

The Impact of Family Support on the Academic Adaptation of International Exchange Students: The Moderating Role of Coping Styles

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Abstract: Against the backdrop of deep globalization and higher education internationalization, international exchange programs have become a core approach for universities to strengthen international cooperation and cultivate intercultural talents. However, international exchange students face multiple challenges abroad-including language barriers, educational system differences, cultural value conflicts, and academic pressure-making academic adaptation an increasingly prominent issue. Poor adaptation not only impairs learning outcomes but may also trigger psychological anxiety. As the core social support system, family support plays a crucial role in alleviating cross-cultural pressure and facilitating academic adaptation, yet geographical separation has transformed its forms and mechanisms. This study adopts a quantitative-dominated mixed research design, collecting 428 valid questionnaires via stratified random sampling. Using SPSS 26.0 and AMOS 24.0, it explores the impact of family support dimensions on academic adaptation and the moderating role of coping styles. The results reveal that family support and its four dimensions positively predict academic adaptation, while positive coping styles strengthen this positive impact and negative coping styles weaken it. These findings clarify the internal mechanism among the three variables, providing practical references for families, universities, and exchange students.

Keywords: International Exchange Students; Family Support; Academic Adaptation; Coping Styles; Moderating Role

1. Introduction

1.1 Research Background

With the accelerated internationalization of

higher education, international exchange programs have been widely promoted globally, offering students an important platform for intercultural learning[1]. Participants gain expanded international horizons and enhanced cross-cultural communication skills, but face unique challenges: adapting to new academic environments, teaching models, evaluation standards, and cultural norms in a short period. Academic adaptation has thus become a pressing issue[2], with poor adaptation leading to reduced learning efficiency, academic decline, psychological anxiety, and even interrupted exchange programs.

As the core of social support, family support alleviates cross-cultural pressure, strengthens psychological resilience, and promotes academic adaptation[3]. Studies confirm that family support reduces homesickness, enhances cultural identity, and indirectly boosts academic self-efficacy and stress relief, positively predicting sociocultural adaptation. However, geographical separation transforms family support-online emotional communication replaces offline companionship, and direct material assistance shifts to economic support and resource coordination[9]. These changes may alter its mechanism on academic adaptation compared to local students. Key questions-how family support specifically affects academic adaptation among exchange students and whether coping styles moderate this relationship-remain under-explored, creating research gaps. This study thus holds significant theoretical and practical value.

1.2 Research Significance

1.2.1 Theoretical significance

This study constructs an integrated model of "family support-coping styles-academic adaptation of international exchange students," clarifying variable dimensions and exploring the internal mechanism of family support on academic adaptation. It fills gaps in existing

research on the three variables' relationships, analyzes family support characteristics under geographical separation, and enriches cross-cultural adaptation and social support research, providing empirical support for theoretical localization.

1.2.2 Practical significance

The findings offer targeted suggestions for exchange student families to adjust support forms and intensity, improving effectiveness. They provide a theoretical basis for universities to develop cross-cultural adaptation guidance programs and build family-university collaborative support systems. Additionally, they guide exchange students to recognize the importance of positive coping styles, optimize strategies, and enhance academic adaptation to ensure successful exchange experiences.

1.3 Research Questions and Hypotheses

1.3.1 Research questions

1) What is the impact of family support and its dimensions (emotional care, material security, information guidance, social resource connection) on international exchange students' academic adaptation?

2) Does coping style (positive/negative) moderate the relationship between family support and academic adaptation?

1.3.2 Research hypotheses

1) Main Effect Hypothesis (H1): Family support positively predicts international exchange students' academic adaptation, with its four dimensions (emotional care, material security, information guidance, social resource connection) all exerting positive effects.

2) Moderating Effect Hypothesis (H2): Coping styles moderate the relationship between family support and academic adaptation.

- H2a: Positive coping styles strengthen family support's positive impact on academic adaptation;

- H2b: Negative coping styles weaken family support's positive impact on academic adaptation.

