



The influence of excessive consumption on residents' family thriving: the roles of intergenerational poverty transmission and educational cognition

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Abstract

Whether excessive consumption triggers the intergenerational transmission of poverty, as well as the role of residents' cognition in family thriving, is still unclear in the literature. By adopting the structural equation model and the hierarchical regression method, we empirically tested the impact of excessive consumption and intergenerational transmission of poverty on the family thriving. We found that: first, the stronger the excessive consumption of Chinese residents are, the less helpful for them to achieve family thriving; the stronger the intra- and inter-generational transmission of poverty of Chinese residents are, the less likely for them to achieve family thriving. Second, excessive consumption reduces residents' demands on family thriving by promoting the degree of intra-generational or inter-generational transmission of poverty. Third, the effect of achieving family thriving by reducing the intra- or inter-intergenerational transmission of poverty is evident in highly education-cognitive people. Our research provides insight into how excessive consumption affects the intergenerational transmission of poverty and the family thriving. It also provides valuable decision support for poverty reduction in public sector.

Keywords Excessive consumption · Intergenerational transmission of poverty · Family thriving · Educational cognition

1 Introduction

In recent years, poverty issues caused by excessive consumption have attracted wide attention. The United Nations General Assembly adopted 17 global Sustainable Development Goals (SDGs) for 2030, including goals of eradicating poverty and achieving prosperity. Besides, China has made resource conservation as a basic national policy and explicitly proposed against excessive consumption. China's consumption economy has shifted from the stage of consumption upgrading to consumption stratification, which may give rise to excessive consumption. According to China's e-commerce statistics, low-income groups are increasingly inclined to overspend. For example, irrational consumption, food waste,

Extended author information available on the last page of the article

and Internet consumer loans are becoming increasingly popular. Poverty caused by excessive consumption has long been a major obstacle to the public sector's efforts to reduce poverty and achieve family thriving.

Excessive consumption refers to consumption beyond the income level, basic needs, and the ability to pay (Yurevich, 2020). Some scholars have related excessive consumption with consumption upgrading and discussed capricious consumption, unhealthy consumption, and excessive consumption as intergenerational results (Calcott and Petkov, 2021). Insufficient awareness of the poverty caused by consumption makes the low and middle-income groups gradually lose the ability to criticize and correct excessive consumption. Besides, excessive consumption hinders the transformation of consumption structure and consumption stratification, which may not help reduce poverty (Herran et al., 2018).

In order to reduce poverty and achieve a family thriving, some scholars have studied the adverse consequences of excessive consumption. The investigation of the consequence of excessive consumption is still mainly carried out from the dimensions of the structure, or individual, and society. Excessive consumption not only has a negative impact on family structure, such as triggering family conflicts, undermining family cohesion, causing generational separation and increasing the poverty dimension of the rural family and family generational crisis, but also on the individual and social dimension, which would be harm to individual psychology, individual behavior and social economics, such as alienation of happiness, cognitive poverty, causing commercial crime, and consumption poverty. Excessive consumption also brings about social factors such as resource consumption, environmental damage and ecological crisis, bubble economy, social injustice, and population poverty (Boström, 2020; Christensen and Averbuch, 2020; Sumarto et al., 2007). However, does excessive consumption lead to the intergenerational transmission of poverty and subsequently make it difficult for residents to achieve family thriving? The question has not been answered in the literature.

It is challenging to achieve family thriving without eliminating the intergenerational transmission of poverty. The sustained development on physical and mental health of low-income families contributes to stopping the development of intergenerational transmission of poverty and promoting family thriving (Kaplan, 2018). Existing studies have explored the impact of the intergenerational transmission of poverty on human skills improvement, income improvement, and increased opportunities from the three levels which are human resources, wealth, and society (Bai et al., 2021). However, few studies have explored whether the governance on intergenerational transmission of poverty can generate family thriving based on the cognitive capital perspective. Cognitive capital is a prerequisite for reducing the intergenerational transmission of poverty, and family thriving is an essential investment in the future for the poor. Some researchers have investigated the critical role of educational cognition. For example, educational cognition increases income (Becker et al., 2019) and leads to success (Ho et al., 2022; Sarnacchiaro et al., 2018). Although these studies imply that education probably plays a positive role in family thriving, the literature does not answer the governance effect of educational cognition in improving the intergenerational transmission of poverty and in family thriving.

