

## *Original Paper*

# Meta-analysis on the Relationship between Parenting Style and Personality of Chinese College Students

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### ***Abstract***

*There have been many studies on the relationship between parenting style and personality characteristics of college students, and there are many inconsistent conclusions on the direction and intensity of the correlation. In order to explore the relationship between parenting style and personality of college students in China, this systematic review and meta analysis included 12 studies with 4,984 college students. Results showed that: 1) Positive parenting style was significantly negatively correlated with neuroticism and positively correlated with extraversion; 2) Negative parenting style was significantly positively correlated with psychoticism and negatively correlated with neuroticism. Parenting style can significantly influence college students' personality.*

### ***Keywords***

*parenting style, personality, meta-analysis, Chinese college students*

## **1. Introduction**

College students' sound personality not only affects the fate of themselves, but also determines the future of a country to a certain extent. When faced with difficulties and setbacks, the strong people will work hard while weak ones may fall down. Many researchers have reported that one of the important factors affecting personality is parenting style (Zhang, Liu, & Wo, 2004). Generally speaking, positive, tolerant, encouraging and participatory parenting style can promote the development of individual personality, while negative parenting style is the opposite. In a word, parenting styles can help or hinder the personality development of offspring.

The personality of college students needs urgent attention, and exploring the influencing factors of college students' personality is of great significance for proposing feasible intervention strategies. Chinese scholars have conducted a lot of empirical research on the influencing factors of college students' personality, and have achieved quite fruitful results. Parental rearing style is one of the important factors. However, there are many inconsistent conclusions on the direction and intensity of the correlation between the two. Chen invested 563 college students and found that fathers' overprotection, emotional warmth and understanding, were significantly positively correlated with extraversion. Father's over-protection and mother's preference for the subject was significantly positively correlated with neuroticism and psychoticism of offspring. There was a significant negative correlation between mother's emotional warmth and understanding and neuroticism of college students. Father's refusal, over-protection and mother's over-interference and protection, preference for subjects were significantly positively correlated with children's psychoticism (Chen & Liu, 2008). Zeng's study showed that father's severe punishment, mother's refusal, and severe punishment were positively correlated with psychoticism, while mother's emotional warmth and understanding was significantly positively correlated with extraversion. Parental emotional warmth and understanding were significantly negatively correlated with neuroticism, while fathers' refusal and over-protection were significantly positively correlated with psychoticism (Zeng, 2012). Li's research showed that parents' emotional warmth and understanding were significantly negatively correlated with neuroticism and positively correlated with extraversion, and negative parenting styles were positively correlated with neuroticism (Li, 2004). Wu also found that parental emotional warmth and understanding were negatively correlated with psychoticism and neuroticism (Wu & Tang, 2000). Xia's research showed that parents' emotional warmth is negatively correlated with psychoticism and neuroticism, and positively correlated with their extraversion. Severe punishment and refusal were positively correlated with psychosis and neuroticism (Xia, 2007). Liu showed that severe punishment, excessive interference and refusal of fathers and severe punishment and preference of mothers were significantly positively correlated with neuroticism, while emotional warmth and understanding of fathers were significantly negatively correlated with psychoticism. Extraversion was significantly positively correlated with parents' emotional warmth and understanding (Liu, 2008).

There have been many studies on the relationship between parenting style and personality characteristics of college students, and their reports have shown that parenting style of college students are closely related to personality characteristics, but the researchers have not been able to reach a consistent result. For example, the  $r$  between psychoticism and father's emotional warmth and understanding was 0.007 in Zeng Yu's study and -0.158 in another study. The  $r$  between extraversion and mother's severe punishment was -0.024 in Zeng Yu's study and 0.224 in Li Yian's study (Li, 2004; Zeng, 2012). It can be seen that there are many inconsistencies in the degree and direction of correlation between personality dimensions and parenting styles. This systematic review and meta-analysis aimed to unify these studies and get a more objective conclusion. In addition, both

parenting style and personality contain too many dimensions and this weakens its guiding significance to reality. Therefore, based on previous studies (Lei, Chiu, Cui, Zhou, & Li, 2018), we classified them as positive parenting style and negative parenting style to simplify the conclusions.