1.4 Research Structure

Following the logic of "theoretical combing-empirical analysis-conclusions and suggestions," this study includes five parts: introduction (background, significance, questions, hypotheses), literature review (core concept definition, research status), research methodology (design, objects, tools, data

analysis), empirical analysis (results and hypothesis testing), conclusions and discussions (findings, value, limitations, future directions), and references.

2. Literature Review

2.1 Definition of Core Concepts

2.1.1 Family support

Family support refers to multi-dimensional assistance from family members (mainly parents) to international exchange students, including emotional care, material security, information guidance, and social resource connection—an important external resource for cross-cultural adaptation[5]. Emotional care involves concern, understanding, and encouragement to alleviate homesickness and pressure; material security provides economic and material support for daily life and study; information guidance offers insights into host-country academic rules and resources; social resource connection links students to host-country networks and internship opportunities.

2.1.2 Academic adaptation of international exchange students

Academic adaptation denotes the internal psychological and external behavioral process through which exchange students adjust learning attitudes, methods, task strategies, and interpersonal patterns to host-country curriculum systems, teaching models, academic requirements, and cultural environments, gradually achieving learning goals and integrating into the academic community[4]. It encompasses learning strategy adjustment, academic task completion, academic environment integration, and academic emotional regulation.

2.1.3 Coping styles

Coping styles are cognitive and behavioral strategies for managing cross-cultural academic pressure, divided into positive and negative types[6]. Positive coping is problem-solving oriented (e.g., active help-seeking, root-cause analysis, cognitive adjustment); negative coping centers on avoidance (e.g., pressure avoidance, denial, passive endurance).

2.2 Research on Family Support and Academic Adaptation

Existing studies confirm family support's positive impact on exchange students' academic adaptation[3]. He (2022) found that higher

family support correlates with better classroom participation, homework quality, academic performance, and faster adaptation to host-country teaching rhythms. Yu[10] verified that family support for cultural tolerance and communication confidence alleviates "culture shock," strengthens learning motivation, and indirectly improves academic adaptation among Chinese students in the U.S. Even for short-term exchange students, frequent family communication and emotional feedback facilitate rapid academic adjustment and goal achievement[9].

However, research on the differentiated effects of family support dimensions remains insufficient and inconsistent-some emphasize emotional support, while others highlight material security and information guidance. Additionally, boundary conditions (e.g., individual characteristics, environmental factors) influencing the family support-academic adaptation relationship are under-explored.

2.3 Research on the Moderating Role of Coping Styles

Coping styles play a key role in the social support-adaptation relationship[7]. Chen et al.[7] found that perceived social support (with family support as the core) positively predicts coping styles; positive coping reduces cross-cultural pressure and depression, minimizing interference with academic performance. For exchange students, family-provided material security, emotional comfort, and information support translate into academic adaptation motivation through positive coping[8].

Conversely, negative coping weakens family support's effectiveness[7]. Chen et al.[7] noted that negative coping correlates with depression, which directly hinders academic performance. Guo et al.[8] added that negative coping prevents the transformation of family support into adaptive behaviors, exacerbating academic procrastination and interpersonal alienation, and offsetting family support's positive effects.

Despite these findings, empirical research on coping styles' moderating role in the family support-academic adaptation relationship among international exchange students remains scarce, with limited comparative analysis of positive and negative coping's differentiated effects-this study addresses this gap.

2.4 Research Gaps

Current research has three key gaps: unclear mechanisms of family support on academic adaptation for international exchange students; insufficient analysis of family support dimensions' differentiated effects and boundary conditions; and inadequate verification of coping styles' moderating role[3,7,8]. This study targets these gaps with an integrated theoretical model and empirical research.

3. Research Methodology

3.1 Research Design

This study adopts a quantitative-dominated mixed design: literature research to sort out theories and construct the "family support-coping styles-academic adaptation" model; questionnaire surveys to collect primary data; statistical analysis to test hypotheses; and practical suggestions derived from conclusions to ensure scientificity and applicability.

