 2022), which are limited in their ability to obtain rich, in depth, and nuanced information about parent-child communication as a context for influencing adolescents' thinking about their educational future. Furthermore, most previous studies have relied on questionnaires developed and validated in Western nations (e.g., Tang et al. 2018; Wu et al. 2018); therefore, these measures may not be reflective of different cultural norms or values held by Chinese adolescents and their parents. Thus, we aimed to expand our current understanding of the effectiveness of parent-adolescent communication in influencing the educational aspirations of adolescents in rural China using qualitative interviews.

Educational Aspirations of Rural Families in China

In China, the nine years of compulsory education are divided into six years of primary education (grades 1–6) and three years of junior secondary education (grades 7–9). After completing compulsory education, students can progress to either a regular high school or a vocational school based on their scores on the national high school entrance examination. Regular high schools focus on university preparation, whereas vocational schools emphasize occupational skills (Wang and Guo 2019). Those who are not able to attend regular high school can enroll in vocational schools, 39.5% in 2019 (Chinese Ministry of Education 2020).

Living in an urban or rural area is critical in determining Chinese students' educational opportunities, including their progression to regular high school followed by university (Knight and Li 1996). Chinese adolescents who grow up in rural areas face many challenges that can adversely impact their education, such as rural-urban inequality in educational resources and perceived economic pressures (Postiglione et al. 2017). Consequently, rural youth are 7 times less likely to get into university than urban youth (Li et al. 2015). However, the belief that the pursuit of knowledge is a moral virtue, which is largely derived from Confucianism, along with the expectations of financial rewards for completing further education, have led Chinese rural parents to place a high value on academic achievement and to hold high educational aspirations for their children (Ng and Wei 2020). Traditional Confucian thinking values filial piety, with children being expected to obey their parents and comply with their expectations in Chinese culture (Luo

et al. 2013). Therefore, research on the academic pursuits of rural Chinese students has shown that their own aspirations are related to their parents' aspirations for them (Chen et al. 2023), with the enhancement of family reputation identified in past qualitative research as a primary reason, among rural youth, to attend university (Xu and Montgomery 2021). However, it is unclear how Chinese rural youth view their own educational future, given perceived barriers to academic success, combined with high parental aspirations, financial incentives, and broader societal pressures to achieve.

Parent-Child Communication

Theoretical Frameworks of Parent-Child Communication

Grusec and Goodnow's (1994) two-step model of intergenerational value transmission is an empirically validated construct widely applied to understand the process of parental socialization of child values and aspirations (e.g., Knafo and Schwartz 2003; Wu et al. 2018). The model proposes that youth first need to perceive their parents' values accurately and then accept these values as their own, with both steps viewed as central to effective value communication (Grusec and Goodnow 1994). Consistent with this theoretical perspective, previous studies with adolescents conducted in both Western and Eastern contexts have found that the more accurate the perception of parents' values, the greater their acceptance (Cheung and Pomerantz 2015; Knafo and Schwartz 2009). Furthermore, the two step-model (Grusec and Goodnow 1994) highlights parenting as an important influence on children's ability to form accurate perceptions of parental values, as the quality of parenting is viewed as a strong influence on children's motivation to attend to parental messages. According to the model, parents' emotional support and involvement with children fulfills their needs for relatedness, thereby influencing the effort children invest in attending to, and adopting, the values held by their parents (Grusec and Goodnow 1994; Knafo and Schwartz 2003). This theoretical perspective is supported by past studies (e.g., Barni et al. 2011; Wu et al. 2018) that only found a positive association between youth educational aspirations and their parents' educational aspirations for them when youth reported high levels of parental warmth.

Self-determination theory (SDT) is another framework that has frequently been used to understand environmental influences on adolescent motivation, with parent factors highlighted as important in the transmission of intergenerational values (Deci and Ryan 2000). According to

SDT, people tend to internalize traits or values that are valued by significant others (Deci and Ryan 2012). In the family context, the extent to which children internalize parental values is viewed as related to the extent to which their innate psychological needs for autonomy, competence, and relatedness are satisfied in the parent-child relationship (Deci and Ryan 2000). Parents play a critical role in influencing Chinese adolescents' values and aspirations (Chen et al. 2023; Wu et al. 2018). However, to our knowledge, no empirical studies have explored the effectiveness of parent-child communication as a context for influencing the aspirations and motivations of children living in rural China regarding their educational future. Therefore, guided by the two-step model of intergenerational value transmission and SDT, this study addressed a gap in the literature by exploring the nature and quality of parent-child communication about educational aspirations in Chinese rural families.

Parent-Child Communication Around Education in Chinese Rural Families

Rural parents' low levels of education constrain their ability to take concrete actions to assist their children's education. Instead, these parents give verbal encouragement to their children to study harder and achieve more, which acts as a form of motivation that contributes to their children's success (Xu and Montgomery 2021). Park's (2008) comparative study of 14 countries showed that the existence of standardized educational systems with a clear progression of levels from early childhood to postgraduate study (such as in China and Korea) makes it easier for parents from low-SES backgrounds to communicate with their children about their education. For example, these systems help parents with less education to have a clear understanding of what level of performance students are expected to achieve to gain admission to a high school or university (Kim 2020; Park 2008). Thus, parent-child communication, as a verbal form of parental involvement in children's education, has become prominent in Chinese rural families (Xu and Montgomery 2021). However, little is known about the effectiveness of parent-child communication about educational goals in encouraging children's aspirations in socio-economically disadvantaged rural families.

Rural-urban migration has increased in China since the 1980s, resulting in many parents leaving their children in rural hometowns while they go to the cities to work (Sun et al. 2020). There are approximately 40 million rural 'left-behind' children (LBC) in China, accounting for 29% of all rural children in China (UNICEF 2017). Around half of these children are left behind by both parents, who are then often cared for by grandparents. In the current study, children who are left-behind by both parents will be referred to

as LBCBs, while children who are left behind by one parent (usually the father) will be referred to as LBCOs. Previous research indicated that when upwardly mobile migrant parents become more familiar with educational and occupational opportunities in urban areas, they communicate these opportunities to their children, thereby influencing their thinking about their future education and career (Sun et al. 2020). However, these studies have failed to take into account the barriers that children may face when communicating with their migrant parents and, in the case of LBCBs, their grandparents.