## **2. Method**

### *2.1 Search Strategies*

Chongqing VPN, CNKI and Wan fang datasets were searched on 13, April, 2020 and a total of 496 references without duplication were found. Search items were as following:

# 1 Parenting style or parental rearing

# 2 Personality or neuroticism or psychoticism or extraversion

Searching: 1 and 2

### *2.2 Inclusion and Exclusion Criteria of Literature*

The inclusion criteria were as follows: (1) parental rearing pattern questionnaire (EMBU) and Eysenck Personality Questionnaire (EPQ) were used; (2) subject are Chinese college students; (3) there are sufficient information that meta-analysis needed such as the number of people, correlation coefficient or other parameters that can be converted into  $r$ , including  $t$ ,  $P$ , etc.; (4) the language is Chinese. The correlation coefficients between each dimension should be reported, and studies that only report part of the data will be excluded. For multiple publications using the same database, we link them together and extract the sufficient data from one of them.

### *2.3 Data Extraction*

Literature screening was divided into two stages. In stage one, every reference was judged through reading the title and abstract. In stage two, full text is used to judge whether it meets the inclusion criteria. Each stage was completed by two researchers independently. Controversial issues were solved through negotiation or seeking senior researcher's help. Positive parenting style included emotional warmth and understanding of father and mother. Negative parenting style included other dimensions (Yue, Li, Jin, & Ding, 1993). The concealment factor in EPQ was not involved in the follow-up analysis because it measured whether college students had lied or not

### *2.4 Statistical Analysis*

Pearson correlation coefficient  $r$  is used as the effect size index in this meta-analysis. Random effect in Comprehensive Meta-Analysis 3.0 was used to analyze the data (Cortese et al., 2018; Higgins & Thompson, 2002).  $I^2$  was used to assess the size of heterogeneity while egger test and funnel plot was used to detect publication bias (Egger, Davey Smith, Schneider, & Minder, 1997).

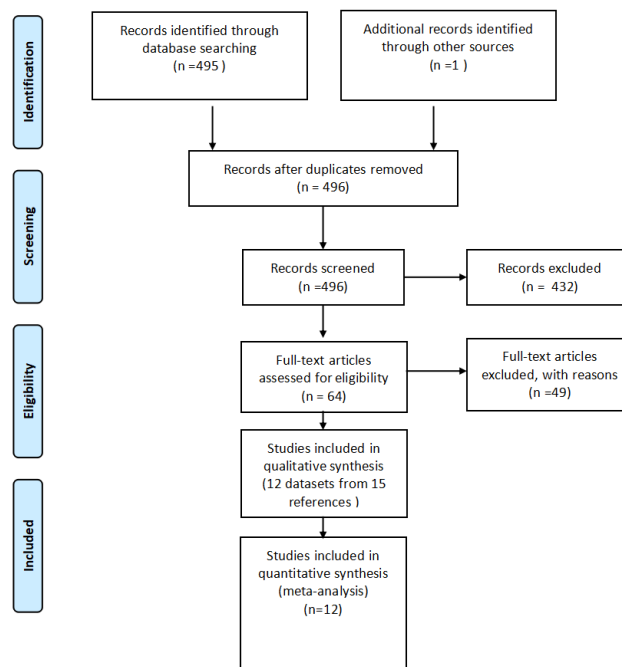
### 3. Results

#### 3.1 Characteristics of Studies Included

A total of 496 references were retrieved. The PRISMA flow chart in Figure 1 detailed the quantitative stages of each study. A total of 12 studies since 2000 met the standards and were input into the meta-analysis research (Chen & Liu, 2008; Han, 2009; Huang & Jiang, 2016; Li, 2004; Liu, 2008; Wu & Tang, 2000; Xia, 2007; Xu, Liu, & Zhang, 2010; Zeng, 2012; G. Zhang, Guo, & Yan, 2006; L. Zhang, Yao, & Wang, 2009; Zhou, Sun, & Cheng, 2012). One study provided data on two groups of Hui and Han college students (L. Zhang et al., 2009). As a result, there are 13 sets of data. The total number of college students is 4894. These college students came from Chongqing, Fujian, Guangxi, Guizhou, Hebei, Heilongjiang, Henan, Jiangxi, Ningxia, Shaanxi and Xinjiang. One study did not report the information about the region of college students.