3.2 Research Objects

Using stratified random sampling (by exchange region, duration, and gender), undergraduate and graduate students with 1-24 months of overseas exchange experience were selected. The sample covers diverse countries/regions, majors, and durations. A total of 500 questionnaires were distributed, and 428 valid responses were collected after excluding incomplete or regular answers, ensuring sample representativeness and statistical reliability.

3.3 Research Tools

3.3.1 Family support scale

Revised from Zimet et al.'s[14] Multidimensional Scale of Perceived Social Support (MSPSS), this scale includes 13 items across four dimensions (emotional care, material security, information guidance, social resource connection). Using a 5-point Likert scale (1=strongly disagree, 5=strongly agree), higher scores indicate greater family support. The scale has a reliability coefficient of 0.86 and verified cross-cultural construct validity[13].

3.3.2 Coping styles Scale

Revised from Wang's[12] Simplified Coping Style Questionnaire (SCSQ), this scale includes 11 items across two dimensions (positive/negative coping). Using a 5-point Likert scale (1=never use, 5=always use), higher scores reflect stronger preference for the coping style. The total scale's Cronbach's α is 0.90, with

0.89 for positive coping and 0.78 for negative coping-meeting reliability standards.

3.3.3 Academic adaptation scale

Revised from Zhu's[11] academic adaptation questionnaire, this scale includes 15 items across three dimensions (academic task adaptation, teaching model adaptation, academic environment integration). Using a 5-point Likert scale (1=strongly disagree, 5=strongly agree), higher scores indicate better adaptation. The revised scale has an overall Cronbach's α of 0.82, with dimension coefficients between 0.75-0.80-ensuring good reliability and validity.

3.3.4 Demographic variable questionnaire

Self-designed, this questionnaire includes 7 items (gender, age, exchange country/region, duration, major, cultural distance measured by perceived host-country-China differences via 5-point Likert scale) to collect sample information for boundary condition analysis.

3.4 Data Collection

3.4.1 Pre-survey

Fifty students with overseas exchange experience participated in a pre-survey. Scale reliability was tested via Cronbach's α ($\alpha > 0.7$), and construct validity via exploratory factor analysis (EFA, factor loading > 0.6). Based on results, items were revised, logic optimized, and the formal questionnaire finalized.

3.4.2 Formal survey

Questionnaires were distributed via online platforms (Wenjuanxing, Tencent Questionnaire) for one month. University international exchange offices and exchange student communities assisted in forwarding to improve recovery rates. Respondents were informed of research purposes, data usage, and confidentiality; participation was voluntary, with a lottery incentive post-completion.

3.5 Data Analysis Methods

SPSS 26.0 and AMOS 24.0 were used for data processing:

- 1) Descriptive statistics: Analyze sample demographics and variable means/standard deviations;
- 2) Reliability and validity test: Cronbach's α for reliability, confirmatory factor analysis (CFA) for construct validity;
- 3) Correlation analysis: Pearson correlation to test relationships between family support dimensions, coping styles, and academic adaptation;

4) Regression analysis: Multiple linear regression to test family support dimensions' differentiated impact on academic adaptation;

5) Moderating effect test: Hayes' PROCESS macro to verify coping styles' moderating role.

4. Empirical Analysis

4.1 Sample Demographic Characteristics

Among the 428 valid samples, 213 were male (49.8%) and 215 were female (50.2%), showing a balanced gender distribution; age ranged from 18 to 28 years old, with 356 students (83.2%) aged 20-24; exchange regions covered North America (152, 35.5%), Europe (128, 29.9%), Asia (105, 24.5%), and other regions (43, 10.1%); exchange duration included 1-6 months (187, 43.7%), 7-12 months (156, 36.4%), and 13-24 months (85, 19.9%); majors involved liberal arts (142, 33.2%), science and engineering (138, 32.2%), medicine (95, 22.2%), and other disciplines (53, 12.4%); cultural distance perception: low (102, 23.8%), medium (226, 52.8%), and high (100, 23.4%).