It should be emphasized that the intergenerational transmission of poverty includes absolute and relative poverty. China solved the problem of absolute poverty in 2020. Therefore, this study focuses on the intergenerational transmission of relative poverty. We raised the following research questions:

RQ1: Can excessive consumption affect family thriving through the intergenerational transmission of poverty?

RQ2: What is the role of educational cognition in the effect of intergenerational transmission of poverty on family thriving?

This study investigates the impact of excessive consumption and intergenerational transmission of poverty on residents' family thriving from the perspective of relative poverty governance by using structural equations and hierarchical regressions. The contributions of this paper are mainly reflected in the following aspects. First, based on intra- and intergenerational transmission, we innovatively quantified the intergenerational transmission of poverty. Besides, the literature has not revealed the role of intergenerational transmission in overconsumption affecting family thriving. We have put forward a path for Chinese residents to achieve family thriving from the perspective of intergenerational poverty transmission. Furthermore, there is a lack of research on how educational cognition contributes to achieving family thriving in literature. We found that educational cognition has a moderating role in the impact of intergenerational poverty transmission on the residents' thriving. This study is a breakthrough about the study of poverty caused by under-consumption and absolute poverty, which can provide decision support for the public sector on precisely alleviating poverty. This study addresses the problem of intergenerational transmission of relative poverty that is prolific in the post-poverty alleviation era in China, and proposes policy measures for intergenerational transmission of relative poverty with Chinese characteristics and consumption domain specificity.

The remaining parts of this article are the theoretical framework and hypotheses development, followed by research designs, empirical results analysis, and the conclusion and enlightenment.

2 Theoretical framework and hypotheses development

Excessive consumption proposed by Veblen (1953) includes not only the consumption upgrading brought by the improvement of consumption quality but also the conspicuous consumption reflected by the differentiated choices of consumers. Thus, excessive consumption is measured as unreasonable consumption that exceeds objective limits, basic needs, and payment ability and is incompatible with the level of productivity. The essence is the individual's self-control in consuming products with great immediate satisfaction. It is manifested as excessive consumption at three levels: quantitative, qualitative, and emotional.

Family thriving was first proposed by Spreitzer et al. (2005) and refers to the two-way experience of learning and vitality, which together essentially reflect the individual's psychological experience of emotional vitality and cognitive learning during one's growth. In this case, learning refers to the notion that individuals consciously improve their abilities, skills, and knowledge, while vitality refers to the positive state in which individuals can feel energized and enthusiastic. Moreover, family thriving is not an intermittent state, but a continuous process characterized by continuity (Karlina 2019).

Most studies analyze the influencing factors of excessive consumption from macro perspectives such as region and industry. Researchers considered that residents are the decision-makers, and excessive consumption might impact consumption upgrading (Myers et

al., 2015). In addition, some scholars have discussed the social income effect, consumption demonstration effect, and Diderot effect on family consumption structure from the perspective of residents' social capital (Kam et al., 2018). Other scholars have also discussed the micro consumption interaction among residents and its possible connection with family thriving from the perspective of social learning (Contreras et al., 2019).

Consumption stratification theory and positional consumption theory both support the productive function of positive consumption upgrading (Bourdieu 1985). Specifically, consumption stratification theory treats individual or family consumption behavior as a kind of production or reproduction process. It can maximize income utility through consumption and generate satisfaction. As a result, it leads to family thriving. However, excessive consumption satisfies short-term enjoyment while overdrawing future consumption capacity, which is not sustainable family consumption. It is not conducive to the gradual increase of consumption, which will undermine the thriving of the household. According to positional consumption theory, overspending is like a race for consumers, the final winner is awarded with a higher status, respect from people, the opportunity to enter the high-income class, and what the participants need to pay is overconsumption. This will reduce the expected effect of consumption, aggravate the uneven distribution of family income, and is not conducive to the realization of common prosperity for residents. Accordingly, the research hypothesis is proposed.

H1: The stronger the excessive consumption of residents is, the weaker their achievement of family thriving will be.