**Table 1. Characterizes of Studies Included**

Author/Year	Region	Type of study	N
Chen (2008)	Guizhou	Journal	563
Han (2009)	Heilongjiang	Dissertation	178
Huang (2016)	Jiangxi	Journal	208
Li (2004)	Unclear	Journal	196
Liu (2008)	Shann'xi	Journal	113
Wu (2000)	Guangxi	Journal	97
Xia (2007)	Xinjiang	Journal	2055
Xu (2010)	Chongqing	Journal	199
Zeng (2012)	Fujian	Journal	245
Zhang (2006)	Henan	Journal	233
Zhang (2009)	Ningxia	Journal	736
Zhou (2012)	Hebei	Journal	161



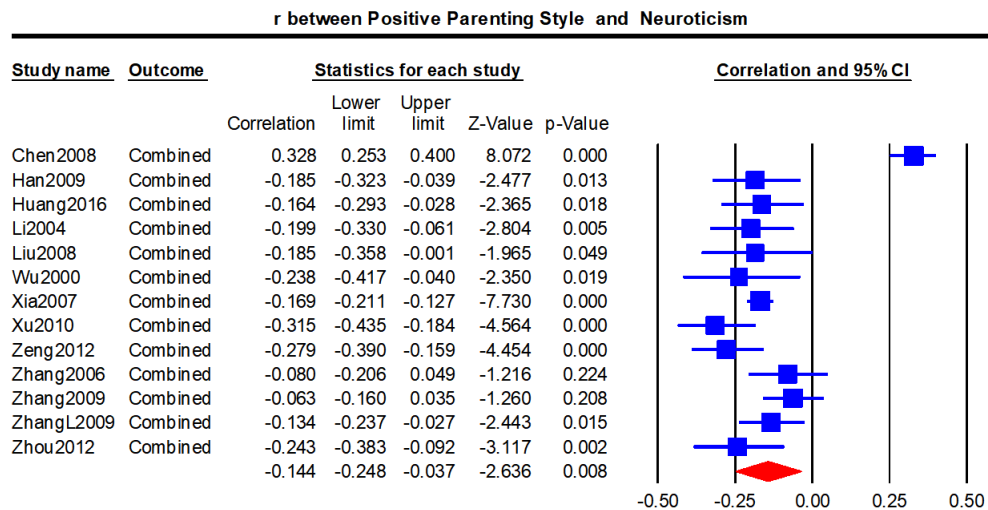
**Figure 1. Preferred Reporting Items for Systematic Reviews and Meta-Analyses Flow Chart**

### 3.2 Relationship between Positive Parenting Style and Personality

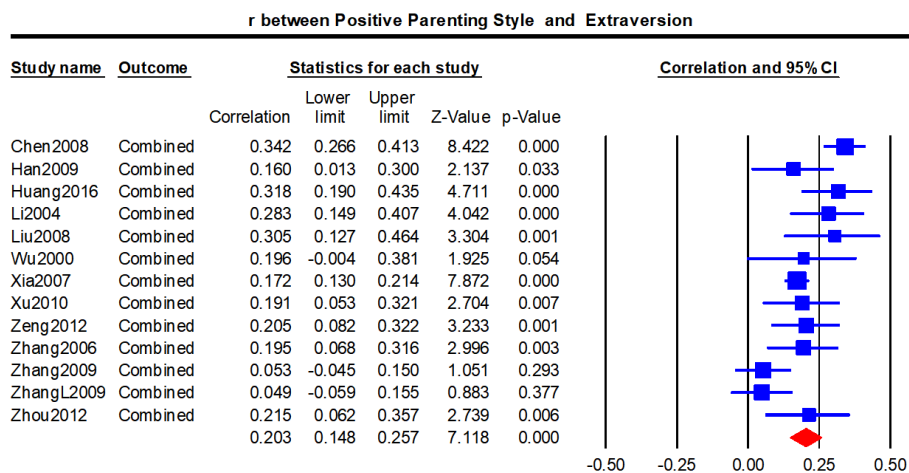
It can be seen from Table 2 that there is a significant negative correlation between positive parenting style and neuroticism ( $r = -0.144$  ( $-0.248, -0.037$ ), see Figure 2), and a significant positive correlation between positive parenting style and extraversion ( $r = 0.203$  ( $0.148, 0.257$ ), see Figure 3). There is no significant correlation between positive parenting style and psychoticism ( $r = -0.085$  ( $-0.236, 0.071$ ), see Figure 4).