The two-step model of intergenerational value transmission (Grusec and Goodnow 1994) and SDT (Deci and Ryan 2000) highlight parenting as an important factor to consider when investigating parent-to-adolescent transmission of beliefs and values. Maccoby and Martin (1983) described four types of parenting styles in general: authoritative, authoritarian, permissive, and neglectful. Authoritative and authoritarian parenting styles are the focus of research on intergenerational transmission of values and aspirations in Chinese families (Liu et al. 2018; Wu et al. 2018). Authoritative parents show "high demandingness" and "high responsiveness", displaying a high degree of supervision and control over their children and holding high expectations for them, accompanied by warmth, support, and encouragement of open communication (Strage and Brandt 1999). In contrast, authoritarian parents show "high demandingness" and "low responsiveness", placing a strong emphasis on parental control and the expectation of children's unquestioning obedience, while providing less support and fewer open displays of affection towards their children (Zhang et al. 2017). Consistent with the intergenerational value transmission model and SDT, prior studies have highlighted the importance of parenting styles for effective value transmission between parents and children. For example, Knafo and Schwartz (2003) have found that an authoritative parenting style elicits positive emotional responses from children and motivates them to attend to and understand parental values. In contrast, an authoritarian parenting style is viewed as eliciting negative emotions from children during parent-child interactions, which then undermines children's willingness to accept parental values (Schönpflug 2001). Based on theory (Grusec and Goodnow 1994; Deci and Ryan 2000) and past findings, our study therefore explores the influence of parenting styles on the effectiveness of parent-child communication about educational aspirations in Chinese rural families.

Current Study

We adopted a qualitative design to explore parent-child communication about educational aspirations in Chinese rural

families. The findings may differ from those of studies conducted in Western nations given different cultural and social norms, such as the degree to which parents value education and family connectedness, as well as parental migration (Cheung and Pomerantz 2012). Furthermore, parenting styles within rural families may differ from those within urban families due to differences in parents' educational background and socioeconomic status (Yang and Zhao 2020). Therefore, our findings may provide new insights into the relationship between parenting styles and the quality of parent-child communication in socially disadvantaged rural families. We sought to answer the following research questions: (1) What are the reasons underlying Chinese rural students' educational aspirations? (2) How do adolescents perceive the style and quality of their parents' communication about their educational aspirations, and how do these perceptions influence children's feelings about achieving their aspirations? (3) What are the challenges for LBC when communicating with their migrant parents and other caregivers such as grandparents about education?

Method

Participants and Procedure

We recruited adolescents from two middle schools in Nanhai, a township in Songzi, a poor rural county in Hubei Province, Central China. Students aged 14 to 16 years old in

grade 9 were invited to participate in one-on-one interviews. We focused on students in grade 9, because this is the final year of compulsory schooling and thus a critical time for youth to reflect on their educational future.

Following the receipt of ethical approval from the university ethics board, permission was obtained from the two school principals and all grade 9 head teachers ($N = 13$) to approach students for participation in our study. All school students ($N = 721$) and their parents (or caregivers) were provided with information sheets and opt-in consent forms. However, only 82 students and their parents (or caregivers) agreed to participate in the interview and provided informed written consent. Our response rate is consistent with those reported in past studies (e.g., Leung and Lee 2012), which found that interview response rates are typically low in this age group in China. One potential reason may be the lack of time available to middle school students due to their busy academic schedules. These 82 students were first asked to complete a brief questionnaire assessing their educational aspirations (ranging from completion of middle school to a doctoral degree) and sociodemographic information (age, gender, primary caregiver, and parental educational level). Interviewees were then selected based on three criteria: educational aspirations (all levels included), gender (balance of boys and girls), and living situation (balance of students living with two parents, one parent, or grandparents). The selection process is shown in Fig. 1.

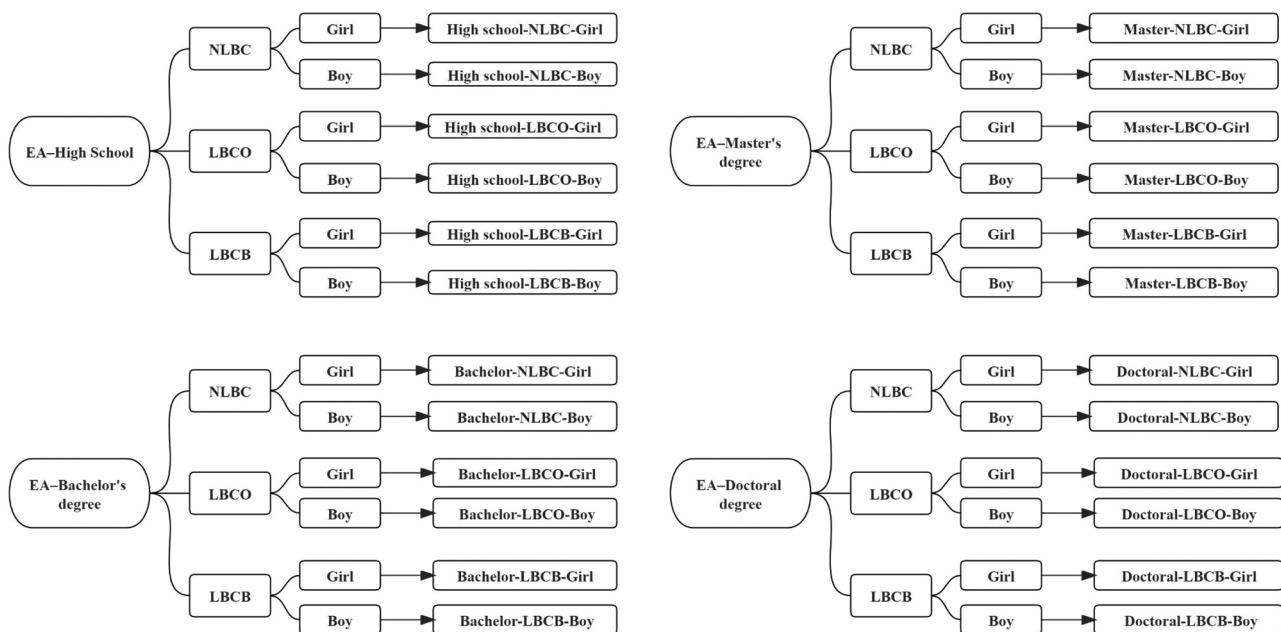


Fig. 1 Interviewee Selection Process. EA Educational aspirations, NLB Children living with both parents, LBCO Children living with mother, LBCB Children living with grandparents. All selected respondents had to meet three conditions (e.g., High school-NLBC-Girl). If more than one student met all three conditions,

one student was randomly selected to participate. In addition, only two of the 82 students reported their educational aspiration as 'high school', therefore we selected both of them. We also randomly selected four other students to ensure a sample of 24