Relative poverty refers to a state in which an individual or family income can meet food needs but cannot meet other basic living needs. Intergenerational transmission of relative poverty refers to the situation in which poverty is transmitted in relatively low-income families, from parent to offspring or from individual to their spouse.

Intergenerational transmission of poverty manifests the permanent, welfare-dependent poverty from which the poor class cannot escape. Najman et al. (2018) divided intergenerational transmission of poverty into two components: intra- and inter-generational transmission of poverty, and proposed horizontal transmission in which individuals pass on their spouses and vertical transmission in which paternal generations pass on their offspring. Intra-generational transmission of poverty refers to the horizontal situation in which poverty and poverty-causing factors are passed from individuals to other family members, such as their spouses, and lead to the deepening of the family's poverty status. Inter-generational transmission of poverty refers to the continuation of poverty and poverty-causing conditions and factors between generations within a class range or community so that offspring repeat their paternal generation's vertical situation of poverty (Wu et al., 2019).

Intergenerational poverty transmission affects family thriving in multiple ways. The intergenerational transmission of poverty can reduce subjective well-being by influencing residents' class mobility opportunities, awareness of social equity, and social trust, which may lead to continued poverty and will not help to achieve family thriving (Alesina and Angeletos, 2005). From a social mobility perspective, factors such as improved family structure and social resources positively influence the ability of the poor offspring to use the achievable resources, which may also promote their willingness to nurture younger generations, thus contributing to family thriving (Tilahun et al., 2021). From the family productivity perspective, family education, health, nutrition, divorce, neighborhood disadvantage, and social conflict all influence the input of family resources, which are related

to the achievement of family thriving. From a cultural capital perspective, improving the educational attainment of poor paternal generations can prevent the limits of intergenerational transmission of poverty and contribute to the achievement of family thriving. All the appealed studies imply a negative association between intra- or inter-generational transmission of poverty and family thriving. Hence, we proposed the following research hypotheses.

H2a: The stronger the intra-generational transmission of poverty among residents is, the weaker it is for realizing family thriving.

H2b: The stronger the inter-generational transmission of poverty among residents is, the weaker it is for realizing family thriving.

There may be an inherent link between excessive consumption and the intergenerational transmission of poverty. First, some negative consumption culture will lead to the overconsumption of individuals and families, resulting in intergenerational transmission of poverty. Consumer culture of a family is the crucial element that influences the income level of offspring, which affects the offspring's non-cognitive and cognitive abilities and widens the social class gap. Currently, most of the intergenerational transmission of poverty groups in China belong to low- and middle-income groups in relative poverty status, which lack investment in their offspring and have strong consumption preferences. The intergenerational transmission of excessive consumption consciousness causes lower human capital investment in families, which does not help to escape poverty's intergenerational transmission. Second, excessive consumption intensifies the intergenerational transmission of poverty through expenditure-based poverty. Resident consumption increasingly shows a ratchet effect. When excessive consumption and unreasonable expenditure increase, along with the expenditure of investment in education, housing improvement, and disease treatment, expenditure-based poverty is prone to emerge. The increase in non-essential consumption aggravates household poverty, then the intergenerational transmission of poverty occurs. Specifically, the negative attributes of excessive consumption-based poverty lead to increased intra- or inter-generational transmission of poverty (Glass et al., 2017).

Excessive consumption caused by psychological factors is one of the factors that inhibit family thriving. Hedonism, people with a strong sense of individualism, and consumer of impulsiveness caused by time pressure and price incentives, are more likely to shop online, exacerbating the intra-generational transmission of poverty and not contributing to family thriving. In addition, social stress can pose a psychological threat to the residents, and the residents will reduce this stress through large consumption to reduce the psychological threat. This will all exacerbate the inter-generational spread of poverty and hinder family thriving (Yenneti et al., 2017). Hence, we proposed the following research hypotheses.

H3a: The stronger the excessive consumption of residents is, the stronger the intra-generational transmission of poverty will be.