**Table 2. Correlation between Positive Parenting Styles and Personality**

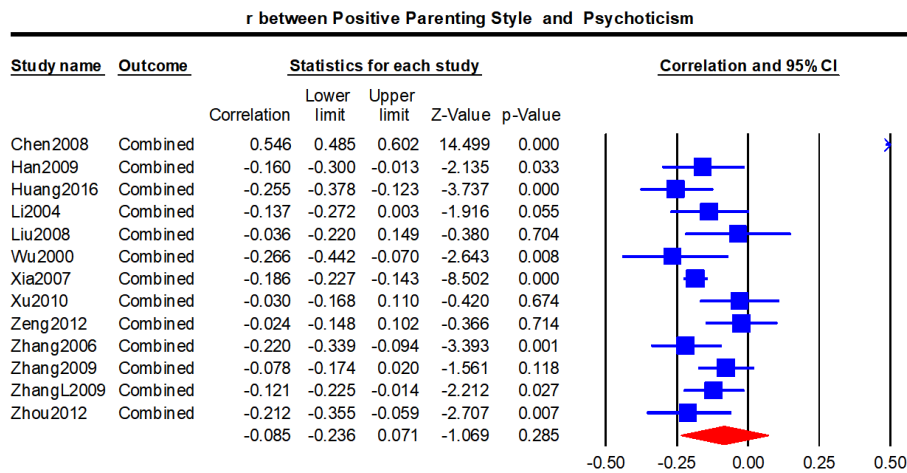
Dimensions of Personality	K Datasets	N Subjects	SMD (95% CI)	P	Heterogeneity			Egger's test		
					Q	df	p	I <sup>2</sup>	t	p
Neuroticism	13	4894	-0.144(-0.248,-0.037)	0.008	147.924	12	0.000	91.888	0.452	0.659
Extraversion	13	4894	0.203(0.148,0.257)	0.000	37.975	12	0.000	68.400	0.621	0.546
Psychoticism	13	4894	-0.085(-0.236,0.071)	0.285	313.743	12	0.000	96.175	0.052	0.959



**Figure 2. Forest Plot of r between Positive Parenting Style and Neuroticism**



**Figure 3. Forest Plot of r between Positive Parenting Style and Extraversion**



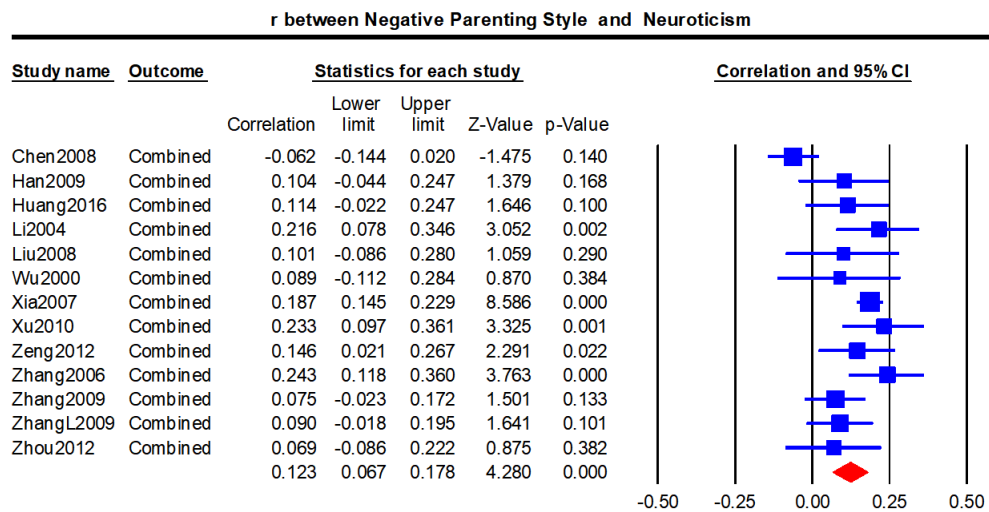
**Figure 4. Forest Plot of r between Positive Parenting Style and Psychoticism**

