



# The Impact of Parenting Styles on Middle School Students' Learning Motivation

## The Mediating Role of Subjective Learning Well-Being

Yizhuo Fan

School of Education, Xi'an International Studies University, Xi'an, Shaanxi, 710128, China

E-mail: Star\_Erol@outlook.com

**Abstract.** To explore the relationship between parenting styles and the learning motivation of middle school students, mediated by their subjective learning well-being. Additionally, it aims to provide educational suggestions for improving parenting styles, enhancing subjective learning well-being, and shaping students' learning motivation. Over 300 middle school students from a school in Y District, Xi'an, were surveyed using the short version of the s-EMBU-C parenting styles questionnaire, the learning motivation scale, and the subjective learning well-being questionnaire. SPSS 27.0 was employed for descriptive statistics, regression, and correlation analysis to determine the relationships among the three variables. At the same time, PROCESS was used to test the mediation model of subjective learning well-being. Parenting styles influence learning motivation through subjective learning well-being. Under emotional warmth parenting styles, students have higher subjective learning well-being and learning motivation. While under rejection parenting styles, subjective learning well-being is lower but learning motivation remains high. With over-protection parenting styles, subjective learning well-being is high but has a critical impact on learning motivation. Parenting styles also directly affect learning motivation. Therefore, parents should focus on their parenting approaches, providing emotionally warmth to enhance students' subjective learning well-being and stimulate intrinsic motivation, facilitating a shift from extrinsic to intrinsic motivation in students' learning.

**Keywords:** Parenting styles, learning motivation, subjective learning well-being, family education.

## 1 Introduction

Parents' parenting styles exhibit distinct characteristics of Chinese education[1], which influence middle school students' learning motivation through their subjective learning well-being. The PISA 2018 report indicated that Chinese students around the age of fifteen had lower subjective learning well-being, obviously below the OECD average, with some students lacking learning motivation, thereby affecting their learning process and outcomes. Due to the pandemic, mainland China missed the official testing

window in the first half of 2022 and did not participate in the PISA 2022 assessment, which only included data from Hong Kong, Macau, and Taiwan. The PISA 2022 report suggested that better-performing students reported that their families often had meals together, spent time talking with them, or asked about their school activities. These students also reported higher feelings of belonging and life satisfaction. The current survey also shows that some students lack subjective learning well-being, which affects their learning motivation.

Based on this, the study will use middle school students' subjective learning well-being as a mediating variable, with parenting styles as the independent variable and students' learning motivation as the dependent variable. This research draws on the work of scholars such as Jiang Jiang, who categorize parenting styles into three dimensions: emotional warmth, rejection, and over-protection. These styles influence subjective learning well-being, which in turn affects learning motivation. By exploring the relationship between learning motivation, parenting styles, and subjective learning well-being, this study aims to enrich the content of family education, support student development, and promote cooperation between home and school.

By reason of the foregoing, this study proposes the following hypotheses: 1. Parenting styles affect learning motivation through learning well-being. Under an emotional warmth parenting style, subjective learning well-being is higher, leading to higher levels of learning motivation; under a rejection parenting style, subjective learning well-being is lower, but learning motivation levels remain high; under an over-protection parenting style, subjective learning well-being is high, which has a crucial impact on learning motivation. 2. Parenting styles will directly affect learning motivation. This study will verify the relationship model among the following variables-Fig.1.

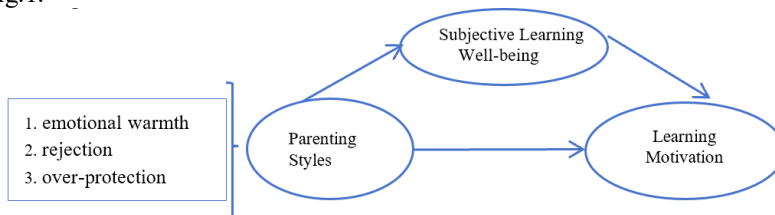


Fig. 1. the assumption of the research

## 2 Problem Statement

Family education is the foundation of all education and has its uniqueness[2]. As the most primitive ecological environment for students, it has varying influences on the growth process of students[3]. In the family education system, parenting styles are critical components, referring to the educational concepts parents embody and their attitudes toward their children, as well as their words and actions during the teaching and nurturing process[4]. Below are some related studies: Pumory categorizes parenting styles into four types: disciplinarian, indulgent, protective, and rejecting[5]. Disciplinarian parents require strict compliance with rules, forcing children to grow up;