The original study sample consisted of 24 students. However, one student withdrew from the study prior to data analysis. The final sample of 23 students consisted of 12 boys and 11 girls (M age = 14.65 years, $SD = 0.59$). The participants were given ID numbers (e.g., S1) to preserve their anonymity. Of the 23 students who participated, eight lived with their parents, seven with their mothers (father a rural-urban migrant), and eight with their grandparents (both parents rural-urban migrants). Regarding parents' educational level, 52% of fathers and 56% of mothers had completed middle school as their highest level of education; no mothers and only one father had a college degree. However, most adolescents reported high educational aspirations, with over 91.30% aspiring to attend university. Eight (34.8%) aspired to obtain a bachelor's degree, five (21.7%) aspired to obtain a master's degree, and eight (34.8%) aspired to obtain a doctoral degree. Only two students reported no desire to continue their education beyond high school.

Data Collection

Semi-structured interviews were conducted at the two schools in July 2020. We chose to conduct one-on-one interviews because confidentiality was important given that young people were being asked about personal and family issues. Students were asked to describe their experiences communicating with their parents about their school progress and future plans. All students were told that their data would be kept anonymously and confidentially. The interview focused on four domains: (1) reasons for adolescent aspirations (e.g., *Can you tell me why you wish to go to university?*); (2) the content of parent-child communication (e.g., *When talking about school progress and future plans with your mother, what do you usually talk about?*); (3) the quality of parent-child communication, with an emphasis on parental communication style and children's responses to these styles (e.g., *How does your mother talk about this?*); and (4) the role of teachers and grandparents (for LBCBs) in relation to their educational aspirations (e.g., *Can you describe how it is when you talk to your grandparents about your future plans?*). Interviews were conducted in Mandarin by the first author in a private office where conversations would not be interrupted. Each interview was audio-recorded and lasted 45 to 60 min.

Data Analysis

All interviews were transcribed verbatim through Xunfei, an online transcription tool provided by iFlyrec (iFlytek 2015). Since the interviews were conducted in Mandarin, the data were analyzed in this language by two bilingual members of the research team (the first and fourth authors). The first author first read each transcript and listened to the audio recording to

scrutinize the transcription text and correct any errors, and then stored and analyzed the data in NVivo 12 (QSR International Pty Ltd 2018). Transcripts were analyzed using a combination of inductive and deductive thematic analysis, following the recommendations of Braun and Clarke (2006). To ensure that the data were coded with sensitivity to the research topics, the first author reviewed the literature on parent-child communication and other parental factors known to influence children's educational aspirations before coding (Allen et al. 2018). Deductive codes were identified and coded by the first author on the basis of their relevance to the current research questions and drawing on the literature on parent-child communication about education. Inductive codes that described new themes emerging from the data were also identified. These codes were identified based on the data's explicit meaning, with no interpretations made beyond that. In addition, codes were also developed when data revealed inconsistencies within and across the interviews or with previous research findings to ensure that any patterns that deviated from the dominant story were not ignored. Following the completion of the code development phase, the fourth author assisted with the coding revision phase. After a discussion and review of the codes with her, a list of final codes was developed. The codes were then sorted and grouped together to form potential themes, with codes describing similar issues being combined into a more overarching theme or subtheme. By using a visual representation of the thematic map, the relationships between codes and between themes (i.e., themes and subthemes) were also examined. The themes were then reviewed and modified by the two coders, such as combining similar themes into a new theme and eliminating themes in which the data were not meaningful and coherent. To validate the reliability of the coding, three randomly selected transcripts were analyzed independently by another qualitative researcher outside the research team. There was a high level of agreement between coders. Any questions and disagreements were discussed and resolved. Finally, the data extracts were translated into English using the back-and forward-translation process recommended by Chen and Boore (2010). The two bilingual researchers collaborated on the translation and reached an agreement on the final English version.

Results

In the following sections, seven themes and 16 subthemes (see Table 1) with representative data extracts are presented.

Reasons for Adolescent Aspirations

The main reasons for rural adolescents' high educational aspirations were economic rewards and fulfilling their parents' aspirations. Twenty-one of the students (91.30%) wished to go

Table 1 Themes and subthemes for the educational aspirations of chinese rural adolescents

Themes	Subthemes
Reasons for adolescent aspirations	<ul style="list-style-type: none"> • Economic rewards • Fulfilling parents' aspirations
Parent-child communication content	<ul style="list-style-type: none"> • Academic performance • Short-term aspirations • Long-term aspirations
Adolescents' perceived parenting styles	<ul style="list-style-type: none"> • Perceived parental harshness • Perceived parental warmth • Style of communication (i.e., one-way or open communication)
Differences in mother-child and father-child communication	<ul style="list-style-type: none"> • Differences in parenting styles • Differences in mother-child and father-child relationship quality
Adolescents' emotional responses	<ul style="list-style-type: none"> • Adolescents' emotional responses to parent-child communication regarding educational aspirations • Adolescents' feelings about achieving their educational aspirations
Barriers for left-behind children	<ul style="list-style-type: none"> • Lack of face-to-face communication • Limited time with parents
The role of other significant adults	<ul style="list-style-type: none"> • The role of teachers • The role of grandparents

to university because they believed that a higher level of educational attainment would lead to promising jobs with better salaries. All respondents were very motivated to contribute to the family's household income:

"With a high degree, I can get a good job and help my parents so they don't have to work hard when they get old. I can give them money to help them live a better life." (S11 - Girl, 14 years old).

