


Influence of Intellectual-cultural Orientation as Family Culture on Chinese College Students' Subjective Well-being: A Moderation Model

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Guangming Li, PhD¹ , Yuelin Wu, BS¹ , Haiying Wen, MS²,
Fadi Zhang, HS³, and Desheng Yan, PhD⁴

Abstract

The well-known mediation-moderation model of subjective well-being has been criticized because it oversimplified the concept of culture. This study aimed to explore whether the family culture, as supplement of social culture, has significant impacts on subjective well-being. The intellectual-cultural orientation subscale (ICO) of family environment scale-CV (FES-CV), Eysenck personality questionnaire for adult (EPQA), and index of well-being (IWB) were used to test 340 college students from China. Results showed that the extraversion and neuroticism of personality traits have great influences on subjective well-being, and intellectual-cultural orientation as family culture, to represent characteristic of family culture, serves as a moderating variable for the 2 components of subjective well-being. And all these findings revealed that the trait of family culture should be considered as a supplement of the social culture and a critical complementary moderating influenced factor for subjective well-being. Together with personality traits, it can explain the variance of subjective well-being to some extent. The family cultural has an important influence on college students' personality and subjective well-being. It is important to provide a high quality family cultural environment for college students.

Keywords

family culture, social culture, intellectual-cultural orientation, subjective well-being (SWB), personality traits, extraversion, neuroticism, college students, moderation model

What do we already know about this topic?

Some researchers had realized that social culture had an impact on subjective well-being.

How does your research contribute to the field?

This study aimed to explore the influence of family culture and personality traits on the subjective well-being for college students.

What are your research's implications toward theory, practice, or policy?

All these findings reveal that the trait of family culture should be considered as a great supplement of the social culture and as a critical complementary moderating influenced factor for subjective well-being. Together with personality traits, it can explain the variance of subjective well-being to some extent.

Introduction

Subjective well-being (SWB) refers to the various ways that we experience and evaluate our lives positively.^{1,2} It consists of affective components (frequent positive feelings, infrequent negative feelings) and cognitive components (evaluations of life and judgments of satisfaction).³ Regarding the relation between the emotional and cognitive components of SWB, research has shown that when people make judgments about life satisfaction, the proportion of positive emotions to

negative emotions experienced serves as an important source of information.^{4,5} Such findings are supportive of theories of emotion, suggesting that affective well-being and cognitive well-being often correlate with each other, and people rely on their emotional experiences to form judgments of how satisfied they are with their lives.⁶

In the pursuit of eliminating misery and improving life quality, great efforts have been made to find out which factors may influence SWB. Some researchers found out that personality traits are one of the most stable and effective



predictors of SWB.^{7,8} For instance, top-down theories assumed that life-satisfaction is due to personality influences. Personality and a positive psychological orientation will affect individuals' perceived behavior and feelings, which will affect their social environment evaluation and attitude.⁹ According to the Dynamic Equilibrium Model, each person has a normal equilibrium level of SWB which can be predicted on the basis of stable person characteristics. When something (either positive or not) happens to a person, the level of SWB starts to change. Then the personality trait will regulate the level of SWB back to normal status.¹⁰ From these perspectives of views, it is reasonable to say that judgments of life satisfaction are fairly stable over long periods of time and are predicted by personality traits.^{11,12}

What's more, in studies concerning the relationship between the big 5 personality traits and individual subjective well-being, some researchers have found that conscientiousness, pleasantness, and openness are all correlated with the subjective well-being.¹³ However, there are inconsistencies in these research findings,¹⁴ and extraversion and neuroticism are the 2 personality traits most relevant to individual subjective well-being.¹⁵ Both meta-analyses suggested that neuroticism is the strongest predictor of negative affect and is also the strongest predictor of life satisfaction. In addition, extraversion is the strongest predictor of positive affect.^{11,16} Margolis et al found in their research that extraverts are more talkative, active and are more likely to feel a sense of happiness, so they tend to have a higher well-being index.¹⁷ However, individuals exhibiting higher neuroticism levels are more susceptible to hostility, depression, and emotional vulnerability, subsequently they tend to have a lower well-being index. Therefore, an analysis of existing research suggests that building a good personality structure can help improve the subjective well-being of individuals.