indulgent parents are child-centered, allowing children to act on their whims and take little responsibility; protective parents minimize risks for their children, not allowing them to grow up; rejecting parents typically harbor hostility toward their children, through discipline and punishment. Baumrind classifies parenting styles as permissive, authoritarian, and authoritative these three types[6]. Maccoby and Martin also categorize them into authoritative, dictatorial, permissive, and neglectful styles[7]. Steinberg and other authorities had classified them into four dimensions: authoritative, authoritarian, permissive, and indulgent[8], similar to Pumory's views, but Steinberg's view focuses on analyzing the relationship between parenting styles across these four dimensions and children's academic abilities, behavioral issues, and internal distress, thereby further refining the research. Domestic scholars, such as Jiang Jiang et al. (2010), based on the study by Swiss scholars Perris and other authorities(1980), divided parenting styles into three types: rejection, emotional warmth, and over-protection. Emotional warmth is parents' emotional acceptance and support of their children; rejection refers to hostile, harsh, and punitive parenting styles; over-protection is about excessive parental interference, strict management, and control[9]. Parenting styles make an essential difference in various aspects of adolescents, including personality and behavioral attitudes[10], with a more pronounced effect on students' learning motivation[11].

Liu Rude and others point out that learning motivation is about the impetus that stimulates learning behavior, directs it toward academic goals, and maintains this behavior. It can be divided into intrinsic motivation and extrinsic motivation, which are associated with interests, needs, and expectations, and have a dialectical impact on learning through emotional experiences. Different learning theories provide various explanations for the theory of learning motivation, such as Maslow's Hierarchy of Needs, Self-Determination Theory, and Achievement Motivation Theory. Research indicates that learning motivation as a driving force is not innate; parental upbringing significantly influences the formation of learning motivation[12]. Baumrind's research shows that children of authoritative parents exhibit strong cognitive motivation, high cognitive abilities, and a strong desire for achievement[13]. Ginsburg and others found that a parenting style characterized by emotional warmth and firmness is related to children's intrinsic motivation for success in school, and these children tend to have good self-regulation skills. Conversely, an extremely strict parenting style is associated with extrinsic motivation and lower self-worth, along with a lack of effective self-regulation abilities[14].

Subjective learning well-being is a new concept that has emerged from the in-depth study of subjective well-being during the learning process, also referred to as learning happiness. Subjective well-being refers to an individual's overall evaluation of their quality of life based on self-defined criteria; it is a comprehensive psychological indicator of personal life quality, reflecting the subject's social functioning and adaptation state[15]. Subjective learning well-being is an extension of subjective well-being and involves both emotional and cognitive dimensions, referring to the pleasure, satisfaction, and sense of achievement that students experience before, during, or after the learning process[16]. Research by scholars such as Song Lingqing shows that junior high school students' subjective learning well-being is generally above average, but it

tends to decrease as grade levels increase[17]. Research by Ma Ying and others indicates that Chinese middle school students generally have low levels of subjective learning well-being[18]. Huebner and others found that the overall life satisfaction of adolescents is above average, but a significant proportion of adolescents report low satisfaction, and a great deal of adolescents are dissatisfied with their families[19]. There is a crucial positive correlation between parental autonomy support and subjective learning well-being[20]. Parental upbringing styles affect students' subjective learning well-being to some extent; therefore, exploring the relationship between parental upbringing styles and subjective learning well-being is particularly vital for understanding learning motivation.