A sense of duty to realize parents' aspirations for them was also reflected in the adolescents' explanations. All students mentioned that they did not want to disappoint their parents:

"My parents always say that I must study hard. In this way, I can have a good life in the future. I feel that if I can attend a good university, they will be very happy." (S6 - Boy, 15).

Migrant parents also conveyed "urban values" to their children. Educational aspirations were high among students whose parents communicated these values:

"My father always says that if I could go to university in an urban area, I could stay there to work and live and become an urban resident." (S23 - Boy, 14).

Parent-Child Communication Content

Students shared stories about conversations they had with their parents regarding educational aspirations. A striking similarity across various interviews was the topics covered by parents during these conversations: exam scores and key schools. Parents frequently emphasized the importance of exam scores, with academic performance seen as the most important determinant of their children's educational future:

"They always say that the test results determine everything... whether I can go to high school and university or not." (S4 - Boy, 15).

Students in our study were in their last year of compulsory education; thus, their families had access to more information about high school choices. All parents communicated their aspirations to their children, such as going to the school identified as most likely to help their child attend university. From the students' perspective, they had to strive to follow their parents' wishes:

"They want me to go to the best high school in our town, so I should do my best." (S23 - Boy, 14).

All students also mentioned that their parents did not want them to go to a vocational school because vocational education is not preparation for university:

"My parents say if I could only go to vocational school, they would not let me continue my studies. I would go to work. They think it's useless to go to a vocational school because students don't learn anything useful there. It is better to save tuition fees." (S18 - Boy, 15).

Students also discussed their long-term goals with their parents. Obtaining a bachelor's degree was a basic goal, with 22 students (95.65%) reporting that their parents expected them to achieve a higher degree:

"The number of undergraduate students is growing, and I need to achieve higher" (S23 - Boy, 14).

Adolescents' Perceived Parenting Style During Parent-Child Communication

Eighteen students (78.26%) reported how communication around education was undermined by their parents' harshness and criticism. Parental use of sarcasm, putting children down, and comparing their child unfavorably to others were repeatedly mentioned in interviews:

“My parents say, ‘What school would accept you with such poor grades!?’” (S12 – Boy, 15).

“My father said things like ‘I was not as stupid as you are when I was a student.’” (S16 – Girl, 15).

“My mother likes to compare me to the kids who do well in school.” (S3 – Girl, 15).

Moreover, 12 students (52.17%) said that their parents did not listen to their opinions:

“My parents always say how important it is to go to high school, but I just want to go to vocational school and go out to work early. However, they don’t listen to me. They think what they say is right and what I say is meaningless.” (S18 – Boy, 15).

Five students (21.74%) described their parents’ communication in positive terms as warm, encouraging, helping them in their academic problem-solving, and providing comfort:

“Whenever we talk about my future, they say that they will support me as long as I want to continue my studies, and that I don’t need to worry about tuition fees.” (S23 – Boy, 14).

“If I do badly in an exam, my mother reassures me that it doesn’t matter. She also helps me to analyze the problem and encourages me to try hard next time.” (S21 – Girl, 14).

Differences in Mother-Child and Father-Child Communication

The students mentioned differences in their communication with their mother and their father. Eighteen students (78.26%) perceived their fathers as being harsher and more controlling than their mothers:

“I prefer to talk to my mother because she encourages me and doesn’t always criticize me like my father does.” (S3 – Girl, 15).

“My father doesn’t care if I do well in school, but he has very high aspirations for me. He always says ‘I’m your father and you must listen to me.’” (S4 – Boy, 15).

Differences in mother-child and father-child relationships also emerged, with 10 students (43.48%) describing their fathers as more difficult to communicate with because their relationships were less close due to long-term physical distance. Of these ten children, six were LBCOs living with their mothers:

“My father has been working elsewhere for as long as I can remember... it is awkward to talk to him about my goals... but I can say anything to my mother.” (S15 – Boy, 15).

Children’s Emotional Responses

According to the students, their parents’ harshness strongly impacted their emotional responses during discussions about their education. Students explained that they were unwilling to participate in these conversations because their parents were harsh:

“I always get bad grades, and I am afraid that I won’t get into high school. I truly want to talk to my parents about what I should do, but they always answered me, ‘You need to study harder!’, so I don’t want to talk to them.” (S9 – Boy, 14).

Fifteen adolescents (65.22%) also reported that one-way communication undermined their desire to actively participate in these discussions. They ‘just listened’ to their parents most of the time, but they did not internalize the information:

“I don’t think I have anything to say to them... we don’t always agree with each other. I’ve said that if I cannot enter high school, I would do live streaming to make money... but they think it’s an unreliable career. Being a live-streaming star is very popular in China now, right?” (S14 – Boy, 15).

In contrast, five students (21.74%) felt happy and comfortable having such conversations with their parents who had a warm and authoritative style, and reported feeling confident enough to share their thoughts:

“I told my parents that I want to be a doctor. They support my idea and have helped me to look up information about the medical universities on the internet.” (S10 – Girl, 14).

When discussing their feelings about achieving their goals, adolescents expressed varying views. Eight students

(34.78%) felt that having aspirations was beneficial for promoting motivation:

“I think having goals gives me a sense of direction... I want to study harder.” (S6 – Boy, 15).

However, twelve students (52.17%) reported that having high educational aspirations led to negative emotional states. They doubted their ability to achieve their goals and worried about failure:

“I think the goal of going to university puts a lot of pressure on me because I don’t know how to achieve it or how to work hard.” (S11 – Girl, 14).

In particular, some low-achieving students expressed that their poor academic performance led to their feelings of helplessness about achieving their aspirations. They also expressed embarrassment and hesitation in asking for help from their parents and teachers:

“I feel that no matter how hard I try, I cannot get good grades. I’m afraid to ask my teachers for help because I do not think they like students with poor grades.” (S11 – Girl, 14).