4.2 Reliability and Validity Test

4.2.1 Reliability test

The Cronbach's α coefficients of the scales were as follows: Family Support Scale (0.86), Emotional Care dimension (0.83), Material Security dimension (0.79), Information Guidance dimension (0.81), Social Resource Connection dimension (0.78); Coping Styles Scale (0.90), Positive Coping dimension (0.89), Negative Coping dimension (0.78); Academic Adaptation Scale (0.82), Academic Task Adaptation dimension (0.79), Teaching Model Adaptation dimension (0.75), Academic Environment Integration dimension (0.80). All α coefficients exceeded 0.7, indicating good reliability of the scales.

4.2.2 Validity test

Confirmatory factor analysis (CFA) was conducted on the three core scales. The results showed that the fit indices of the Family Support Scale were $\chi^2/df=2.36$, CFI=0.92, TLI=0.91, RMSEA=0.056; the fit indices of the Coping Styles Scale were $\chi^2/df=2.18$, CFI=0.94, TLI=0.93, RMSEA=0.052; the fit indices of the Academic Adaptation Scale were $\chi^2/df=2.27$, CFI=0.93, TLI=0.92, RMSEA=0.054. All fit indices met the standard ($\chi^2/df < 3$, CFI > 0.9 , TLI > 0.9 , RMSEA < 0.08), indicating good construct validity.

4.3 Descriptive Statistics and Correlation Analysis

4.3.1 Descriptive statistics

The mean values and standard deviations of the main variables were as follows: family support (3.86±0.52), emotional care (4.02±0.58), material security (3.91±0.61), information guidance (3.75±0.59), social resource connection (3.76±0.63); positive coping (3.62±0.65), negative coping (2.38±0.71); academic adaptation (3.71±0.56), academic task adaptation (3.78±0.60), teaching model adaptation (3.65±0.62), academic environment integration (3.69±0.58).

4.3.2 Correlation analysis

Pearson correlation analysis showed that family support and its four dimensions were significantly positively correlated with academic adaptation ($r=0.58-0.67$, $p<0.001$); positive coping was significantly positively correlated with family support and academic adaptation ($r=0.45$, $p<0.001$; $r=0.62$, $p<0.001$); negative coping was significantly negatively correlated with family support and academic adaptation ($r=-0.23$, $p<0.001$; $r=-0.31$, $p<0.001$). These results provided a preliminary basis for subsequent hypothesis testing.

4.4 Hypothesis Testing

4.4.1 Main effect test (H1)

Multiple linear regression analysis was conducted with academic adaptation as the dependent variable and the four dimensions of family support as independent variables. The results showed that the regression model was significant ($F=68.32$, $p<0.001$, $R^2=0.41$). Specifically, emotional care ($\beta=0.28$, $p<0.001$), material security ($\beta=0.19$, $p<0.001$), information guidance ($\beta=0.22$, $p<0.001$), and social resource connection ($\beta=0.17$, $p<0.001$) all had significant positive effects on academic adaptation. Thus, Hypothesis H1 was fully supported.

4.4.2 Moderating effect test (H2)

Hayes' PROCESS macro (Model 1) was used to test the moderating role of coping styles. The results showed that:

1) The interaction term between family support and positive coping had a significant positive effect on academic adaptation ($\beta=0.15$, $p<0.001$). Simple slope analysis indicated that when positive coping was high (M+1SD), the positive effect of family support on academic adaptation was stronger ($\beta=0.69$, $p<0.001$); when positive

coping was low (M-1SD), the positive effect was weaker ($\beta=0.39$, $p<0.001$). Thus, Hypothesis H2a was supported.