In summary, there is some research in education and educational psychology regarding parental upbringing styles, student learning motivation, and the relationship between the two, as well as subjective learning well-being. This paper examines the relationship between parental upbringing styles and learning motivation, using subjective learning well-being as a mediator. Based on the three classifications of parental upbringing styles proposed by domestic scholars like Jiang Jiang, the analysis will explore how parental upbringing styles affect students' subjective learning well-being, and how subjective learning well-being further influences learning motivation, to enhance students' subjective learning well-being and foster positive and effective learning motivation.

### **3 Research Methodology**

#### **3.1 Subjects**

This study employed a convenience sampling method, selecting some students from grades seven to twelve at a middle school in Y District, Xi'an, to participate in the tests. The testing was conducted through an online questionnaire, distributing 315 questionnaires. After excluding ten invalid responses due to short testing time and high overlap in option data, 305 valid responses were collected, resulting in a response rate of 96.8%.

#### **3.2 Research Tools**

##### **3.2.1 Short Form of the Parental Rearing Styles Questionnaire (s-EMBU-C).**

Domestic scholar Jiang Jiang (2010) and others revised the Short Form of the Short-Egna Minnen av Barndoms Uppfostran(s-EMBU), originally grown by foreign scholar Arrindell, to adapt it to the national context. The s-EMBU-C consists of three dimensions: Emotional Warmth (7 items), Rejection (6 items), and Over-protection (8 items), totaling 42 items. It includes both a father and mother version, each containing 21 items. The content and dimensions of both versions are the same. This questionnaire uses a 4-point scoring method, with the 15th item being reverse scored. Therefore, this study will utilize the combined 21 items. A higher average score in each dimension indicates a higher degree of the parenting style used by the parent. The Cronbach's  $\alpha$  coefficients for the various subscales of the Short Form of the Parental Rearing Styles

Questionnaire are as follows: Father's Rejection 0.80, Mother's Rejection 0.74, Father's Emotional Warmth 0.88, Mother's Emotional Warmth 0.87, Father's Over-protection 0.70, and Mother's Over-protection 0.72. The overall test-retest reliability is 0.86, with the subscales ranging from 0.70 to 0.81, indicating good reliability.

### **3.2.2 Subjective Learning Well-Being Questionnaire.**

Scholar Yu Han developed the Subjective Learning Well-Being Questionnaire for high school students based on the current state of research. Through exploratory factor analysis, it was determined that subjective learning well-being is a multidimensional structural model that includes four dimensions: academic performance, learning value, positive learning experiences, and negative learning experiences, comprising 18 items. A 5-point Likert scale is used for scoring, with higher scores indicating greater subjective learning well-being among students. Reliability and validity tests showed that the Cronbach's  $\alpha$  coefficient for this questionnaire is 0.863, indicating good reliability.

### **3.2.3 Learning Motivation Scale.**

This questionnaire uses the Learning Motivation Scale developed by scholar Amabile and revised by Chi Liping and others. The scale consists of 6 dimensions and 30 items, employing a 5-point Likert scale. Higher scores indicate stronger learning motivation. Items 1 and 16 are scored in reverse. The overall Cronbach's  $\alpha$  coefficient for the scale is 0.863, with an internal motivation Cronbach's  $\alpha$  of 0.880 and an external motivation Cronbach's  $\alpha$  of 0.837, demonstrating good reliability.

## **3.3 Research Procedure**

In this study, professionally trained students majoring in education served as the main testers. Before testing, consent was obtained from the school, teachers, students, and their parents. The project was introduced to ensure that students understood the purpose and method of the test. Testing was conducted by class units.

## **3.4 Data Processing**

This study used SPSS 27.0 for data entry and conducted descriptive statistics, correlation analysis, and regression analysis. The PROCESS 4.2 plugin was utilized for mediating model testing. The specific analytical steps are as follows: (1) Perform descriptive statistics on the overall data; (2) Obtain the correlations between key variables through correlation analysis; (3) Conduct regression analysis; (4) Use the PROCESS 4.2 plugin to perform mediating model testing.

## **3.5 Innovation of the Study**

This research explores the impact of subjective learning well-being among middle school students, highlighting how parenting styles with distinctive Chinese educational characteristics[21] affect learning motivation. It delves into the relationships among

learning motivation, parenting styles, and subjective learning well-being, enriching the content of family education and promoting students' psychological development.