Barriers for Left-Behind Children

Left-behind children in the study said that they were unable to have face-to-face conversations with their parent(s) who had migrated to urban areas; instead, they used phone calls or video calls, which made having good conversations difficult. LBC also perceived their migrant parent(s) as being busy with less. These barriers were more frequently reported by LBCBs than LBCOs:

“I sometimes want to talk to them about which high school I go to... but they have little understanding of my studies” (S17 – Girl, 15).

“They usually call me for a few minutes when I’m going to bed.” (S22 – Boy, 15).

The Role of Other Significant Adults

Students were also asked if their schools provided any academic guidance. All respondents said that their teachers had informed them about popular high schools, for example, about the admission requirements. However, 20 (86.96%) reported having had few one-on-one conversations about their plans with teachers:

“I want to know what university life is like, but no one in my family has ever been to university, and I do not know who to ask. I’m scared to ask my teachers.” (S11 – Girl, 14).

For LBC, the role of guardians is important. However, six participating LBCBs (26.09%) responded that their grandparents had only finished their elementary education, and two reported that their grandparents were illiterate. All the grandparents in the study were farmers. These students reported that they would talk to their grandparents about daily life, but not academic issues:

“My grandparents have been farmers all their life... maybe there is a generation gap. For example, I want to become a programmer in the future, because I like computers... but they do not know what a programmer is. It is exhausting to explain my ideas to my grandparents.” (S1 – Boy, 16).

Discussion

The aim of our study was to explore the experience of parent-child communication about educational aspirations among adolescents living in rural areas of China. Previous research has shown that parent-child communication is one of the most important ways of transmitting aspirations across generations (Xu and Montgomery 2021). We found that the educational aspirations of Chinese rural adolescents were mainly family and socially oriented. With regard to the role of the family, all students in our study mentioned that their parents aspired for them to complete high school and later attain at least a bachelor’s degree. Therefore, they sought to please and repay their parents through educational success. This is consistent with previous research linking Chinese students’ academic motivation to their sense of obligation to respect and repay their parents for their support (Tao and Hong 2014). Traditional cultural values of filial piety emphasize that Chinese children should comply with their parents’ wishes out of respect (Luo et al. 2013). Thus, it is understandable that students view their internalization of parental aspirations as their filial duty.

Students identified high income as another important motivator for pursuing university-level education rather than commencing work after their compulsory education or attending a vocational school, consistent with (Wang and Rao 2022). In line with Koo’s (2012) findings, we also found that migrant workers appeared to transmit the value of education to their children by presenting themselves as negative examples. Half of the parents in our study were migrant workers in urban areas. They told their children that

their lack of education had prevented them from finding a well-paid job. This shared experience may reinforce their children's belief in the value of completing a university degree, in turn encouraging them to think of a university degree in terms of return on investment. These reasons given by adolescents for attaining further education help us to understand that parents' sharing of beliefs about the expected positive outcomes of education, as well as their own personal negative experiences, contribute to children's internalization of parents' views about the value of education as a route to success (Ryan and Deci 2000).

Guided by the two-step model of intergenerational value transmission (Grusec and Goodnow 1994) and SDT (Deci and Ryan 2000), we explored the parenting and communication styles when parents talk to their children about educational aspirations. It is important to note that we explored parenting styles as perceived by adolescents, which are subjective in nature and therefore vulnerable to biases related to students' mood, memory, personality, and parent-child relationship quality. However, given the absence of prior research considering parenting styles in relation to parent-child communication in rural Chinese families, this qualitative study exploring perceived parenting factors may provide helpful information to guide future research employing more objective measures of parenting styles, such as the observation of parent-child interaction. All parents in our study communicated very frequently with their children and held high aspirations for them. However, parents who were perceived as authoritative communicated their aspirations in a positive way, displaying warmth, encouragement, and consideration for their children's ideas. In contrast, communication by parents perceived as authoritarian was characterized by a harsh vocal tone, criticism, threats (e.g., they would not pay vocational school fees), unfavorable comparisons of their child to their peers, and one-way rather than reciprocal communication. These characteristics correspond to findings about the role of authoritarian and authoritative communication styles of Chinese parents in adolescent outcomes (e.g., Yang and Zhao 2020). Our findings also indicated that most parents were perceived to use an authoritarian communication style, which supports past research showing that the parenting style of low-SES parents is predominantly authoritarian in China (Huang 2018). These findings add to a growing body of research on barriers to parent-child communication in Chinese rural families (Wang et al. 2019), and suggest that authoritarian parents need support in learning how to support their child's pursuit of goals.

Consistent with the literature on differences in the parenting styles of Chinese mothers and fathers (Wang and Zhang 2007), we found that adolescents tended to perceive their mothers as being more supportive and responsive than their fathers when talking about school-related issues.

Research on the social gender roles of parents in Chinese rural areas suggests that mothers play a more central role in child-rearing than do fathers, who are seen as breadwinners (Xu et al. 2017). In our study, adolescents described themselves as being closer to their mothers than to their fathers. This finding is consistent with the views of Peng and Wong (2016) who suggested that mothers are typically the primary caregivers and emotional supporters for their children in Chinese rural families. It is understandable that adolescents in the current study perceived their fathers to be less warm and supportive than their mothers, particularly LBCOs, who were primarily cared for by their mothers and had infrequent contact with their migrant fathers. Increasing awareness and access to online parenting programs designed specifically for fathers that emphasize positive parenting strategies may be especially useful for LBC (Tully et al. 2021; Hall and Bertuccio 2021).

We also explored children's emotional responses to parent-child communication regarding educational aspirations. Consistent with previous research on intergenerational value transmission in general (Chen et al. 2000; Zhang 2020), we found that students who perceived their parents as using an authoritarian communication style were more likely to express uncaring responses to parents' communication and experience negative emotions such as irritation and boredom during parent-child conversations. We also found that adolescents' compliance with their parents' wishes tended to increase when parents engaged in a reciprocal exchange of information and ideas with them. These findings extend Grusec and Goodnow's (1994) model of intergenerational value transmission which suggests that children's attention to parental messages is influenced by parenting and communication styles, to the transmission of educational aspirations. Consistent with this view, our study findings suggest that a top-down communication style where parents attempt to teach rather than listen to, understand, and empathize with young people may prevent them from accepting their parents' advice, especially during early adolescence when young people are seeking to establish independence from their parents (Hill and Tyson 2009).