As research continues, a number of cross-cultural researchers found out there are distinct differences in the subjective well-being between nations that can be explained to some extent by the effects of culture.¹⁸⁻²⁰ In fact, different cultural backgrounds that human beings live affect the formation of their subjective well-being. Separating personality, culture, and subjective well-being will bring many problems and will not help researchers to explore the influencing factors of subjective well-being. Since recent years, formation of mediation-moderation model that integrate culture, personality traits, and subjective well-being has been built to explain the relationship between them.²¹

The main idea of this model is that extraversion and neuroticism are significantly associated with the emotion component of SWB, which exists in all cultures. And the affective and cognitive components of SWB were more correlated in individualistic cultures than in collectivistic cultures. In other word, culture moderated the relationship between the 2 components of SWB. People living in individualistic-oriented, wealthy, and democratic cultures have higher levels of SWB than those living in collectivistic-oriented, poor, and totalitarian cultures.⁵ People from individualist nation's main concern with retaining their independent, active, happy, and outgoing selves. In contrast, individuals from collectivist nations experience interpersonal emotions more frequently as opposed to individuals from more individualist nations. In such countries, well-being may require experiencing negative emotions in order to attain more highly valued ideals such as interpersonal harmony.^{22,23} The other cultural variable that moderates the relation between emotions and life satisfaction is the survival value dimension or self-expression value dimension.²⁴ Societies that stress self-expression values are characterized by high levels of economic and physical security. People in those societies have high levels of personal responsibility, political activity, tolerance of diversity, and SWB.⁶

However, in this model, the "culture" only refers to social culture. But according to ecological systems theory, one individual is embedded with 4 nested systems, which are distinguished by their distance from individual and the extent they may exert direct influence on individual.²⁵ When it comes to the influence that environment brings, researchers often mistakenly only think of the "big picture." But microsystems are the contexts in which people have primary face-to-face contact with important and impactful individuals. Family may be the most stable and profound in microsystems and it is also the carrier of culture.²⁶ So it is reasonable to say that family culture plays a significant role in the development of people's psychology and personality. Therefore it is necessary to include this factor when explore the relationship between subjective well-being and personality.

In fact, some researchers had realized that family culture had an impact on subjective well-being. However, these studies separated the family culture from social culture and personality. So it is worthwhile to find out whether family culture can be an important supplement to the culture factors, and also have impact on subjective well-being.

¹School of Psychology, Center for Studies of Psychological Application, South China Normal University, Guangzhou, China

²Department of Fashion Design, Guangdong Province Technician College of Light Industry, Guangzhou, China

³International Department, Affiliated High School, South China Normal University, Guangzhou, China

⁴School of Education, South China Normal University, Guangzhou, China

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Corresponding Author:

Guangming Li, School of Psychology, South China Normal University, No. 55, West of Zhongshan Avenue, Tianhe District, Guangzhou City China, Shipai Campus, Guangzhou 510631, China.

Email: Lgm2004100@sina.com

Based on these previous researches, this study aimed to explore the influence of family culture and personality traits on the subjective well-being for college students. Index of well-being,²⁷ Eysenck personality questionnaire for adult²⁸ and the intellectual-cultural orientation subscale of family environment scale-CV²⁹ are used respectively to measure subjective well-being, personality, and family culture.

Method

Participants

The sampling method was based on stratified random sampling and all the participants were drawn from Guangdong province in China. The final sample for this study included 340 college students with age from 18 to 35 years old, and 53.8% of them are male. The sample comprised 257 undergraduate and 83 postgraduate students. Informed consent was obtained from the students before they took part in the study.

Procedure

The college students from 3 universities were randomly selected. Data were collected during the class using a paper/pencil version survey administered to all students in these school classes. Students' physiological indicators (eg, height, weight, blood pressure) were assessed within the first week following the baseline measures. The academic affairs offices of the 3 schools provided the measurement sites. Students were wearing light clothes and were barefoot when measured at air-conditioned rooms. Research staff was trained before they administered the survey. Student assents were obtained from both schools and parents, and this study was approved by the South China Normal University (SCNU) research ethics board (Institutional Review Board).

Instrument

All scales used in this study were written in English originally and participants are Chinese, so the items had been translated and back-translated by previous Chinese researchers.

Index of Well-being (IWB). Index of Well-being (IWB) was published as a measure of present subjective well-being. It is a 7-point scale that includes scale of general emotion index which contains 8 items and live satisfaction questionnaire which contains 1 item. Total score of general well-being is equal to the sum of mean score of scale of general emotion index and the score of live satisfaction. The IWB used in this study was a version that was revised by Wang et al,^{27,30} which has been widely used by Chinese researchers and always with Cronbach's alpha above .80. In this study,

reliability of Index of well-being was great with Cronbach's alpha of .89 for whole scale.