## 4 Results and Discussion

### 4.1 Correlation Analysis

Through correlation analysis, the data in Table 1. indicates that each correlation significance is 0.000. According to Pearson correlation data, the parenting style characterized by emotional warmth demonstrates an apparent positive correlation with middle school students' learning well-being and learning motivation. On the contrary, the rejection parenting style reveals a negative correlation with both subjective learning well-being and learning motivation among middle school students. The over-protection parenting style is also significantly positively correlated with learning well-being and learning motivation, as its level of learning motivation is lower than that associated with the emotional warmth parenting style. The significance of the correlation between learning well-being and learning motivation is less than 0.01, with a Pearson correlation coefficient of 0.5. These data suggest that the three kinds of parenting styles in this study have a strong correlation with subjective learning well-being and learning motivation, and subjective learning well-being is also significantly correlated with learning motivation.

**Table 1.** Correlation Coefficients Between Variables

| Variable            | Subjective Learning Well-being | Learning Motivation | Emotional Warmth | Rejection |
|---------------------|--------------------------------|---------------------|------------------|-----------|
| Learning Motivation | .494**                         |                     |                  |           |
| Emotional Warmth    | .416**                         | .417**              |                  |           |
| Rejection           | -.366**                        | -.374**             | -.414**          |           |
| Over-protection     | .397**                         | .357**              | .515**           | -.392**   |

\*P<0.05;\*\*P<0.01;\*\*\*P<0.001

### 4.2 Partial Mediation Model Test

Using Model 4 from the PROCESS 4.2 plugin, the standardized variables were placed into the equation to test the mediating effect of subjective learning well-being between parenting styles and learning motivation.

First, the results indicate (Tables 2. & Table 3. & Figure 2.) that both the emotional warmth parenting style and the over-protection parenting style significantly positively predict learning motivation ( $\beta=0.400/0.347$ ,  $t=7.976/6.657$ ,  $P<0.001$ ). Moreover, these parenting styles also greatly positively predict learning well-being ( $\beta=0.371/0.359$ ,  $t=7.956/7.533$ ,  $P<0.001$ ). When parenting styles and subjective learning well-being were involved in the model, parenting style ( $\beta=0.245/0.186$ ,  $t=4.815/3.579$ ,  $P<0.001$ ) still had a predictive effect on learning motivation, while subjective learning well-being

also strongly positively predicted parenting styles ( $\beta=0.416/0.450$ ,  $t=7.324/7.837$ ,  $P<0.001$ ).

The over-protection parenting style significantly negatively predicts learning motivation ( $\beta=-0.371$ ,  $t=-7.021$ ,  $P<0.001$ ), and it also obviously negatively predicts subjective learning well-being ( $\beta=-0.337$ ,  $t=-6.844$ ,  $P<0.001$ ). When the over-protection parenting style and subjective learning well-being were included, the over-protection parenting style ( $\beta=-0.221$ ,  $t=-4.274$ ,  $P<0.001$ ) still had a predictive effect on learning motivation, while subjective learning well-being significantly positively predicted the over-protection parenting style ( $\beta=0.444$ ,  $t=7.906$ ,  $P<0.001$ ).

The  $R^2$  values ranged from 0.13 to 0.30, indicating a good model fit. The  $P$  values for the three types of parenting styles and subjective learning well-being were all lower than 0.01, suggesting that these factors significantly affect learning motivation. Furthermore, the coefficients for the emotional warmth and over-protection parenting styles were all greater than 0, while the coefficient for the rejection parenting style was less than 0, indicating that better parenting styles are associated with stronger learning motivation.

Further examination of the mediating effect shows that after incorporating learning well-being, the upper and lower limits of the Boot95% CI for the direct effects are (0.145, 0.345), (-0.323, -0.119), and (0.084, 0.289). The upper and lower limits of the Boot CI for the mediating effect of learning well-being are (0.099, 0.223), (-0.222, -0.091), and (0.103, 0.232). This indicates that the mediating effect of learning well-being is significant and serves as a partial mediation effect. The direct effects of the three models are 0.245, -0.221, and 0.186, with corresponding mediating effects of 0.155, -0.150, and 0.161, which account for the total effects of 0.400, -0.371, and 0.347 at (61.25%, 38.75%), (59.57%, 40.43%), and (53.60%, 46.40%) respectively.