The results also showed that positive emotional experiences during communication may also help to promote adolescents' positive beliefs in their ability to achieve their goals. Specifically, adolescents expressed positive perceptions of their parents' aspirations and were motivated and confident in achieving their goals when they reported their parents as having an authoritative style, demonstrated by showing interest in their children's perspectives and providing warm and encouraging feedback. This finding is consistent with past research inspired by SDT showing that parental warmth and need-supportive communication helps to satisfy children's need for autonomy and promotes a

positive self-perception, which, in turn, leads children to internalize their parents' values and intentionally motivate their behaviors (Froiland 2011). In general, our findings suggest that both the model of intergenerational value transmission and SDT, both of which highlight the critical role of parenting behaviors in transmitting parental values to youth, are relevant to understanding the drivers of educational aspirations of adolescents living in rural China.

Our findings confirm that Chinese rural parents' high aspirations appear driven by a desire to see their children avoid the difficulties they had experienced due to a lack of education (Yu 2020). However, we found that such high parental aspirations, especially when transmitted to adolescents in an authoritarian way, may exert a negative impact on children's mental health (e.g., cause anxiety and depression). Recent research by Ma et al. (2018) found that high parental educational aspirations for children have a direct positive effect on adolescent depression in Hong Kong. However, our qualitative findings paint a more complex picture, showing that the benefit of high parental aspirations may only be seen when adolescents perceive their parents as having a warm, authoritative parenting style, while the combinations of high parental aspirations and an authoritarian parenting style might actually place young people at higher risk for internalizing problems. Thus, our findings can help guide future research on the influence of high parental educational aspirations on the psychological and academic adjustment of Chinese rural adolescents.

With respect to migrant parent-child communication, we found that children not living with parent(s) found it difficult to have frequent and good quality communication with their absent parent(s). Notably, LBCBs whose parents had both migrated expressed greater dissatisfaction than LBCOs who were able to communicate face-to-face with their mothers. This response is consistent with recent evidence of the low frequency of parent-child communication among Chinese LBC, especially for children in families where both parents have migrated (Lu et al. 2020). Moreover, LBC in the current study generally reported communicating with their migrant parent(s) via mobile phone or instant-messaging software such as WeChat, and lacked face-to-face communication that could facilitate physical and emotional closeness between parent(s) and children (Weitzman and Greenberg 2002). As a result, consistent with previous research suggesting that migrant parents have difficulty being closely involved in their children's education and everyday life (Hong and Fuller 2019), some LBC in our study were less willing to use mobile phones to talk about personal goals with their absent parent(s), who had a limited understanding of their children's lives and experiences with school due to their absence. Therefore, our findings suggest that the flexible application of telemental health (Tully et al. 2021; Hall and Bertuccio 2021) to

promote good relationships and communication between LBC and their absent parent(s) is greatly needed.

Our study also considered the role of teachers and grandparents in influencing adolescents' educational aspirations. Adolescents reported fewer opportunities for one-on-one communication with their teachers because of large class sizes (around 65 students in a class), which is common in rural China (Lei et al. 2018). Furthermore, LBCBs reported avoiding discussing academic topics with their grandparents due to their low educational level, and a generation gap which led to challenges in explaining current education and career options, particularly those related to advances in technology and social media. Liang and Sun (2020) also found that although grandparents are often devoted to raising their left behind grandchildren, they have limited ability to provide adequate education-related supervision. Our findings suggest that there is a need to provide access to alternative adult mentors to LBC, such as teachers or community service workers, to help support grandparents and young people to access practical information about different educational and career pathways. Furthermore, large class sizes coupled with adolescent perceptions that teachers are less interested or supportive of less academically capable students suggests that teachers need to take the lead in welcoming and initiating these discussions.

Our study comes with some limitations. First, the sample consisted of rural adolescents from two schools in a poor township in central China. Thus, the findings may not be generalizable to adolescents living in other rural areas of China. Second, only adolescents were interviewed in our study. Future research should strive to gain the perspectives of both parents or caregivers and children to triangulate their perspectives with respect to parent-child communication about educational aspirations. Third, as previously mentioned, there are limitations to using adolescents' subjective discourse to explore parenting and parent-child communication styles. Future research could include family observation of parent-adolescent conversations to enable a more objective and ecologically valid assessment of parenting styles and adolescent behavior. Finally, the low interview response rate may have resulted in selection bias, as more confident students may have been more likely to agree to participate in the interview. Conversely, students who lacked self-confidence may have been underrepresented in our sample, and these may be more likely to be low-achieving students, given evidence linking child anxiety and poor academic performance (Herzig-Anderson et al. 2012); thus, limiting the generalizability of the findings.

Our study also possesses considerable strengths because it is the first to use a qualitative approach to explore parent-child communication as a context for

influencing Chinese rural adolescents' thinking about their educational future. As mentioned previously, many of the quantitative measures in the educational aspirations literature are based on Western assumptions, which may make it difficult to uncover indigenous and local values in non-Western contexts. Thus, studies that use interviews, such as the present study, have the potential to provide insight into specific cultural characteristics. For example, consistent with previous quantitative research using Western-based questionnaires (e.g., Wu et al. 2018), we found that adolescents' educational aspirations were strongly influenced by their parents' aspirations; however, through interviews we learned that feelings of responsibility to the family (e.g., earning money for the family) was reported as an important motivator for rural students to share their parents' high aspirations for them. Therefore, our findings suggest that the role of family and collective cultural values should be given greater consideration when designing instruments to assess the academic motivational goals of Chinese adolescents. In addition, the findings of this study have several practical implications. First, they highlight the importance of accessible school and family-based interventions to help rural parents, especially fathers, to communicate effectively with their children about academic concerns. For example, school-based interventions can provide parents with in-person or online lectures and supportive group discussions on how to develop a close parent-child relationship and motivate adolescents in positive ways. Second, school and community-based mentoring programs are needed, particularly for LBC, to raise rural adolescents' awareness of resources and sources of support that may assist them to achieve their educational goals. Provision of flexible opportunities to ensure that parents and caregivers are better informed about their child's schooling and future educational and career options is likely to be helpful for Chinese adolescents living in rural areas.

