Family Functioning and Interpersonal Adaptation in Rural Left-behind Children: The Serial Mediation Effect of Peer Relationships and Psychological Capital

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Abstract: This study used a questionnaire to examine the relationship between family functioning and interpersonal adaptability among rural left-behind children using 222 students in grades 4-6 as subjects, and also explored the role of peer relationships and psychological capital in mediating the chain between family functioning and interpersonal adjustment. The results showed that (1) family functioning, peer relationships, psychological capital and interpersonal adjustment of rural left-behind children were positively correlated; (2) peer relationships and psychological capital of rural left-behind children mediated the chain between family functioning and interpersonal adjustment.

Keywords: Rural left-behind children, Family functioning, Interpersonal adaptation, Psychological capital, peer relationships.

1. Introduction

Rural left-behind children are those under the age of 18 who have been left behind by both or one of their parents to work for a long time [1]. Studies have found that most left-behind families suffer from parent-child alienation and poor parent-child communication, and that the lack of parental support makes left-behind children prone to interpersonal maladjustment in their interactions [2], which affects their later personality development [3-4]. Interpersonal adjustment is an important sub-dimension of social adjustment, which is an individual's ability to establish good relationships with others and to obtain appropriate support as a result [5]. Primary and secondary school students are at an important stage of their physical and mental development, and the establishment and maintenance of interpersonal relationships at this stage plays an important role in children's social development. Therefore, we hope to improve the interpersonal adjustment of left-behind children by examining the mechanisms that influence family functioning on interpersonal adjustment in this age group of rural left-behind children.

Family functioning is the effectiveness of the family system in terms of the emotional connection of its members, communication, family rules and coping with external contingencies [6]. As a microsystem that influences individual development, the family provides conditions and support for the healthy physical, cognitive, psychological and social development of children [7]. Studies have shown that family functioning can improve interpersonal adjustment[8] and regulate adolescents' feelings of alienation. Adolescents with poor family functioning are likely to apply negative interpersonal practices to their daily lives, making it difficult for them to establish harmonious interpersonal relationships with others[9]. Compared to non-leaving children, rural left-behind children have worse parent-child relationships [10] and weaker family functioning, leading to obstacles in getting along with others and maintaining interpersonal relationships [11]. Accordingly, hypothesis (H1) is proposed: family functioning of rural left-behind children has a positive effect on interpersonal adjustment.

Psychological capital is an important psychological resource for individuals and refers to the core psychological elements of general positivity, including optimism, self-efficacy, hope and resilience [12]. The psychological capital of left-behind children refers to the state-like positive psychological abilities that children possess in the context of being left behind and that contribute to psychosocial adjustment [1]. Some studies have found that good family functioning is strongly associated with the acquisition of psychological capital [13] and positively predicts psychological capital [14]. Whereas psychological capital has a protective effect on personal development, individuals with high levels of psychological capital have lower interpersonal sensitivity and greater interpersonal communication skills. In summary, it is hypothesized (H2) that family functioning will have an impact on the interpersonal adjustment of rural left-behind children through the mediation of psychological capital.

A peer relationship is a relationship established and developed between individuals of similar age or level of psychological development[15]. As an important context for early individual development, the family has an important influence on the quality of adolescent peer relationships; much of children's early acquisition of social interaction behaviours comes from parents and other family members and can influence their peer interaction patterns in adolescence [16]. At the same time, peer relationships are an important predictor of children's behavioural problems [17-18]. The higher the level of mutual support, concern and solidarity among peers, the lower the externalising problem behaviour [19]. Poor peer relationships can easily develop negative effects such as frustration, loneliness and even adjustment difficulties [20]. Studies have found that junior high school students can enhance their psychological capital by building good peer relationships to improve their psychological resilience and self-efficacy [21].
Accordingly, it was hypothesised that the family functioning of rural left-behind children would influence their psychological capital (H3) and hence interpersonal adjustment (H4) through peer relationships.

In summary, this study proposes a chain mediation model (see Figure 1) to explore the impact of family functioning on the interpersonal adjustment of left-behind children and its pathways of influence.