**Table 2.** Path coefficients of parenting styles - subjective learning well-being - learning motivation

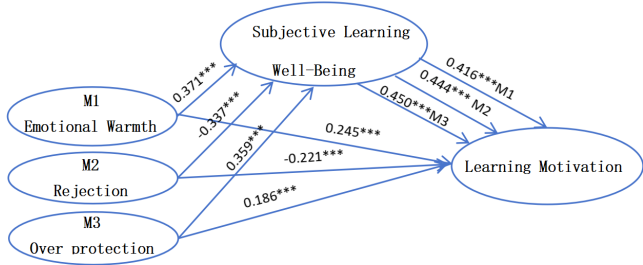
| Path                                               | R     | R <sup>2</sup> | F      | $\beta$ | T      |
|----------------------------------------------------|-------|----------------|--------|---------|--------|
| <b>Model 1</b>                                     |       |                |        |         |        |
| Emotional Warmth→Subjective Learning Well-being    | 0.416 | 0.173          | 63.292 | 0.317   | 7.956  |
| Subjective Learning Well-being→Learning Motivation | 0.546 | 0.298          | 64.150 | 0.416   | 7.324  |
| Emotional Warmth→Learning Motivation               | 0.417 | 0.174          | 63.614 | 0.400   | 7.976  |
| <b>Model 2</b>                                     |       |                |        |         |        |
| Rejection→Subjective Learning Well-being           | 0.366 | 0.134          | 46.838 | -0.337  | -6.844 |
| Subjective Learning Well-being→Learning Motivation | 0.536 | 0.287          | 60.897 | 0.444   | 7.906  |
| Rejection→Learning Motivation                      | 0.374 | 0.140          | 49.291 | -0.371  | -7.021 |
| <b>Model 3</b>                                     |       |                |        |         |        |
| Over-protection→Subjective Learning Well-being     | 0.397 | 0.158          | 56.747 | 0.359   | 7.533  |
| Subjective Learning Well-being→Learning Motivation | 0.524 | 0.275          | 57.286 | 0.450   | 7.837  |
| Over-protection→Learning Motivation                | 0.357 | 0.128          | 44.319 | 0.347   | 6.657  |

**Table 3.** Bootstrap test of the total, direct, and indirect effects of parenting styles on middle school students' learning motivation

| Effect          | Effect Size | Standard Error | 95%CI         | P      |
|-----------------|-------------|----------------|---------------|--------|
| Model 1         |             |                |               |        |
| Total Effect    | 0.400       | 0.050          | 0.301~0.498   | <0.001 |
| Direct Effect   | 0.245       | 0.051          | 0.145~0.345   | <0.001 |
| Indirect Effect | 0.155       | 0.032          | 0.099~0.223   | <0.001 |
| Model 2         |             |                |               |        |
| Total Effect    | -0.371      | 0.053          | -0.475~-0.267 | <0.001 |
| Direct Effect   | -0.221      | 0.052          | -0.323~-0.119 | <0.001 |
| Indirect Effect | -0.150      | 0.034          | -0.222~-0.091 | <0.001 |
| Model 3         |             |                |               |        |
| Total Effect    | 0.347       | 0.052          | 0.245~0.450   | <0.001 |
| Direct Effect   | 0.186       | 0.052          | 0.084~0.289   | .0004  |
| Indirect Effect | 0.161       | 0.033          | 0.103~0.232   | <0.001 |

The above data indicate that the hypothesis of this study is supported: parenting styles influence learning motivation through subjective learning well-being, and parenting styles directly affect learning motivation. Under the emotionally warm parenting style, students report higher levels of learning well-being and motivation. In contrast, under the rejecting parenting style, students experience lower learning well-being, significantly affecting their motivation. With an over-protection parenting style, students have high learning well-being, which also greatly impacts their motivation, slightly more than the emotionally warm parenting style. Previous research has also shown that children who frequently face parental rejection have lower well-being; the more emotional warmth parents provide, the higher their well-being. Children who are excessively monitored or protected by their parents tend to have higher levels of neuroticism[22], and they become accustomed to this without feeling disgusted, which does not necessarily translate to happiness or unhappiness. Therefore, the impact on learning motivation is generally moderate. The results align with international studies, indicating that parenting styles have a significant impact on individual personality and mental health[23].