Data Availability

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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References

- Allen, J. L., Bird, E., & Chhoa, C. Y. (2018). Bad boys and mean girls: Callous-unemotional traits, management of disruptive behavior in school, the teacher-student relationship and academic motivation. *Frontiers in Education, 3*, 108.
- Barni, D., Ranieri, S., Scabini, E., & Rosnati, R. (2011). Value transmission in the family: Do adolescents accept the values their parents want to transmit? *Journal of Moral Education, 40*(1), 105–121.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101.
- Chen, H. Y., & Boore, J. R. (2010). Translation and back-translation in qualitative nursing research: Methodological review. *Journal of Clinical Nursing, 19*(1-2), 234–239.
- Chen, X., Liu, M., Li, B., Cen, G., Chen, H., & Wang, L. (2000). Maternal authoritative and authoritarian attitudes and mother-child interactions and relationships in urban China. *International Journal of Behavioral Development, 24*, 119–126.
- Chen, X., Allen, J. L., & Hesketh, T. (2023). The influence of individual, peer, and family factors on the educational aspirations of adolescents in rural China. *Social Psychology of Education, https://doi.org/10.1007/s11218-023-09765-3*.
- Cheung, C. S. S., & Pomerantz, E. M. (2015). Value development underlies the benefits of parents' involvement in children's learning: A longitudinal investigation in the United States and China. *Journal of educational psychology, 107*(1), 309.
- Cheung, C.-S.-S., & Pomerantz, E. M. (2012). Why does parents' involvement enhance children's achievement? The role of parent-oriented motivation. *Journal of Educational Psychology, 104*(3), 820–83.

- Chinese Ministry of Education. (2020). *Composition of students in senior secondary schools*. Beijing: Chinese Educational Development Institute.
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological inquiry*, *11*(4), 227–268.
- Deci, E. L., & Ryan, R. M. (2012). Motivation, personality, and development within embedded social contexts: An overview of self-determination theory. In R. Ryan (Ed.), *The Oxford handbook of human motivation* (pp. 85–107). New York, NY: Oxford University Press.
- Eng, S. (2012). Cambodian early adolescents' academic achievement: The role of social capital. *Journal of Early Adolescence*, *33*(3), 378–403.
- Froiland, J. M. (2011). Parental autonomy support and student learning goals: A preliminary examination of an intrinsic motivation intervention. *Child & Youth Care Forum*, *40*(2), 135–149.
- Froiland, J. M. (2021). A comprehensive model of preschool through high school parent involvement with emphasis on the psychological facets. *School Psychology International*, *42*(2), 103–131.
- Grusec, J. E., & Goodnow, J. J. (1994). Impact of parental discipline methods on the child's internalization of values: A reconceptualization of current points of view. *Developmental Psychology*, *30*, 4–19.
- Hall, C. M., & Bertuccio, R. (2021). Delivering family-based interventions using phone-assisted and internet-based technology. In Allen, J. L., Hawes, D. J., & Essau, C. A. (Eds.), *Family-Based Intervention for Child and Adolescent Mental Health: A Core Competencies Approach* (pp. 76–86). Cambridge University Press.
- Herzig-Anderson, K., Colognori, D., Fox, J. K., Stewart, C. E., & Warner, C. M. (2012). School-based anxiety treatments for children and adolescents. *Child and Adolescent Psychiatric Clinics*, *21*(3), 655–668.
- Hill, N. E., & Tyson, D. F. (2009). Parental involvement in middle school: A meta-analytic assessment of the strategies that promote achievement. *Developmental Psychology*, *45*(3), 740.
- Hong, Y., & Fuller, C. (2019). Alone and "left behind": A case study of "left-behind children" in rural China. *Cogent Education*, *6*(1), 1654236.
- Huang, C. (2018). Parenting styles and the development of non-cognitive skills among Chinese adolescents. *Chinese Journal of Sociology*, *38*(6), 216–240. (in Chinese).
- Huang, Y., & Gong, H. (2022). Educational expectations of left-behind children in China: determinants and gender differences. *Applied Research in Quality of Life*, *17*(5), 2501–2523.
- iFlytek. (2015). *iFlyrec*. <https://www.iflyrec.com/>.
- Khattab, N. (2015). Students' aspirations, expectations and school achievement: What really matters? *British Educational Research Journal*, *41*(5), 731–748.
- Kim, S. W. (2020). Meta-analysis of parental involvement and achievement in East Asian countries. *Education and Urban Society*, *52*(2), 312–337.
- Knafo, A., & Schwartz, S. H. (2003). Parenting and adolescents' accuracy in perceiving parental values. *Child Development*, *74*, 595–611.
- Knafo, A., & Schwartz, S. H. (2009). Accounting for parent-child value congruence: theoretical considerations and empirical evidence. In U. Schönplflug (Ed.), *Culture and psychology* (pp. 240–268). New York, NY: Cambridge University Press.
- Knight, J., & Li, S. (1996). Educational attainment and the rural-urban divide in China. *Oxford Bulletin of Economics Statistics*, *58*(1), 83–87.
- Koo, A. (2012). Is there any chance to get ahead? Education aspirations and expectations of migrant families in China. *British Journal of Sociology of Education*, *33*(4), 547–564.
- Lei, W., Li, M., Zhang, S., Sun, Y., Sylvia, S., Yang, E., & Rozelle, S. (2018). Contract teachers and student achievement in rural China: Evidence from class fixed effects. *Australian Journal of Agricultural and Resource Economics*, *62*(2), 299–322.
- Leung, L., & Lee, P. S. (2012). The influences of information literacy, internet addiction and parenting styles on internet risks. *New media & society*, *14*(1), 117–136.
- Li, H., Loyalka, P., Rozelle, S., Wu, B., & Xie, J. (2015). Unequal access to college in China: How far have poor, rural students been left behind? *The China Quarterly*, *221*, 185–207.
- Liang, Z., & Sun, F. (2020). The lasting impact of parental migration on children's education and health outcomes. *Demographic Research*, *43*, 217–244.
- Liu, L., Xu, L., Luo, F., & Li, Y. (2018). Intergenerational transmission of interpersonal strengths: The role of parent gender, family processes, and child characteristics. *Journal of adolescence*, *67*, 66–76.
- Lu, J., Lin, L., Roy, B., Riley, C., Wang, E., Wang, K., & Zhou, X. (2020). The impacts of parent-child communication on left-behind children's mental health and suicidal ideation: A cross sectional study in Anhui. *Children and Youth Services Review*, *110*, 104785.
- Luo, R., Tamis-LeMonda, C. S., & Song, L. (2013). Chinese parents' goals and practices in early childhood. *Early Childhood Research Quarterly*, *28*(4), 843–857.
- Ma, Y., Siu, A., & Tse, W. S. (2018). The role of high parental expectations in adolescents' academic performance and depression in Hong Kong. *Journal of Family Issues*, *39*(9), 2505–2522.
- Maccoby, E., & Martin, J. (1983). Socialization in the context of the family: Parent-child interaction. In E. M. Hetherington (Ed.), *Handbook of child psychology: Vol. 4. Socialization, personality, and social development* (pp. 1–101). New York, NY: Wiley.
- Ng, F. F. Y., & Wei, J. (2020). Delving into the minds of Chinese parents: What beliefs motivate their learning-related practices? *Child Development Perspectives*, *14*(1), 61–67.
- Park, H. (2008). The varied educational effects of parent-child communication: A comparative study of fourteen countries. *Comparative Education Review*, *52*(2), 219–243.
- Peng, Y., & Wong, O. M. (2016). Who takes care of my left-behind children? Migrant mothers and caregivers in transnational child care. *Journal of Family Issues*, *37*(14), 2021–2044.
- Postiglione, G. A., Xie, A., Jung, J., & Hong, Y. (2017). Rural students in a Chinese top-tier university: Family background, school effects, and academic performance. *Chinese Education & Society*, *50*(2), 63–74.
- QSR International Pty Ltd. (2018). *NVivo* (Version 12). <https://www.qsrinternational.com/nvivo-qualitative-data-analysis-software/home>.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, *55*(1), 68–78.
- Schönplflug, U. (2001). Intergenerational transmission of values: The role of transmission belts. *Journal of Cross-Cultural Psychology*, *32*(2), 174–185.
- Strage, A., & Brandt, T. S. (1999). Authoritative parenting and college students' academic adjustment and success. *Journal of Educational Psychology*, *91*(1), 146.
- Sun, F., Liu, Z., & Schiller, K. S. (2020). Parental migration and children's educational aspirations: China and Mexico in a comparative perspective. *Chinese Sociological Review*, *52*(4), 462–486.
- Tang, J., Li, N., Sandoval, J. R., & Liu, Y. (2018). Parenting styles and academic motivation: A sample from Chinese high schools. *Journal of Child and Family Studies*, *27*(10), 3395–3401.
- Tao, V. Y., & Hong, Y. Y. (2014). When academic achievement is an obligation: Perspectives from social-oriented achievement motivation. *Journal of Cross-Cultural Psychology*, *45*(1), 110–136.
- Tully, A., Hawes, D., & Dadds, M. (2021). Engaging fathers in family-based interventions for child mental health. In Allen, J. L., Hawes, D. J., & Essau, C. A. (Eds.), *Family-Based Intervention*

