

The Effect of Family Emotional Support on Adolescents' Learning Motivation: The Mediating Role of Basic Psychological Needs

Jiale Xue*

School of Textile Garment and Design, Suzhou University of Technology, Suzhou, Jiangsu, 215500, China

* Corresponding author: Jiale Xue (Email: jxue751@gmail.com)

Abstract: This study aimed to explore the connection between familial emotional backing and the psychological fundamentals that drive teenagers' educational engagement, while also shedding light on how these psychological needs act as go-betweens according to self-determination theory. We gathered data from 542 high school students across grades 9-11 at two Shanghai schools using standardized measures for family support, psychological needs, and learning motivation. The findings showed that a nurturing home environment directly fuels students' sense of autonomy, competence, and belonging. In turn, these psychological needs give students the motivation to excel academically. What's more, family support doesn't just stop at meeting these needs—it actually amplifies learning drive through them. At the end of the day, when parents provide emotional safety and understanding, they give teens the foundation they need to truly engage with their education.

Keywords: Family Emotional Support, Learning Motivation, Basic Psychological Needs.

1. Research Status at Home and Abroad

1.1. Definition of Concepts

Learning motivation embodies the internal drive that propels and sustains students' academic pursuits toward specific objectives. As a key non-cognitive factor, motivation in learning plays a crucial role in shaping educational outcomes. It directly influences how much effort students put into their studies, which in turn affects their ability to acquire knowledge and develop skills. Essentially, the drive to learn can make or break a student's academic success[1]. According to the principles of self-determination theory, the driving force behind adolescent learning can be broken down into three distinct categories: intrinsic motivation, which stems from genuine interest in the subject matter; extrinsic motivation, which is propelled by external rewards or incentives; and a complete lack of motivation altogether[2].

1.2. Significance of the Study

The teenage years represent a make-or-break time when it comes to cultivating a drive for learning. This academic passion doesn't just influence how well students do in school—it's the bedrock upon which the capacity for lifelong learning is built[2]. Research indicates a majority of teens—more than 60%—experience inadequate academic drive, predominantly influenced by family conditions[3]. As an important protective factor for the growth of adolescents, the quality of family emotional support is directly related to the activation and maintenance of learning motivation[4]. The self-determination theory outlines the connection between environmental support, the fulfillment of needs, and the nurturing of motivation—a trio that holds considerable explanatory weight. However, current studies have yet to thoroughly explore the mediating factors involved when it comes to the three fundamental psychological needs within familial contexts[5,6]. This research examines the

mechanisms through which familial emotional backing shapes educational drive, establishing data-informed bases for home teaching guidance and academic support programs.

Motivation types play a crucial role in shaping self-regulated learning. Students who possess a high level of autonomous motivation tend to excel in utilizing meta-cognitive strategies and exhibit robust academic perseverance[7,8]. On a practical note, research on learning motivation lays down a solid scientific foundation for educational endeavors, enabling educators to devise more engaging and individualized teaching approaches. This research helps nurture learners' positive, enduring attitudes towards learning, and significantly elevates their learning outcomes and adaptability to diverse cultural and situational environments[9].

1.3. Theoretical Basis

According to Self-Determination Theory (SDT), family emotional support serves as the cornerstone for sparking intrinsic motivation in adolescents, as it effectively addresses their fundamental needs for autonomy, competence, and belonging. Nevertheless, the lion's share of current scholarship has zeroed in on the educational setting, leaving a significant gap in our understanding of how family emotional support connects to these core psychological requirements[5]. This research aims to shed light on whether family emotional support acts as a catalyst for learning motivation by fulfilling these three essential needs. By fleshing out the theoretical pathway from the family micro-system through need satisfaction to motivation development, we can expand the practical applications of self-determination theory within familial contexts and uncover the underlying psychological processes through which family emotional support shapes learning motivation[3]. Previous investigations applying self-determination theory to left-behind junior high school students have indeed established the potential mediating role of basic psychological needs, yet have failed to fully unpack the nuanced dimensions of family

emotional support[2]. These inquiries promise not only to broaden the horizons of self-determination theory's application but also to offer fresh theoretical insights into the interplay between family dynamics and educational drive.

1.4. Influencing Factors

Self-determination theory posits that personal drive is rooted in the fulfillment of fundamental psychological needs—such as autonomy, mastery, and social connection—and that when these needs are met, especially in nurturing environments, they greatly amplify intrinsic motivation[10]. In the realm of education, fostering an environment that backs up students can ignite their eagerness to learn, whereas a lack of such backing can zap their drive[2]. Take, for instance, research indicating that those who feel supported in their self-direction exhibit a more robust intrinsic motivation for learning[5,11]. Moreover, a sense of belonging can heighten students' involvement in academic activities, and bolstering their competence is linked to their persistence in the learning process[10,12].