The following Fig.2. are the results of the mediating model tests:



**Fig. 2.** Results of Partial Mediation Effect Test

Therefore, parents need to clearly understand the importance and impact of their parenting styles on students' subjective learning well-being and motivation. They should appropriately categorize their parenting style and provide suitable emotional acceptance and support. Research by scholar Zhang Lin indicates that emotional warmth can stimulate intrinsic motivation for learning[24]. Thus, when middle school students feel emotional warmth, it can enhance their subjective learning well-being and increase their enthusiasm and confidence. However, this does not mean that parents should excessively interfere in their students' learning, impose strict management and control, or provide unconditional acceptance and support, as this can negatively affect psychosocial adjustment and decrease well-being[25]. Such approaches may lead to a lack of learning motivation or cause motivation to shift externally[26], which is not conducive to students' long-term learning.

## **5 Significance and Limitations of the Study**

### **5.1 Theoretical and Practical Significance**

In theory, this study employs a literature review, questionnaire surveys, and statistical methods to clarify and explain the relationship between parenting styles and middle school students' learning motivation, with subjective learning well-being as a mediator. This enriches the content of educational psychology and family education, providing theoretical support for future scholars' research. At the practical level, based on the literature and questionnaire data, this study offers educational recommendations for improving parenting styles, enhancing subjective learning well-being, and shaping middle school students' learning motivation, which benefits collaboration between home and school and promotes the physical and mental development of students.

### **5.2 Limitations of the Study**

The sample of this study consists of a portion of students from a middle school in a district of Xi'an, and its external validity requires further exploration. Secondly, the questionnaire contains 71 items and requires about 3 to 5 minutes; participants' patience and focus may affect the completion rate. Therefore, future researchers should simplify the questionnaire while maintaining good reliability and validity. Additionally, some of the referenced literature is based on studies conducted by foreign scholars in the context of their own social and educational settings, and its applicability to the current state of family education and parenting styles in China requires further investigation. Finally, aside from the influence of parents on students' subjective learning well-being or motivation, other variables may also have an impact, such as the substantial support and encouragement provided by teachers, which can enhance the learning experience and significantly influence positive learning behaviors, motivating students to engage in learning[27]. Thus, further research on additional variables is needed.

## 6 Conclusion

Through empirical analysis, this study deeply discusses the influence of different parenting styles on middle school students' learning motivation, and focuses on the mediating role of subjective learning well-being in this process. The valid data from middle school students were collected by questionnaire survey, and descriptive statistics, regression analysis, correlation analysis and intermediate effect test were carried out on the questionnaire data by SPSS and PROCESS statistical software. It is found that parenting style has a significant impact on students' learning motivation, and this impact is partly mediated by subjective learning well-being. The study also found that parenting style not only indirectly affects learning motivation through subjective learning well-being, but also directly affects students' learning motivation, which indicates that parenting style is an important factor affecting middle school students' learning motivation. This study not only reveals the internal relationship between parenting style, subjective learning happiness and learning motivation, but also provides useful references for family education and even school education: Parents should pay attention to their own parenting style, understand the impact of parenting style on students' subjective learning happiness, students' external learning motivation and internal learning motivation, and improve their own parenting style, provide appropriate emotional support, reduce rejection and overprotection behavior, and enhance students' subjective learning happiness. To cultivate middle school students' learning motivation or help students transfer their learning external motivation to internal motivation, pay attention to students' mental health, and promote students' all-round development. Future research could further explore the differences in the impact of parenting styles in different cultural contexts and how to optimize parenting styles through educational interventions to better promote student learning and development.

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