![Figure 1: Diagram of model assumptions](image)

Note: FF= Family Functioning, PR= Peer Relationships, PC=Psychological Capital, IA= Interpersonal Adaptation.

2. Subjects and Methods

2.1 Subjects

In this study, 300 left-behind children in grades 4 to 6 were selected from two rural primary schools in Gansu Province, China, and after eliminating invalid questionnaires, 222 actual questionnaires were obtained. Among them, 109 were boys and 113 were girls; their ages ranged from 9 to 14 years old, with a mean age of 11.87 years (SD= 0.92).

2.2 Research Tools

2.2.1 Family functioning

This study used a Chinese version of the scale derived from a modification of the Family Intimacy and Adaptability Scale (FACESIII) written by Olson et al. in 1983 by Xu Jie and Fang Xiaoyi [22]. The scale divides family functioning into two dimensions, intimacy and adaptability, with 20 questions, and is rated on a 5-point scale. The higher the score, the higher the level of family closeness and adaptability. The Cronbach's alpha coefficient for the test in this study was 0.814.

2.2.2 Psychological Capital

The psychological capital questionnaire [1] compiled by Fan Xinghua et al. was used for rural left-behind children, containing five dimensions: self-reliance and tenacity, self-confidence and enterprise, reasoning and gratitude, optimism and cheerfulness, tolerance and friendliness, with a total of 25 items scored on a 5-point scale, with 1 being "not at all" and 5 being "fully". After reverse scoring the answers to the negative expression items, the mean scores of all items were calculated, with higher scores representing stronger corresponding psychological capital capabilities. In this study, the Cronbach's alpha coefficient for the total questionnaire was 0.810.

2.2.3 Peer Relationships

This study used the Peer Relationship Scale for Children and Adolescents developed by Guo Boliang, which contains 22 questions. A four-point scale was used, with "not this way, sometimes this way, often this way and always this way" being scored 1-4 respectively. The Cronbach's alpha coefficient for this study was 0.818.

2.2.4 Interpersonal Adaptation

The Interpersonal Adaptation subquestionnaire of the Social Adaptation Assessment Questionnaire for Adolescents developed by Hui Zhou and revised by Yibing Yu [23] was used. The questionnaire consists of 12 questions, including 2 dimensions of pro-social tendencies and interpersonal detachment, and is scored on a 5-point scale. The internal consistency coefficient of this scale in this study was 0.721.

2.3 Statistical Methods

SPSS 26.0 software and the PROCESS macro program developed by Hayes were used for data analysis.

3. Results

3.1 Common Method Deviation Test

In this study, the Harman one-way test was used to conduct exploratory factor analysis for all items. The results showed that the number of factors with characteristic roots greater than 1 was 28 and the maximum factor variance explained was 14.63%, which was less than the critical value of 40%, so there was no serious common method bias in this study.

3.2 Descriptive Statistics and Correlation Analysis Results

The results of the descriptive statistics and correlation analysis show that (Table 1): family functioning is positively correlated with psychological capital, peer relationships and interpersonal adjustment; interpersonal adjustment is significantly positively correlated with psychological capital and peer relationships; psychological capital is significantly positively correlated with peer relationships.

### Table 1: Descriptive statistics and correlation analysis of each variable (N=222)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean (M)</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Functioning</td>
<td>3.61</td>
<td>0.65</td>
<td>---</td>
<td>---</td>
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</tr>
<tr>
<td>Psychological Capital</td>
<td>4.09</td>
<td>0.43</td>
<td>0.48</td>
<td>---</td>
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<td>---</td>
</tr>
<tr>
<td>Peer Relationships</td>
<td>3.26</td>
<td>0.41</td>
<td>0.17</td>
<td>0.37</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Interpersonal Adaptation</td>
<td>4.13</td>
<td>0.52</td>
<td>0.41</td>
<td>0.66</td>
<td>0.41</td>
<td>---</td>
</tr>
</tbody>
</table>

Notes: *p<0.05, **p<0.01, ***p<0.001.