Family emotional support encompasses a host of stable, nurturing behaviors, like offering warmth and encouragement, valuing independence through supporting decisions, and engaging in empathetic communication—all of which are pivotal to a well-functioning family dynamic[4,13]. Serving as the cornerstone of adolescents' development, the quality of this support profoundly influences their psychological well-being. Essentially, family emotional support is the psychological reinforcement that parents provide through acts of warmth, autonomy respect, and supportive dialogue[4,13]. Research indicates that teens in emotionally supportive homes are more prone to enjoy the freedom to make their own choices[14]. Feel a stronger sense of belonging in their educational endeavors, and are more apt to cultivate a sense of academic confidence[15]. Conversely, a lack of emotional support in the home can stifle the fulfillment of adolescents' fundamental psychological needs, potentially undermining their drive to learn[16].

In examining the determinants of academic drive, researchers have somewhat validated the impact of familial emotional backing. They've discovered that the warmth and support parents provide is strongly linked to teenagers' personal interest in learning. When parents encourage their kids to be self-reliant, it boosts their engagement in schoolwork by fulfilling their desire for independence. Further research has indicated that family backing indirectly contributes to a student's motivation through a sense of belonging. These findings offer initial proof of the connection between emotional family support and learning motivation. However, the role of the three fundamental psychological needs—autonomy, competence, and connection—within the context of self-determination theory remains largely unexplored. This theory highlights the significance of these needs in mediating the relationship between environmental factors and motivational outcomes. It particularly focuses on the influence of these basic needs on the link between family support and motivation[17].

Research has established that in academic settings, teacher support boosts student motivation by fulfilling three core psychological needs—autonomy, competence, and belonging[18]. However, the way these mechanisms operate within the family dynamic remains underexplored. Current literature tends to zero in on just one of these needs (like autonomy alone), overlooking how all three might

independently or collectively mediate motivation [3,6].

Moreover, the distinct impact of various aspects of family emotional support—such as warmth, autonomy encouragement, and open communication—on learning motivation remains unclear. Each dimension might influence motivation by targeting different psychological needs. For instance, autonomy support could primarily nurture independence, warmth might strengthen a sense of belonging, and constructive communication could foster competence. Yet, these connections remain speculative, lacking empirical validation[4].

1.5. Research Hypotheses

From the findings in preceding research, this investigation introduces four key hypotheses:

Hypothesis 1 posits a favorable link between familial emotional support—marked by emotional warmth, respect for autonomy, and supportive communication—and adolescents' drive to learn, encompassing intrinsic and extrinsic motivations;

Hypothesis 2 suggests a positive association between familial emotional support and adolescents' fundamental psychological needs, such as autonomy, competence, and a sense of belonging;

Hypothesis 3 claims a positive correlation exists between the fulfillment of these basic psychological needs in adolescents and their learning motivation;

Hypothesis 4 proposes that basic psychological needs—specifically autonomy, competence, and belonging—act as a go-between in the relationship between family emotional support and adolescents' motivational drive to learn.

2. Research Methods

2.1. Subject

By using convenient sampling, students from grade 7 to grade 12 of two middle schools in Shanghai were selected. A total of 600 questionnaires were distributed, and 542 valid questionnaires were retrieved. The valid subjects were aged 12 to 18. There are 275 boys and 267 girls. There are 310 junior high school students (112 in Grade 7, 108 in Grade 8, and 90 in Grade 9) and 232 senior high school students (85 in Grade 10, 78 in grade 11, and 69 in grade 12).

2.1 The confusion faced by enterprises in the direction of technological innovation under the sharing economy.

2.2. Research Tool

Family Emotional Support Scale: Revised with reference to Parenting Style Scale, it includes three dimensions: emotional warmth (6 questions, such as "my parents will encourage me to express my thoughts in learning"), respect for autonomy (5 questions, such as "my parents support me to arrange my study plan independently"), and supportive communication (5 questions, such as "when I encounter difficulties in learning, my parents will listen patiently to me"), and the Likert 5-point score is used (1 = very disagreeable, 5 = very consistent). The Cronbach's α coefficient for this scale in this study is 0.902.