Eysenck Personality Questionnaire for Adult (EPQA). The Eysenck and Eysenck personality questionnaire³¹ was introduced as a measure of 3 primary dimensions of personality, namely neuroticism (N), extraversion (E), and psychoticism (P). In addition, the EPQ contains a social-desirability (L or lie) scale designed to measure a symptom minimization response set. Construct validity of EPQ has been proven by a wide variety of Factor-analytic studies of the EPQ.³² The version of EPQA used in this study was introduced and revised by Gong.^{28,33} It includes 88 dual-choice (yes/no) items. The details are as followed: psychoticism, 24 items; extraversion, 21 items; neuroticism, 24 items; lie, 20 items. And there are 29 items are reverse coded. Cronbach's alpha of psychoticism is usually between .50 and .60 and Cronbach's alphas of other subscales are normally above .80. In this study, the Cronbach's alpha of psychoticism, extraversion and neuroticism were as followed: .78, .81, and .84.

Family Environment Scale-CV (FES-CV). The FES³⁴ is a 90-item, dual-choice (yes/no) questionnaire with 10 scales that evaluate different characteristics of families: cohesion, expressiveness, conflict, independence, achievement orientation, intellectual-cultural orientation, active-recreational orientation, moral-religious emphasis, organization, and control. The original version of FES-CV was design based on western culture. When applying it to the Chinese, Zhou et al²⁹ have revised some items according to the culture and conditions in China. According to previous studies, Cronbach's alpha of the whole scale is usually above .70, and Cronbach's alpha of intellectual-cultural orientation is usually around .80. In this study, we only used one of the subscales, intellectual-cultural orientation, to represent characteristic of family culture, and the Cronbach's alpha of intellectual-cultural orientation was .79.

Data analysis. All responses of participants were collected and analyzed by SPSS26.0. First, we used the Spearman analysis to examine the correlations between all the investigated variables. Second, we used hierarchical multiple regression analysis to examine the mechanism of subjective well-being, personality traits and family culture. Finally, we used path analysis to build a model of all these 5 factors.

Results

Descriptive Statistics and Correlations

Table 1 reports descriptive statistics for all variables in this study. As it is shown, 2 factors from EPQA, extraversion and neuroticism, had moderately large correlations with both

Table 1. Means, Standard Deviations and Correlations of Variables.

Variable	M	SD	1	2	3	4	5	6
1. General emotion index	4.73	1.00	1.00					
2. Live satisfaction	4.68	1.25	.68***	1.00				
3. Psychoticism	4.71	8.00	-.20**	-.14*	1.00			
4. Extraversion	11.67	4.60	.32**	.28**	-.02	1.00		
5. Neuroticism	11.96	5.15	-.48***	-.39**	.24**	-.28**	1.00	
6. Intellectual-cultural orientation	3.14	1.79	.35**	.24**	-.07	.25**	-.13*	1.00

* $P < .05$. ** $P < .01$. *** $P < .001$.

Table 2. Hierarchical Multiple Regression Analysis of General Emotion Index.

Model	General emotion index		
	Model I	Model II	Model III
Gender	0.010	0.043	0.042
Age	-0.060	-0.052	-0.058
Health status	-0.126*	0.024	0.018
Extraversion		0.507***	0.478***
Neuroticism		-0.491***	-0.483***
Intellectual-cultural orientation			0.122*
R^2	.019	.264	.278
Adjusted R^2	.009	.252	.263

* $P < .05$. *** $P < .001$.

components of subjective well-being, as well as intellectual-cultural orientation from FES. Two subscales of IWB can composite into a total score which represents general well-being. The correlation coefficients between general well-being, which composited by 2 subscales of IWB, and extraversion, neuroticism, and intellectual-cultural orientation were as followed: 0.32, -0.48, 0.35. The correlation between the general emotional index and subjective well-being was .88, the correlation between life satisfaction and subjective well-being was .89, and the correlation between general emotional index and life satisfaction was .68.