### 3.3 The Relationship between Negative Parenting Style and Personality

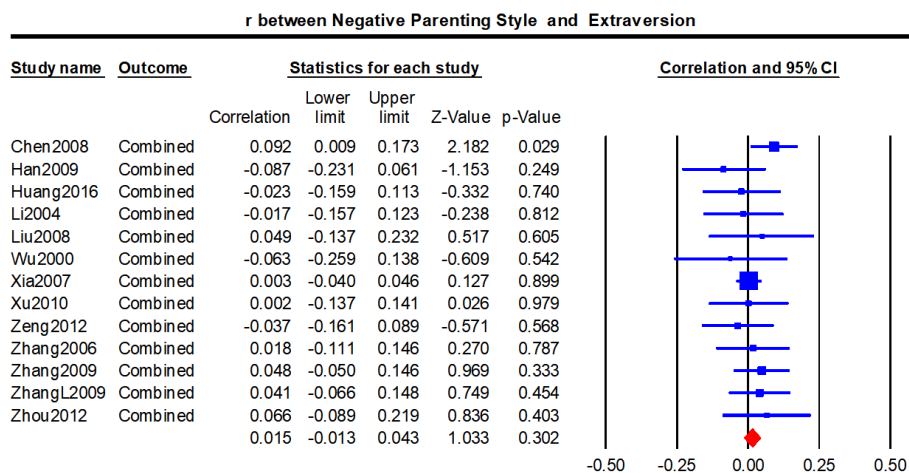
As can be seen from Table 3, negative parenting style has significant positive correlation with neuroticism (0.123 (0.067, 0.178), see Figure 5), significant positive correlation with psychoticism (0.126 (0.085, 0.168), see Figure 6), and insignificant correlation with extraversion (0.015 (-0.013, 0.043), see Figure 7).

**Table 3. Correlation between Negative Parenting Styles and Personality**

Dimensions of Personality	K Datasets	N Subjects	SMD (95%CI)	P	Heterogeneity			Egger's test		
					Q	df	p	I <sup>2</sup>	t	p
Neuroticism	13	4894	0.123(0.067,0.178)	0.000	37.673	12	0.000	68.147	0.681	0.509
Psychoticism	13	4894	0.126(0.085,0.168)	0.000	20.648	12	0.056	41.884	1.637	0.129
Extraversion	13	4894	0.015(-0.013,0.043)	0.302	8.440	12	0.750	0.000	0.386	0.706