2) The interaction term between family support and negative coping had a significant negative effect on academic adaptation ($\beta=-0.11$, $p<0.001$). Simple slope analysis showed that when negative coping was high (M+1SD), the positive effect of family support on academic adaptation was weaker ($\beta=0.32$, $p<0.001$); when negative coping was low (M-1SD), the positive effect was stronger ($\beta=0.54$, $p<0.001$). Thus, Hypothesis H2b was supported.

5. Conclusions and Discussions

5.1 Main Findings

This study explores the impact of family support on the academic adaptation of international exchange students and the moderating role of coping styles, with the following key findings:

1) Family support and its four dimensions (emotional care, material security, information guidance, social resource connection) all have significant positive predictive effects on the academic adaptation of international exchange students. Among them, emotional care has the strongest impact, followed by information guidance, material security, and social resource connection.

2) Coping styles play a significant moderating role in the relationship between family support and academic adaptation. Positive coping styles strengthen the positive impact of family support on academic adaptation, while negative coping styles weaken this positive impact.

5.2 Theoretical Implications

1) This study constructs and verifies the "family support-coping styles-academic adaptation" integrated model, clarifying the internal mechanism of family support affecting academic adaptation, which enriches the theoretical research on cross-cultural adaptation and social support.

2) By analyzing the differentiated effects of the four dimensions of family support, this study supplements the existing research on the dimensional characteristics of family support under geographical separation, providing a new perspective for understanding the role of family support in the academic adaptation of international exchange students.

3) This study empirically verifies the moderating

role of positive and negative coping styles, filling the gap in the research on the boundary conditions of the relationship between family support and academic adaptation of international exchange students.

5.3 Practical Implications

5.3.1 Suggestions for Exchange Student Families

1) Strengthen emotional care: Maintain frequent and in-depth emotional communication with exchange students through video calls, voice messages, etc., to alleviate their homesickness and cross-cultural pressure.

2) Optimize support forms: Provide targeted material security according to the actual needs of students' study and life; actively collect and share academic information and resources of the host country to enhance information guidance.

3) Assist in social resource connection: Utilize existing social networks to help students establish initial social connections in the host country, reducing the difficulty of academic and social adaptation.

5.3.2 Suggestions for Universities

1) Establish a family-university collaborative support system: Regularly communicate with the families of exchange students, feedback on students' academic adaptation, and provide guidance on scientific family support.

2) Develop cross-cultural adaptation guidance programs: Set up special courses or workshops to help exchange students master positive coping skills, such as problem-solving methods and stress management strategies.

3) Improve academic support services: Provide targeted guidance on the host country's teaching models, academic requirements, and evaluation standards to help students quickly adapt to the academic environment.

5.3.3 Suggestions for international exchange students

1) Actively perceive and utilize family support: Take the initiative to communicate with family members about academic difficulties and psychological pressure, and make full use of family-provided material, information, and social resources.

2) Cultivate positive coping styles: When facing academic pressure and cross-cultural challenges, adopt active coping strategies such as seeking help, analyzing problems, and adjusting cognition, and avoid negative coping behaviors such as avoidance and denial.

3) Enhance self-adaptation awareness:

Proactively understand the academic and cultural characteristics of the host country, and adjust learning methods and interpersonal strategies in a timely manner to improve academic adaptation efficiency.

5.4 Limitations and Future Research Directions

This study has certain limitations: First, the sample was collected through online questionnaires, which may have potential selection bias; second, the research adopts a cross-sectional design, which cannot reveal the dynamic changes of the relationship between variables; third, the research focuses on the moderating role of coping styles, and other potential boundary variables (such as personality traits, cultural intelligence) have not been considered.

Future research can be carried out in the following directions: First, expand the sample scope and adopt a mixed sampling method of online and offline to improve sample representativeness; second, use a longitudinal design to track the dynamic process of family support, coping styles, and academic adaptation; third, introduce other boundary variables to construct a more comprehensive theoretical model; fourth, conduct comparative research on exchange students from different countries and regions to explore cross-cultural differences in the research model.

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