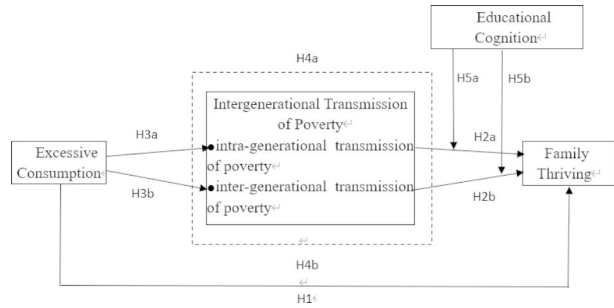
H3b: The stronger the excessive consumption of residents is, the stronger their inter-generational transmission of poverty will be.

H4a: Excessive consumption can negatively affect family thriving through the intra-generational transmission of poverty.

H4b: Excessive consumption can negatively affect family thriving through the inter-generational transmission of poverty.

Education is widely regarded as an important factor in preventing the intergenerational transmission of poverty, which can improve the poor groups' employment rate, income level, and technical skills. However, all of these depend on their cognitive improvement

Fig. 1 Conceptual framework, along with the research hypotheses



(Bird et al., 2010; Kabeer and Mahmud, 2009). Educational-cognitive strategies emphasize poor individuals' vitality, subjectivity, and adaptability in response to a pluralistic society to optimize individual and family development (Hout, 2012). The poor can adapt to different living environments by improving their educational cognition and making positive and reasonable adjustments to difficult situations, which will improve their poor situation and promote the development of their families.

The key to achieving family thriving is improving the poor group's cognitive level. Educational cognition helps to realize family development by enhancing the language cognition, thinking cognition, and cultural cognition of poor groups, which matches the three dimensions of shared language, shared experience and shared vision proposed by Nahapiet and Ghoshal (1998). Educational cognition may also enhance the ability to realize resources and workability. Residents can accumulate the resources needed to grow through their work and help their family spouses get higher work returns, thus improving the progress within the generation and achieving family thriving. Besides, educational cognition is a guarantee for achieving residents' family thriving. Educational cognition may increase the degree of resource concentration and family harmony, and brings strong resilience and adaptability to the offspring and paternal generations to form family cohesion, all contributing to the realization of family thriving. Hence, we proposed the following research hypotheses.

H5a: Educational cognition positively moderates the effect of intra-generational transmission of poverty on family thriving.

H5b: Educational cognition positively moderates the effect of inter-generational transmission of poverty on family thriving.

The conceptual framework is shown in Fig. 1.

3 Research design

3.1 Sample and data

The sample selected for this study was residents with jobs. The electronic questionnaires were distributed in two periods: November 2020 to December 2020 and January 2021 to June 2021. The sample data sources included two categories. One is 100 rural residents from three villages, including Shangzhangzi Village, Hekanzi Township, Lingyuan County, Chaoyang City; Badaoling Village, Fosi Township, Mongol Autonomous County, Fuxin City; and Shixiazi Village, Dayushubao Township, Yixian County, Jinzhou City. The other is 850 working residents of 20 units, including corporate units, institutions, civil service systems,

Table 1 Respondents Profile (N=614)

Category of Respondent		ratio	Category of Respondent		ratio
Education level	Junior high school or below	3%	Age	below 30	21%
	High school	19%		31–40	29%
	Junior college, undergraduate	50%		41–50	31%
	Master and above	28%		51 or above	19%
Gender	male	53%	Years of marriage	below 5	23%
	female	47%		6–10	31%
Number of children	1	92%		11–15	21%
	2	2%		16–20	19%
	3 or above	6%		20 or above	6%

and units of others. The sample data categories included both rural and urban in China, and the regional distribution of the sample data covered the eastern, central, and western regions of China. A Likert scale was used, with scores ranging from 1 (completely disagree) to 5 (completely agree).

We removed those questionnaires that were unmarried and childless. A questionnaire was deleted if all items in the questionnaire scored less than 3. Finally, 614 valid questionnaires were obtained, with a validity rate of 72.2%. The details of the respondents are shown in Table 1.

3.2 Variables selection and the measurement

We adopted the questionnaire items designed by Herziger (2017) to quantify excessive consumption. Referring to the research of Wan (2019) and Greenhaus et al. (2012), we develop the scales of inter-generational poverty transmission and intra-generational transmission. We also referred to the family thriving scale developed by Spreitzer et al. (2005), and the scale developed by Tian et al. (2019) to measure educational cognition. Besides, control variables in the models included gender, age, education level, years of marriage, number of children. The items of key variables are listed in Table 2.