Basic Psychological Needs Scale: Using the self-determination theory-related scale, including three dimensions: autonomy (5 questions, such as "I feel that I am in control of my learning arrangements"), competence (5 questions, such as "I am confident in completing my learning tasks"), and belonging (5 questions, such as "I feel cared for

and accepted in the family"), and Likert is scored on 5 points. The Cronbach's α coefficient for the scale in this study is 0.876.

Learning Motivation Scale: Based on the revision of research tools, measuring intrinsic motivation (6 questions, such as "I learn because knowledge itself is interesting") and extrinsic motivation (6 questions, such as "I learn to get a reward from my parents"), scored on a Likert 5-point scale. The Cronbach's α coefficient for this scale in this study is 0.883.

2.3. Procedure

This study was conducted by professionally trained psychology graduate students. Before the test, obtain the consent of the school and teachers, introduce the project to the students, and ensure that the students understand the purpose and method of the test before filling in the informed consent form. When administering the test, the class will conduct a unified test, and after answering, the main test will collect the questionnaire on the spot.

3. Results and Analysis

3.1. Common Methods Bias Test

Given that all variables in this research relied on student self-reports, the potential for common method bias cannot be overlooked. To assess this, we applied Harman's single-factor test to evaluate bias across the two scales measuring basic

psychological needs and learning motivation[19]. The analysis revealed seven factors with eigenvalues exceeding 1, with the first factor accounting for only 29.8% of the variance-well below the 40% threshold. These findings suggest that significant common method bias is unlikely to be a concern in this study.

3.2. Analysis of the Correlation between Family Emotional Support, Basic Psychological Needs and Learning Motivation

The statistical analysis was conducted using SPSS25 to examine the relationships among family emotional support, basic psychological needs, and learning motivation. As shown in Table 1, the descriptive statistics (means and standard deviations) for all three variables are presented, while Table 2 displays their inter-correlations. The results revealed strong, statistically significant positive associations: family emotional support was closely linked to basic psychological needs ($r = .608, p < .01$), basic psychological needs showed a robust connection with learning motivation ($r = .663, p < .01$), and family emotional support also correlated positively with learning motivation ($r = .524, p < .01$). These findings suggest that adolescents who receive greater emotional support from their families tend to have their fundamental psychological needs met more effectively, which in turn enhances their drive to learn.

Table 1. The average score and standard deviation of the basic psychological needs and learning motivation scores for family emotional support

	Average	Standard deviation
Family emotional support	3.85	0.68
Basic psychological needs	3.72	0.71
learning motivation	3.65	0.74

Table 2. The correlation between basic psychological needs of family emotional support and learning motivation scores

	Family emotional support	Basic psychological needs
Family emotional support	1	
Basic psychological needs	.608**	1
learning motivation	.524**	.663**

Note: $p < 0.01$ (two-sided test).

3.3. Test of the Mediating Effect of Basic Psychological Needs

The bootstrap analysis examining the mediating role of basic psychological needs revealed several key findings. Family emotional support demonstrated a strong, statistically significant direct effect on basic psychological needs ($\beta = 0.59, t = 16.45, p < .001$). Even when accounting for family support, basic psychological needs maintained a substantial direct influence on learning motivation ($\beta = 0.52, t = 11.20, p < .001$), while family emotional support itself continued to show a meaningful direct impact ($\beta = 0.21, t = 4.52, p < .001$).

Crucially, the bootstrap results for the mediation pathway yielded a 95% confidence interval of [0.23], which excludes zero, confirming a significant indirect effect. With a mediation effect size of 0.30, basic psychological needs accounted for 58.8% of the total effect (0.51). These results suggest that basic psychological needs partially mediate the

relationship between family emotional support and learning motivation. In other words, while family support directly fosters adolescents' motivation to learn, it also exerts an additional, indirect influence by fulfilling their fundamental psychological needs, as illustrated in Figure 1.

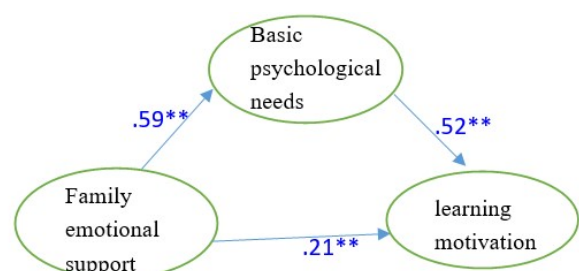


Figure 1. Model diagram of the mediating role of basic psychological needs between family emotional support and learning motivation

4. Discussion

4.1. The Emotional Shielding of Children's Anxiety about Their Parents' Education

The research revealed that a strong correlation exists between familial emotional backing and the drive to learn among teenagers. When parents provide emotional warmth, it helps young learners feel connected to their educational journey, while respect for their independence puts them in the driver's seat of their academic choices. Furthermore, open lines of communication serve as a safety net when students hit academic roadblocks. Together, these elements create an ideal breeding ground for cultivating a desire to learn. Even when accounting for the influence of fundamental psychological needs, family emotional support continues to directly shape learning motivation. Beyond simply meeting psychological requirements, family dynamics can affect academic drive through alternative channels, such as by setting examples and passing down values that prioritize education[5].