Hierarchical Multiple Regression Analyses

Although demographic variables had not been proven to correlate significantly with SWB among all ages, according to the hypothesis of this study, we employed hierarchical multiple regression analysis to examine the mechanism of subjective well-being, personality traits and family culture, while controlling for demographics. The 2 components of subjective well-being were dependent variables. The first regression model (Model I) included gender, age, and status of health as independent variables. The second regression model (Model II) included personality traits as additional independent variables. And intellectual-cultural orientation was added in the final regression model (Model III). Details are shown in Tables 2 and 3. Through hierarchical multiple regression analysis, it was shown that after including

personality traits and family culture in the model, all the demographic variables did not have significant influences on either of the components of subjective well-being. Extraversion and intellectual-cultural orientation showed a significant positive correlation with the general emotional index ($b = .478, P < .001$; $b = .122, P < .05$), and neuroticism showed a significant negative correlation with the general emotional index ($b = -.483, P < .001$). Extraversion and intellectual-cultural orientation were positively correlated with life satisfaction ($b = 0.139, P < .05$; $b = 0.176, P < .01$), and neuroticism was negatively correlated with life satisfaction ($b = -0.319, P < .001$).

Moderating Effect Analysis

The past studies indicated that cultural factors serve as a moderating variable between the 2 components of subjective well-being, general emotion index and live satisfaction. But these studies were limited to social cultural, and one purpose of this study is to find out whether the family culture also has such impact on subjective well-being. This study used the factor, intellectual-cultural orientation, as an indicator of family cultural. Then we analyzed the relationship between the 2 components of subjective well-being and the intellectual-cultural orientation factor from family environment characteristics. We treated the intellectual-cultural orientation factor as a moderating variable (M), general emotion index as independent variable (X), and live satisfaction as

Table 3. Hierarchical Multiple Regression Analysis of Live Satisfaction.

Model	Live satisfaction		
	Model I	Model II	Model III
Gender	0.031	0.056	0.054
Age	-0.031	-0.014	-0.027
Health status	-0.165**	-0.039	-0.046
Extraversion		0.185**	0.139*
Neuroticism		-0.328***	-0.319***
Intellectual-cultural orientation			0.176**
R ²	.029	.189	.217
Adjusted R ²	.019	.175	.202

* $P < .05$. ** $P < .01$. *** $P < .001$.

Table 4. Analysis of Moderating Effect of Intellectual-Cultural Orientation Factor.

	Regression equation	R ²	Change of R ²
The first step	$Y=0.208M+0.308X$.187	
The second step	$Y=0.189M+0.298X+0.112MX$.365	.158**

** $P < .01$.

dependent variable (Y). Details were shown in Table 4. Through the moderating effect analysis, we can say that intellectual-cultural orientation factor moderates the relationship of 2 components of subjective well-being (change of $R^2 = .158$, $P < .01$).

Path Analysis

According to the above results, it is known that neuroticism, extraversion and intellectual-cultural orientation are critical predictors for subject well-being, and intellectual-cultural plays a moderating role in the 2 components of subjective well-being. As shown in Figure 1, this study used path analysis to build a model of all these 5 factors to get a better sense of the relationship between them. And from the path analysis, it was known that extraversion has positive effect on general emotion index with path coefficient ($b=0.478$, $P < .001$), and neuroticism has negative effect on general emotion index with path coefficient ($b=-0.483$, $P < .001$). It was also shown that extraversion and neuroticism have indirect effect on live satisfaction with path coefficients 0.142 (0.478×0.298) and -0.144 (-0.483×0.298) respectively. And general emotion index has direct effect on live satisfaction with path coefficient ($b=0.298$, $P < .01$), while the relationship is moderated by intellectual-cultural orientation factor with path coefficient ($b=0.112$, $P < .05$). Total effect is 0.408 and moderating effect is 0.112. The proportion of moderating effect in the total effect is 27.45%. This shows that moderating effect of intellectual-cultural orientation on Chinese college students' subjective well-being exists and is relatively large. We cannot ignore moderating effect of intellectual-cultural orientation.

Discussions

The Relation of Subjective Well-being, Personality Traits, and Family Culture

Through regression analysis, we found out that neuroticism and extraversion are critical predictors for subjective well-being. This is consistent with many internal and overseas studies.^{35,36} In particular, neuroticism has negative correlation with subjective well-being. Neuroticism is not attributable to any known neurological or organic dysfunction, but individuals with higher scores in this dimension mean that they are more impulsive, easier to get insomnia and worried, and have more fluctuations in emotions.⁸ That is probably why higher a person's neuroticism score is, more likely he/she has a lower degree of subjective well-being. In addition, extraversion has positive correlation with subjective well-being.³⁷ That is to say, in general, individuals who are more sociable, more willing to participate in adventures, are likely to have higher level of subjective well-being. These kinds of findings may remind parents and teachers that they should pay extra attentions on those children who are often withdrawn, because those peoples may experience more negative feelings than others.