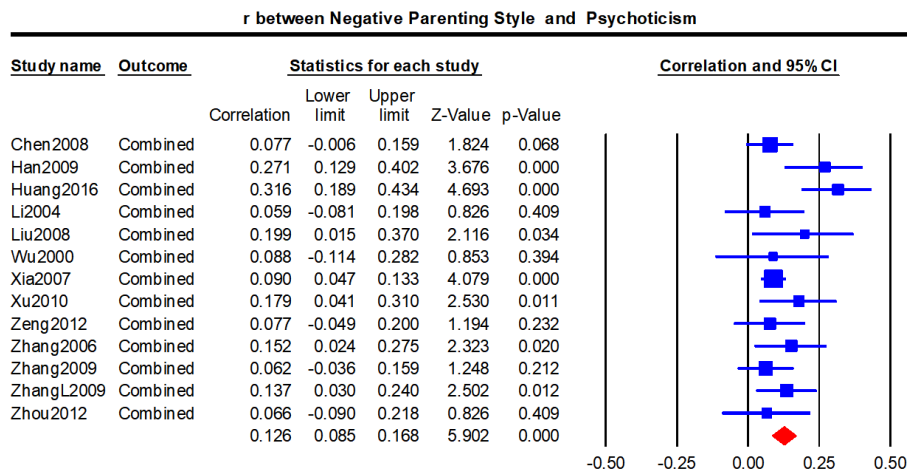


**Figure 5. Forest Plot of r between Negative Parenting Style and Neuroticism**



**Figure 6. Forest Plot of r between Negative Parenting Style and Extraversion**





**Figure 7. Forest Plot of r between Negative Parenting Style and Psychoticism**

#### 4. Discussions

##### 4.1 The Influence of Positive Parenting Style on College Students' Personality

High neuroticism usually means apprehension, irritability and tendencies to experience negative affect (McLarnon & Romero, 2020). Such people usually are under a strong emotional reaction, and often feel depressed, unhappy, and worried. When parents use more positive parenting styles such as warm understanding, the family atmosphere is more democratic. When children have more positive experience, they experience less uncertainty and less anxiety. That's why positive parenting style was negatively and significantly correlated with neuroticism.

Extraversion dimension of EPQ was meant to measure extraversion versus introversion and a high extraversion score indicates extraversion (van Hemert, van de Vijver, Poortinga, & Georgas, 2002). This person likes to socialize and explore the outside world. When parents use more positive parenting methods such as cordial understanding, children will have more freedom, get more positive affirmation in communication with others, and become more active and brave in communication with strangers.

##### 4.2 The Influence of Negative Parenting Style on College Students' Personality

People with high neuroticism usually have more negative emotions. This is closely related to the negative parenting style. Some parents usually take their own standards to ask their children, and do not realize that they are too high for their children. These parents rarely encourage and praise children in time. In this "autocratic" situation, children are easy to form such bad personality characteristics as confrontation, inferiority, anxiety, withdrawal and dependence.

High score in psychoticism usually means loneliness and lack of concern for others. Psychoticism is believed to be closely related to inappropriate social behavior (Colledani, Anselmi, & Robusto, 2018). A person with high psychoticism does not easily adapt to changes in the environment. When parents expect too much of their children, such families are less likely to allow children to make mistakes. If parents are too demanding and too intrusive, children are more reluctant to express their opinions. Children experience less security and less autonomy. Over time, children who live in a negative parenting style become less caring. That is, the greater the level of negative parenting style, the greater the level of psychoticism of college students.

#### *4.3 Comprehensive Analysis*

Parents' positive style including warm understanding has a very good role in promoting the formation of personality characteristic. When parents show more constructive style, college students will have strong independence, strong self-esteem and self-confidence. They tend to be able to control their emotions and be skilled at using his own strength to solve various problems. However, negative parenting styles, such as severe punishment, refusal, excessive interference et al., will lead to college students' lack of self-esteem and self-confidence. The questionnaire used in this paper is based on EPQ personality questionnaire and parenting style questionnaire. Its advantage is to ensure the homogeneity of the study, but its disadvantage is that it cannot examine the influence of different measurement tools on the relationship.

Therefore, this result also suggests studies of interventions to increase positive parenting styles and reduce negative parenting styles in order to help college students shape a noble personality. Studies have found that web-based parenting programs with new technologies are also helpful to parents and children (Nieuwboer, Fukkink, & Hermanns, 2013).

### **5. Conclusions**

Positive parenting style was negatively correlated with neuroticism and positively correlated with extraversion. Negative parenting style was positively correlated with psychoticism and positively correlated with neuroticism. Therefore, parenting style can significantly influence college students' personality traits. In order to enhance the comparability, this paper only selects EMBU revised by Yue and EPQ questionnaire. However, this approach inevitably misses studies using other tools. And it makes it impossible to test the moderating effect of measuring tools. This is what needs to be improved in the future.