3.3 Methods

In this study, we use SPSS and AMOS software for statistical analysis. First, confirmatory factor analysis is used to verify each variable's discriminant validity. Second, Pearson's correlation analysis describes the correlation between variables. Third, we adopt regression analysis and structural equation models to test our proposed hypotheses. Specifically, mediating effect models are constructed to verify hypotheses H2a, H2b, H3a, H3b, H4a, and H4b, and moderating effect models are used to verify hypotheses H5a, and H5b.

Table 2 Questionnaire items of the key variables**The excessive consumption**

- | | |
|---|---|
| 1. For the last six months, the idea of shopping has interfered with my daily activities. | 4. For the last six months, I have felt stressed and troubled because of impulse shopping or over-buying behavior. |
| 2. For the last six months, I have been unable to resist buying non-essential consumptions that I don't need or can't afford. | 5. In the last six months, some uncontrolled purchases have caused me serious financial difficulties. |
| 3. For the last six months, I have spent too much time shopping, and it's always hard to stop shopping. | 6. In the last six months, my impulsive shopping or over-buying behavior has led to difficulties and troubles in my daily life. |

Intra-generational transmission of poverty

- | | |
|---|--|
| 1. Do you have a spouse (both present and past)? | 3. Which local level is your family's economic status currently in? |
| 2. How do you value your family's income situation when you were single compared to the normal Chinese family at that time? | 4. What do you think are the reasons why individual poverty can be transmitted to household poverty? |

Inter-generational transmission of poverty

- | | |
|---|--|
| 1. How many children do you have (including stepchildren and adopted children)? | 3. Which local level is your family's economic status currently in? |
| 2. How do you value your family's income compared to the normal Chinese family at that time when you were at the age of 15? | 4. What do you think are the reasons why paternal poverty can be transmitted to offspring poverty? |

Family thriving

- | | |
|---|---|
| 1. I will actively seek to learn and understand things in the family. | 6. In the family, I feel very energetic. |
| 2. As time goes by, I have learned more and more in my family. | 7. In the family, I feel full of energy and motivation. |
| 3. I think I have been consistently improving. | 8. In the family, I feel very energetic. |
| 4. In the family, I also do studies. | 9. I can keep a clear conscience and alert mind. |
| 5. I gained individual development in the family. | 10. I always look forward to a bright new day. |

Educational cognition

- | | |
|---|---|
| 1. School is a factory, and the teachers are supervisors. Efficiency comes first. | 12. The education of children now requires more parental effort and involvement. |
| 2. Education does not mean everything, and school education should focus more on the cultivation of children's personal qualities. | 13. I am satisfied that my child is being educated in the school. |
| 3. Virtues are false, scores are real, and nothing is more important than let children achieve good grades in their studies. [R] | 14. The school is meeting my needs now. |
| 4. A person's income is more related to their origin than to their schooling. [R] | 15. Nowadays, although there are many problems with school education, it is generally moving in a good direction. |
| 5. Receiving a school education is the preparation for a child to enter society. | 16. Children's education is very important, so the family is very tired for the children's school. |
| 6. School is to get a diploma, and these days it is important to find a job with a high diploma. | 17. I would sacrifice anything to get my child into a good school. |
| 7. There is an immediate need to increase the proportion of physical education, art, and work technology courses in school education. | 18. It would be nice if the child could transfer to an international or private school. |

Table 2 (continued)**The excessive consumption**

8. Nowadays, education is very fair in schools.	19. There is no big difference between public and private schools, it depends on how well your child can adapt.
9. Schooling must remain a priority in terms of students' grades.	20. I see many parents around me making their children learn this and that, and I am afraid that my children will fall behind.
10. Compared to the time when I was a student, today's schooling is becoming less and less useful. [R]	21. If the national education policy and my own conditions allow, I will choose to home school my children.
11. The schooling I received didn't go very far in helping me later. [R]	

Table 3 Descriptive statistics for primary variables

	Mean Value	Standard Deviation	EXC	IntraGTP	InterGTP	FT	EDC
EXC	3.076	0.955	1				
IntraGTP	2.794	0.418	0.372**	1			
InterGTP	2.908	0.426	0.306**	0.480**	1		
FT	3.533	0.596	-0.151*	-0.181*	-0.322**	1	
EDC	2.982	0.387	-0.331**	-0.307**	-0.277**	0.269**	1