4.2. The Mediating Role of Basic Psychological Needs

The notion that the fulfillment of fundamental psychological needs plays a mediating role is a key factor in affirming the central tenet of self-determination theory. More specifically, the aspect of respecting autonomy primarily shapes motivation by catering to the feeling of personal agency-this aligns neatly with the time-honored finding of autonomous support fostering intrinsic motivation[20]. The dimension of emotional warmth plays a significant mediating role through a sense of belonging, indicating that the connection among family emotions is an important emotional support for teenagers to stimulate their learning motivation. The dimension of supportive communication exerts influence through a sense of competence, indicating that targeted guidance from parents can play a role in enhancing the learning efficiency of adolescents. The mediating effect values of the three needs are similar, suggesting that family emotional support needs to take into account the satisfaction of multiple needs in order to maximize the effect of enhancing motivation.

4.3. Practical Enlightenment

This study highlights key insights for family education, emphasizing that parents must adopt a well-rounded approach to emotional support. Beyond fostering security through warmth and affection, they should nurture self-driven learning by honoring their child's independence-while prioritizing skill development through open, encouraging dialogue. Schools can empower parents by collaborating on targeted initiatives, equipping them with practical techniques like offering choices without pressure, using autonomy-respecting language, and giving constructive feedback on academic growth [5,21].

5. Conclusion

A strong emotional support system at home can work wonders for a teenager's drive to learn. This effect comes from fulfilling their fundamental psychological needs-the feeling of being in control, capable, and connected-which in turn strengthens the family's emotional backing and creates an ideal environment for these needs to be met. When parents get

this right, they've hit the jackpot when it comes to boosting their teen's academic motivation.

References

- [1] Xu, L. Overview of the self-determination theory of learning motivation. *Journal of Taiyuan City Vocational and Technical College*, 2018, (11): 105-107.
- [2] Tan M. (2019) Research on the learning motivation of left-behind junior high school students based on self-determination theory. *Hunan University*, 7.
- [3] Fan, Y., Wang, X., Duan, W., Huang, J., Sun, C., Wang, T. (2017) The influence of middle school students' family environment and simple coping style on learning motivation. *China School Doctor*, 31(01):1-3, 5.
- [4] Zhang Y. (2023) Research on the relationship between parenting style, learning motivation and independent learning of junior high school students. *Guangdong Technical Normal University*, 11.
- [5] Chen Y. (2021) Analysis of the impact of parental participation of the first generation of college students on academic investment: from the perspective of self-determination theory. *Journal of Anhui Agricultural University(Social Sciences)*, 30(06):124-132.
- [6] Ma Y. (2024) The Relationship Between Parental Parenting Style and Academic Burnout in Junior High School Students: The Chain Mediating Role of Psychological Control Sources and Self-Worth. *Kashgar University*, 12.
- [7] Järvelä, S., Malmberg, J., & Koivuniemi, M. (2024). Self-regulation and emotion matter: A case study of instructor interactions with a learning analytics dashboard. *Computers & Education*, 210.
- [8] Azevedo, R., Taub, M., & Mudrick, N. V. (2023). Using learning analytics to measure motivational and affective processes during self-regulated learning with advanced learning technologies. *Educational Psychologist*, 58(4), 247-264.
- [9] Wentzel, K. R., & Wigfield, A. (2009). *Handbook of motivation at school*. Routledge.
- [10] 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.
- [11] Reeve, J. (2002). Self-determination theory applied to educational settings. In E. L. Deci & R. M. Ryan (Eds.), *Handbook of self-determination research*, 183-203.
- [12] Vansteenkiste, M., & Ryan, R. M. (2013). On psychological growth and vulnerability: Basic psychological need satisfaction and need frustration as a unifying principle. *Journal of Psychotherapy Integration*, 23(3), 263-280.
- [13] Feng, X., Ding, M., Liu, S., Zou, Y., Liu, Y. (2022) The Impact of Family Emotional Education on Adolescent Values and Its Educational Enlightenment. *Modern Vocational Education*, (03):31-33.
- [14] Grolnick, W.S., & Ryan, R.M. (1989). Parent styles associated with children's self-regulation and competence in school. *Journal of Educational Psychology*, 81(2), 143-154.
- [15] Aunola, K., & Nurmi, J.E. (2005). The role of parenting styles in children's problem behavior. *Child Development*, 76(6), 1144-1159.
- [16] Cui, X. (2017) The influence of family function on academic motivation of adolescents with poor academics. *Education Modernization*, 4(34):257-258.
- [17] Vansteenkiste, M., & Ryan, R. M. (2013). On psychological growth and vulnerability: Basic psychological need satisfaction