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## References

- Chen, M., & Liu, F. (2008). A study on the relationship between parenting styles and personality of college students. *Journal of Guizhou Ethnic Institute*, 2, 183-188.
- Colledani, D., Anselmi, P., & Robusto, E. (2018). Using Item Response Theory for the Development of a New Short Form of the Eysenck Personality Questionnaire-Revised. *Frontiers in Psychology*, 9. <https://doi.org/10.3389/fpsyg.2018.01834>
- Cortese, S., Sun, S., Zhang, J., Sharma, E., Chang, Z., Kuja-Halkola, R., ... Faraone, S. V. (2018). Association between attention deficit hyperactivity disorder and asthma: A systematic review and meta-analysis and a Swedish population-based study. *The Lancet Psychiatry*, 5(9), 717-726. [https://doi.org/10.1016/S2215-0366\(18\)30224-4](https://doi.org/10.1016/S2215-0366(18)30224-4)
- Egger, M., Davey Smith, G., Schneider, M., & Minder, C. (1997). Bias in meta-analysis detected by a simple, graphical test. *BMJ*, 315(7109), 629-634. <https://doi.org/10.1136/bmj.315.7109.629>
- Han, X. (2009). *The relationship between personality characteristics parenting styles and loneliness of college students* (Master's thesis). Harbin Engineering University.
- Higgins, J. P., & Thompson, S. G. (2002). Quantifying heterogeneity in a meta-analysis. *Stat Med*, 21(11), 1539-1558. <https://doi.org/10.1002/sim.1186>
- Huang, M., & Jiang, W. (2016). A study on the relationship between parenting styles and personality of college students. *Modern Communication*, 24, 96-97.
- Lei, H., Chiu, M., Cui, Y., Zhou, W., & Li, S. (2018). Parenting Style and Aggression: A Meta-Analysis of Mainland Chinese Children and Youth. *Children and Youth Services Review*, 94(11), 446-455. <https://doi.org/10.1016/j.childyouth.2018.07.033>
- Li, Y. (2004). A study on the relationship between mental health, personality and parenting style of college students. *Chinese Journal of Health Psychology*, 12(5).
- Liu, J. (2008). A study on the relationship between personality, parenting styles and achievement motivation of college students. *Chinese Journal of Health Psychology*, 16(2), 157-159.
- Mc Larnon, M. J. W., & Romero, E. F. (2020). Cross-cultural equivalence of shortened versions of the Eysenck Personality Questionnaire: An application of the alignment method. *Personality and Individual Differences*, 163. <https://doi.org/10.1016/j.paid.2020.110074>
- Nieuwboer, C. C., Fekkink, R. G., & Hermanns, J. M. A. (2013). Online programs as tools to improve parenting: A meta-analytic review. *Children and Youth Services Review*, 35(11), 1823-1829. <https://doi.org/10.1016/j.childyouth.2013.08.008>
- van Hemert, D. A., van de Vijver, F. J. R., Poortinga, Y. H., & Georgas, J. (2002). Structural and functional equivalence of the Eysenck Personality Questionnaire within and between countries. *Personality and Individual Differences*, 33(8), 1229-1249. [https://doi.org/10.1016/S0191-8869\(02\)00007-7](https://doi.org/10.1016/S0191-8869(02)00007-7)
- Wu, Y., & Tang, Q. (2000). A preliminary study on the influence of parenting styles on personality of Zhuang college students. *Chinese Journal of School Health*, 21(4), 294-295.

- Xia, Y. (2007). Influence of parenting styles on personality and psychology of Uyghur and Han college students in Xinjiang. *Chinese Journal of Health Psychology*, 15(8).
- Xu, X., Liu, Q., & Zhang, J. (2010). A Study on personality and parenting style of college students. *Journal of Luoyang Normal University*, 29(2), 183-185.
- Yue, D., Li, M., Jin, K., & Ding, B. (1993). Preliminary revision of EMBU and its application in neurotic patients. *Chinese Mental Health Journal*, 7(3), 97-101.
- Zeng, Y. (2012). A study on the relationship between parenting styles and personality characteristics of college students. *Journal of Ningbo University*, 34(5), 50-54.
- Zhang, G., Guo, Y., & Yan, C. (2006). Influence of parenting styles on personality and coping styles of college students. *Journal of Xinxiang Medical College*, 23(6), 553-555.
- Zhang, H., Liu, C. M., & Wo, J. Z. (2004). How parenting styles impact on creativity personality of adolescents. *International Journal of Psychology*, 39(5-6), 167.
- Zhang, L., Yao, L., & Wang, G. (2009). A study on the correlation between personality of college students and parental styles. *Journal of Ningxia Medical University*, 31(5), 601-603.
- Zhou, X., Sun, A., & Cheng, S. (2012). A study on attributional style, personality traits and parenting style of college Students. *Chinese Journal of Health Psychology*, 3, 396-398.