3.3 Test of Series Mediating Effects

Using Model 6 of the SPSS plug-in PROCESS provided by Hayes (2013), with family functioning as the independent variable, interpersonal adjustment as the dependent variable,
and peer relations and psychological capital as chain mediators, the path coefficient results are shown in Figure 2. The whole regression equation was significant, $R^2=0.169$, $F(1,220)=44.181, p<0.001$. The results of the test for mediating effects using Bootstrap sampling (see Table 2) showed that the indirect effect of the pathway was 0.026 ($95\% CI=[0.007, 0.052]$) for the mediating variable of peer relationship and 0.026 ($95\% CI=[0.007,0.052])$ for the mediating variable of psychological capital. ($95\% CI=[0.120,0.251])$, 0.022 for peer relationship and psychological capital ($95\% CI=[0.006,0.046])$, and 0.230 for all indirect effects combined ($95\% CI=[0.155,0.313])$, the indirect effect of peer relationship and psychological capital in rural left-behind children's The chain mediating role of peer relations and psychological capital in the positive effect of family functioning on interpersonal adjustment holds true.

![Diagram of the series mediating effect model](image)

**Figure 2: Diagram of the series mediating effect model**

Note: FF=Family Functioning, PR=Peer Relationships, PC=Psychological Capital, IA=Interpersonal Adaptation. The numbers in the model indicated standardised predictive coefficients. *p<.05; **p<.01; ***p<.001.

4. Discussion

In this study, data were collected from 222 rural left-behind children using a questionnaire method. The results of data analysis showed that family functioning was positively related to peer relations, psychological capital and interpersonal adjustment, and that family functioning positively predicted their peer relations, psychological capital and interpersonal adjustment. Peer relations and psychological capital mediated the chain between family functioning and interpersonal adjustment.

Families and peers act as microsystems that influence individual development, providing conditions and support for healthy physical, cognitive, psychological and social development of adolescents [7]. Family members communicate positively and effectively with each other and provide emotional support to each other, which provides children with positive behavioural models that can teach them how to get along with others [24-25] and improve their interpersonal adjustment. The present study is consistent with the findings of previous studies. The Family Functioning Model suggests that family provides good conditions for individuals to develop physically and mentally [26], and this study found that there was a significant positive association between family functioning and interpersonal adjustment in adolescents, and that this positive association could be explained by psychological capital. This positive association can be explained by the positive relationship between family functioning and interpersonal adjustment. The full development of family functioning contributes to the improvement of adolescents' psychological capital, which in turn contributes to the improvement of interpersonal adjustment.

Previous research has found that peer relationships independently predict the psychological capital of children and adolescents, i.e. the better the interpersonal relationships the higher the level of psychological capital [27]. The increase in psychological capital is an 'important indication' that peer relationships mobilise internal resources. Children who have good peer relationships have high self-efficacy, positive expectations, clear goals and self-regulation, which correspond to the four dimensions of psychological capital [21]. Individuals with good peer relationships form positive and deep emotional bonds with their peers, which enhances their intrinsic positive psychological strength. This means that adolescents with good peer relationships have more positive psychological capital and energy, and are more likely to show better interpersonal adjustment when they reach a certain level. It is clear that more emphasis should be placed on positive communication between left-behind children and their parents, and on enhancing their own positive psychological strength through better communication with their peers, thus improving their interpersonal adjustment.

5. Implications and Limitations of the Study

This study constructs a chain mediation model to reveal the mechanism of family functioning on interpersonal adjustment of rural left-behind children, i.e. family functioning influences interpersonal adjustment through the chain mediation of peer relationship and psychological capital. Therefore, how to make family functioning work well, find reasonable patterns of getting along with each other, establish and maintain harmonious parent-child relationship and create a happy family atmosphere is crucial for adolescents' growth. Research has shown that psychological capital mediates the relationship between family functioning and interpersonal adjustment, which is important for adolescents. Therefore, it is important not only to observe the conditions of the environment and the external behaviour of the individual, but also to understand and focus on the level of their internal psychological capital in order to enhance their physical and mental health and overall development.

The subjects in this study came from a primary school in a township, which is a narrow sample and should be generalised for future research. Secondly, this study considered the impact on psychological capital mainly in terms of peer relationships, but as socialised individuals, the main social relationships are not limited to peer relationships, but also to teacher-student relationships, and considering only a single relationship is somewhat partial.

References