- for Child and Adolescent Mental Health: A Core Competencies Approach (pp. 53–66). Cambridge University Press.
- UNICEF, 2017. Population Status of Children in China in 2015: Facts and Figures. <https://www.unicef.cn/en/reports/population-status-children-china-2015/> (accessed 14 April 2022).
- Wang, A., & Guo, D. (2019). Technical and vocational education in China: Enrolment and socioeconomic status. *Journal of Vocational Education & Training*, 71(4), 538–555.
- Wang, F., Lin, L., Xu, M., Li, L., Lu, J., & Zhou, X. (2019). Mental health among left-behind children in rural China in relation to parent-child communication. *International Journal of Environmental Research and Public Health*, 16(10), 1855.
- Wang, J., & Rao, N. (2022). What do Chinese students say about their academic motivational goals—reasons underlying academic strivings?. *Asia Pacific Journal of Education*, 42(2), 245–259.
- Wang, M., & Zhang, W. (2007). A research on parent-adolescent conflict and cohesion. *Psychological Science*, 30, 1196–1198.
- Weitzman, E., & Greenberg, J. (2002). *Learning language and loving it: A guide to promoting children's social, language and literacy development in early childhood settings*. Hanen Centre. Toronto, Canada.
- Wu, N., Hou, Y., Wang, Q., & Yu, C. (2018). Intergenerational transmission of educational aspirations in Chinese families: Identifying mediators and moderators. *Journal of Youth and Adolescence*, 47(6), 1238–1251.
- Xu, J., Ni, S., Ran, M., & Zhang, C. (2017). The relationship between parenting styles and adolescents' social anxiety in migrant families: A study in Guangdong, China. *Frontiers in Psychology*, 8, 626.
- Xu, Y., & Montgomery, C. (2021). Understanding the complexity of Chinese rural parents' roles in their children's access to elite universities. *British Journal of Sociology of Education*, 42(4), 555–570.
- Yang, J., & Zhao, X. (2020). Parenting styles and children's academic performance: Evidence from middle schools in China. *Children and Youth Services Review*, 113, 105017.
- Yu, H. (2020). The making of 'incompetent parents': Intersectional identity, habitus and Chinese rural migrant's parental educational involvement. *The Australian Educational Researcher*, 47(4), 555–570.
- Zhang, W., Wei, X., Ji, L., Chen, L., & Deater-Deckard, K. (2017). Reconsidering parenting in Chinese culture: Subtypes, stability, and change of maternal parenting style during early adolescence. *Journal of Youth and Adolescence*, 46(5), 1117–1136.
- Zhang, Y. (2020). Quality matters more than quantity: Parent-child communication and adolescents' academic performance. *Frontiers in Psychology*, 11, 1203.