Note: ** $P < 0.01$, * $P < 0.05$

4 Result of data analysis

4.1 Reliability and validity analysis

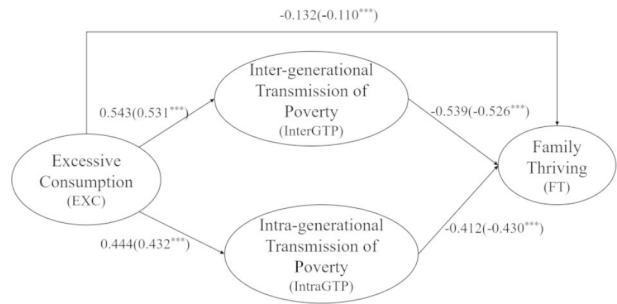
In this study, we used Cronbach's α coefficient to measure the reliability of the questionnaires. The Cronbach α values of excessive consumption (EXC), family thriving (FT), intra-generational transmission of poverty (IntraGTP), inter-generational transmission of poverty (InterGTP), educational cognition (EDC) are 0.945, 0.871, 0.899, 0.823 and 0.703, respectively. These Cronbach α values are greater than 0.7, reaching an acceptable level of reliability.

In order to test the discrimination validity of variables, we used the confirmatory factor analysis method of AMOS17.0. We test the discrimination validity of variables such as EXC, IntraGTP, InterGTP, FT, and EDC, and then compare the fit index with the alternative models. The result shows that the five-factor model (EXC, IntraGTP, InterGTP, FT, EDC) fits well. Among them, $\chi^2 = 211.08$, $df = 91$, $\chi^2/df = 2.32$ meets the requirements of less than the maximum acceptable level of 2.5; $GFI = 0.994$, $IFI = 0.997$, $NFI = 0.993$, $CFI = 0.997$, meets the requirements of larger than the acceptable level of 0.9; $RMSEA$ is 0.033, meets the requirements of less than the maximum acceptable level of 0.08. It is better than other alternative models and shows good discriminant validity between variables.

4.2 Correlation analysis

Table 3 indicates the variables' average, standard deviation, and correlation coefficient. The table shows that EXC is significantly positively correlated with the IntraGTP and InterGTP

Fig. 2 Findings of the direct effect and the mediating effect
 Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; Numerical values outside the brackets are the standardized regression coefficients, and inside the brackets are the nonstandard regression coefficients



($r=0.372$, $r=0.306$), and it is negatively correlated with FT and EDC ($r=-0.151$, $r=-0.331$). IntraGTP is positively correlated with InterGTP ($r=0.480$), and is negatively correlated with FT and EDC ($r=-0.181$, $r=-0.307$). InterGTP is negatively correlated with FT and EDC ($r=-0.322$, $r=-0.277$); FT is significantly positively correlated with EDC ($r=0.269$).

4.3 Analysis of the direct effect and the mediating effect

We construct a structural model of the direct influence of EXC on FT to test the H1. According to the data fitting indicators standards, the data as follows $X^2/df=2.301$, $GFI=0.926$, $IFI=0.959$, $NFI=0.9369$, $CFI=0.905$, $RMSEA=0.062$, are all reaching the recommended level. Furthermore, Fig. 2 shows the specific value of the direct effect of EXC on FT. The standardized path coefficient is -0.110, statistically significant at the 0.001 level. Therefore, the empirical results support H1. It is tenable that the stronger the excessive consumption of residents is, the weaker their achievement of family thriving will be.

We introduce two variables, IntraGTP and InterGTP, into the mediating structural equation to explore the mediating effect of EXC on FT, and test H2a, H2b, H3a, H3b, H4a, and H4b. According to the data fitting indicators standards, the following data $X^2/df=2.458$, $GFI=0.912$, $IFI=0.911$, $NFI=0.938$, $CFI=0.924$, $RMSEA=0.077$, all meets the recommended level.