Intellectual-cultural orientation refers that family members are interested in politics, society, intelligence and cultural activities. High score of intellectual-cultural orientation means that the family members are willing to learn, and care about what happen in the world. This factor also has positive correlation with subjective well-being. From the "Estlin paradox" (status differentiation theory), it can be seen that individuals possess more cultural resources are happier. In addition, the family environment is a part of the children's

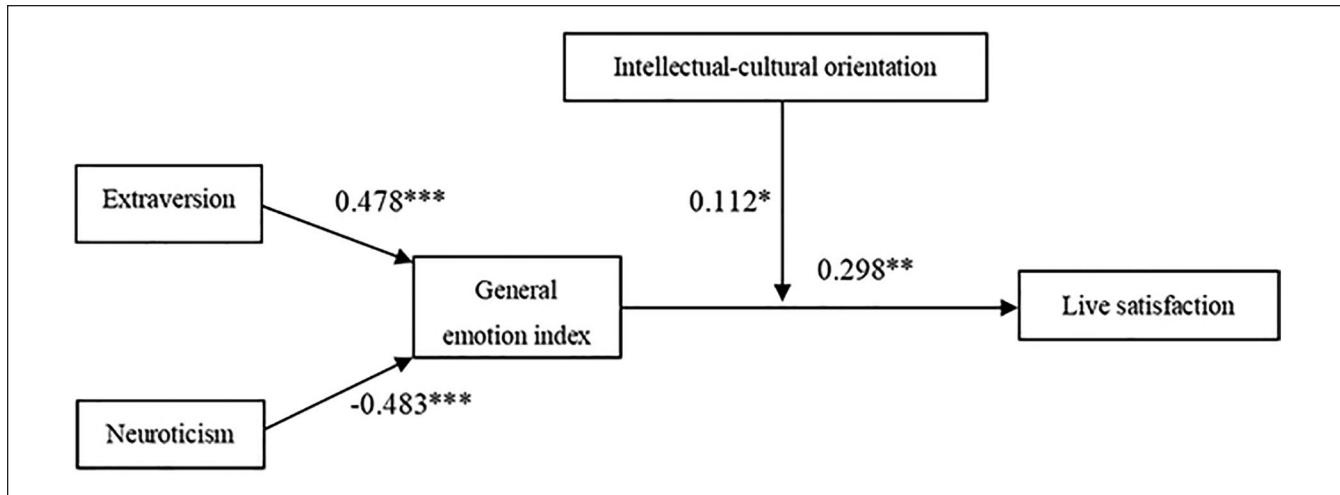


Figure 1. Path analysis of 5 factors.

* $P < .05$. ** $P < .01$. *** $P < .001$.

ecosystem. If the family pays attention to optimize the children's educational environment, it will also help the children to achieve their goals. Studies have shown that the positive relationship between cultural (intellectual) family environment and occupational efficacy is relatively stable. The more family participate in political activities, intellectual and cultural activities, individuals can feel higher sense of efficacy.³⁸ It may be that these families expose their children to many cultural and intellectual activities so that these children feel comfortable in libraries and other settings that house occupational information. However, there are many families that are not characterized as providing an intellectual and cultural environment. Children from disadvantaged backgrounds are more likely to participate in unstructured activities, such as watching TV and so on, and they lack adult guidance and opportunities to pursue competencies. In particular, children of families characterized by an ICO were more likely to participate in cultural/youth groups. Previous research has indicated other positive effects that participation may have on adolescent development including reducing delinquency³⁹ and depression.^{40,41} Serdeva et al⁴² found that family environment is the primary factor determining children's ability to adapt to school. A harmonious family atmosphere with more cultural and recreational activities is conducive to children's development of outgoing, emotionally stable, aggressive, and easy to adapt to the external environment. In other word, one with high subjective well-being is likely from a family that all members spend substantial time in reading and have a better sense about future so they could stay calm and optimistic for most time. This result still can be enlightening since most people go to colleges after 18 years old. They move out their parents' house and get to choose how to make use of their time. During this period, some students are susceptible. If faculties of colleges could cultivate an academic atmosphere in campus and guide students to read and

think, that may help students improve their level of subjective well-being.⁴³

The Moderating Effect of Family Culture as a Supplementary Factor of Social Culture on General Emotional Index and Life Satisfaction