and need frustration as a unifying principle. *Journal of Psychotherapy Integration*, 23(3), 263–280.

- [18] Cheon, S.H., Reeve, J., & Moon, I.S. (2012). Experimentally based, longitudinally designed, teacher-focused intervention to help physical education teachers be more autonomy supportive toward their students. *Journal of Sport & Exercise Psychology*, 34(3), 365-396.
- [19] Zhou, H., Long, L. (2004) Statistical Test and Control Method of Common Method Deviation. *Progress in Psychological Science*, 12(6):942-950.
- [20] Reeve, J. (2002). Self-determination theory applied to educational settings. In E. L. Deci & R. M. Ryan (Eds.), *Handbook of self-determination research*, 183-203.
- [21] Zhang, J., Zhang, J., Li, Y., Edward L.D. (2010) Effective ways to promote work motivation: the perspective of self-determination theory. *Advances in Psychological Science*, 18(05):752-759.

Accessory

Questionnaire on the learning status of adolescents
Hello, dear students!

We're conducting research on adolescent development and learning, and we'd genuinely appreciate your honest input. This anonymous survey is designed to gather insights-your responses will only be used for aggregate data analysis, and all answers will remain strictly confidential. Remember, there are no correct or incorrect responses; we simply want to hear your authentic perspective. Feel free to answer openly based on your personal experiences. Thanks so much for taking the time to contribute-your participation is invaluable!

Part 1: Essential details (complete the blank line or "√" on the corresponding option)

Gender: ☐ male ☐ female

Grade: ☐ junior high school ☐ junior high school ☐ senior high school ☐ high school ☐ senior high school

Age: _____ years old

Part 2: Questionnaire questions

Guidance: Please read each of the following statements carefully and judge how well the statement is consistent with your actual situation. Please put "√" on the corresponding number on the right.

Part A: About your family

number	item content	Very inconsistent	not quite consistent	uncertain	relatively consistent	very consistent
A1	My parents can make me feel loved and liked by them.	1	2	3	4	5
A2	When I encounter troubles, my parents are willing to listen.	1	2	3	4	5
A3	My parents often encourage me.	1	2	3	4	5
A4	When making decisions related to myself (such as choosing an interest class or making friends), my parents will respect my opinion.	1	2	3	4	5
A5	My parents encouraged me to express my opinions, even if it was different from what they thought.	1	2	3	4	5
A6	When I had difficulties in my studies, my parents would discuss solutions with me instead of ordering me directly.	1	2	3	4	5

Part B: About your feelings

number	item content	Very inconsistent	not quite consistent	uncertain	relatively consistent	very consistent
B1	In terms of study, I feel that I can make my own decisions (such as arranging study time and methods).	1	2	3	4	5
B2	I feel that my study life is a good reflection of my "true self".	1	2	3	4	5
B3	I think I have the ability to complete the academic challenge.	1	2	3	4	5
B4	When I study hard, I usually get good grades.	1	2	3	4	5
B5	At school, I can feel the concern of teachers and classmates.	1	2	3	4	5
B6	I have a good relationship with my classmates and a sense of belonging.	1	2	3	4	5

Part C: About your studies

number	item content	Very inconsistent	not quite consistent	uncertain	relatively consistent	very consistent
C1	I study because I am curious and interested in the new knowledge itself.	1	2	3	4	5
C2	When I figure out a difficult problem, I feel very happy and satisfied.	1	2	3	4	5
C3	Learning allows me to explore my field of interest.	1	2	3	4	5
C4	I study hard mainly to get good grades and rewards from my parents.	1	2	3	4	5
C5	I study to avoid letting my parents and teachers down with poor grades.	1	2	3	4	5
C6	For me, studying is mainly to get into a good university in the future.	1	2	3	4	5