It was demonstrated in this study that intellectual-cultural orientation factor moderates the relationship of general emotion index and live satisfaction. Combined with previous studies, family culture plays the same role as social culture in mediation-moderation model. According to Maslow's theory of human motivation, when basic physiological and safety needs are fulfilled, higher needs become important areas of personal investment, which depend on outside conditions such as familial, economic, political, education, etc. Because people's physiological and safety needs are more often met in wealthy nations, love and esteem needs are more likely to be salient concerns for people in wealthy nations than in poor nations. What's more, predictors of life satisfaction vary across cultures, depending on salient needs and values. Cross-cultural researchers have long recognized that the types of goals that people pursue differ across cultures.⁴⁴ For example, people in collectivistic and poorer countries were more likely to rely on financial satisfaction, social norms, and relationship harmony.⁴⁵ And individualistic societies afford an individual more freedom to choose his or her own life course, so individuals may be more likely to attribute success to themselves and they have more freedom to pursue their goals. Research has found that independent goal pursuit increased the benefit of goal attainment on SWB among European Americans but not among Asian Americans. On the contrary, interdependent goal pursuit (ie, goal pursuit to please parents and friends) increased the benefit of goal

attainment on the SWB of Asian Americans, whereas it did not increase the benefit of goal attainment on the SWB of European Americans.⁴⁶

It can be seen that in different cultures, individuals use different sources to judge life-satisfaction. To the extent that a specific source is important to members of a particular group, it is likely to be used by most members of a group. Most students are influenced by their family. In this case, they are more likely to use family satisfaction if this domain is important to them.^{45,47} The bottom-up approach assumes that life satisfaction is largely due to the experience of life events,⁴⁸ emphasizing that external events play a decisive role in personal happiness and that positive life experiences have a great impact on college students' general life satisfaction.⁴⁹ College students are in a critical period of psychological and physical development, many studies showed that the life satisfaction has a significant relationship with family environment of college students. If parents embrace life more positively and optimistically, and are more willing to interact with their children in the areas of studies, recreational games, and emotional support, it will help children's development of the extroversion personality trait and experience more positive emotions.⁵⁰ Positive emotions not only make people feel good in the present, but also making them healthier and more socially integrated, knowledgeable, effective and resilient, then increase the likelihood that people will feel good in the future.⁵¹ A family living in a more democratic, wealthy, and politically-economically sound social environment is more likely to create such a family environment for children.

In sum, we can see from the above findings that 2 personality traits have approximately same extent but different directions of impacts on both components of subjective well-being. To be specific, general emotion index is influenced more than life satisfaction by personality traits. And general emotion index has direct effect on live satisfaction, while this effect is moderated by the intellectual-cultural orientation. This result proves the hypothesis that family culture as a sub-factor of social culture also has moderating effect on components of subjective well-being. It is evident that focus on the influence of both family environment and personality factors on subjective well-being is necessary.

Limitations

First, the study sample consisted of college students from Guangdong Province in China. The collected data were cross-sectional, but the impact of time and other aspects on subjective well-being should be considered using a longitudinal design. Second, only self-report assessments were used and intellectual-cultural orientation is only one dimension of family cultural differences. In the future, we can deepen the understanding of the causes and consequences of family cultural differences and validate additional dimensions of family cultural differences. Finally, all scales used in this

study were written in English originally and participants are Chinese, so the next possible limitation of the present study pertains to language and translation equivalence. It cannot be taken for granted that all items are equally appropriate for tapping this concept in different nations. However, the items of scales had been translated and by previous Chinese researchers which have been widely and successfully used in previous cross-cultural research. A benefit of using these scales is that it permits clear comparability with previous findings and therefore helps to extend prior work.

Conclusions

- (1) Intellectual-cultural orientation of family environment characteristics and neuroticism and extraversion of personality traits have a significant influence on subjective well-being. Intellectual-cultural orientation as family culture, to represent characteristic of family culture, moderates the relationship between general emotion index and live satisfaction that are the 2 components of subjective well-being.
- (2) The trait of family culture should be considered as a great supplement of the social culture and a critical complementary moderating influenced factor for subjective well-being. Together with personality traits, it can explain the variance of subjective well-being to some extent.
- (3) The family cultural has an important influence on college students' personality and subjective well-being. People with high subjective well-being may have greater social rewards, richer social interactions, and better work outcomes. Subjective well-being can also promote the development of personal social adaptability and interpersonal harmony. Therefore, it is important to provide a high quality family cultural environment for college students.

Author Contributions

Each author has contributed significantly to the work and agreed to the submission.

Declaration of Conflicting Interests

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ORCID iDs

Guangming Li  <https://orcid.org/0000-0002-2526-8682>

Yuelin Wu  <https://orcid.org/0000-0003-2529-0414>

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