Furthermore, Fig. 2 indicates that the IntraGTP partially mediates between EXC and FT. Before introducing the IntraGTP, the direct effect test shows that the coefficient of EXC is -0.110. After introducing the IntraGTP, it has been verified that EXC has a significant positive impact on the IntraGTP for the coefficient is 0.543. The IntraGTP significantly negatively impacts FT since the coefficient is -0.539. The EXC has a significant negative impact on FT, and the coefficient is -0.132, significantly lower than before the IntraGTP was not introduced. Therefore, the IntraGTP plays a partial mediating role. The empirical results support H2a, H3a, and H4a.

Secondly, InterGTP plays a partial mediating effect on the relationship between EXC and FT. Before introducing the InterGTP, the direct effect was statistically significant, and the coefficient is -0.110. After introducing the InterGTP, it has been verified that EXC has a significant positive impact on the InterGTP, which a coefficient is 0.444. The InterGTP significantly negatively impacts FT, for the coefficient is -0.412. At the same time, the EXC negatively impacts FT, for the coefficient is -0.132. The coefficient value is reduced when not introducing the InterGTP into the structural equation. Therefore, the InterGTP has a partial mediating effect. In summary, empirical results support H2b, H3b, and H4b.

Table 4 IntraGTP and FT: test results of the mediating effect of EDC

Variable	FT			
	M1	M2	M3	M4
Control Variable				
SEX	0.434*** (P<0.001)	-0.299*** (P<0.001)	-0.388*** (P<0.001)	-0.390*** (P<0.001)
AGE	0.068 (P>0.05)	0.013 (P>0.05)	0.182* (P<0.05)	0.016 (P>0.05)
EDU	0.467*** (P<0.001)	0.145* (P<0.05)	0.112* (P<0.05)	0.112* (P<0.05)
MAR	0.182** (P<0.01)	0.185* (P<0.05)	0.198** (P<0.01)	0.194** (P<0.01)
CHI	0.180** (P<0.01)	-0.012 (P>0.05)	-0.036 (P>0.05)	-0.072 (P>0.05)
Main Effect				
IntraGTP		-0.295** (P<0.01)	-0.270** (P<0.01)	-0.444*** (P<0.001)
EDC			0.330*** (P<0.001)	0.396*** (P<0.001)
Moderating Effect				
IntraGTP*EDC				0.350*** (P<0.001)
R ²	0.121	0.194	0.232	0.334
ΔR^2	0.121	0.073	0.038	0.102
ΔF	16.751	8.833	33.545	9.582
F	16.751***	9.221***	13.120***	11.689***

Note: *P<0.05, **P<0.01,
***P<0.001(Test of two-tailed)

4.4 Analysis of moderating effect

4.4.1 Analysis of the moderating effect of educational cognition on IntraGTP

As shown in Table 4, Regression M2 and Regression M3 indicate the test results of the main effects (D'Ambra et al., 2021). In Regression M2, the coefficient of IntraGTP is -0.295 ($p<0.01$), and it represents that for each additional unit of IntraGTP, the FT will decrease by 0.295 units. In Regression M3, the coefficient of IntraGTP is -0.270 ($p<0.01$), meaning that for each unit addition in the IntraGTP, the FT will decrease by 0.270 units. The moderating variable, the EDC, has a significant positive impact on FT and its coefficient is 0.330 ($p<0.001$), which means that for each additional unit of EDC, FT will increase by 0.330 units.

In Regression M4, the independent variable, IntraGTP, significantly negatively affects FT which is the dependent variable, and the coefficient of the IntraGTP is -0.444 ($p<0.001$), meaning that with each unit adding in the IntraGTP, the FT will decrease by 0.444 units. The moderating variable, the EDC, has a significant positive impact on the FT which is the dependent variable, and the coefficient of EDC is 0.396 ($p<0.001$), representing that for each additional unit of EDC, FT will change positively by 0.396 units. The product coefficient of IntraGTP and EDC (IntraGTP*EDC) has a significant positive impact on the FT and the coefficient of IntraGTP*EDC is 0.350 ($p<0.001$), indicating that for each additional unit of IntraGTP*EDC, the FT will increase by 0.350 units.

Table 5 InterGTP and FT: test results of the mediating effect of EDC

Variable	FT			
	M1	M5	M6	M7
Control Variable				
SEX	0.434*** (P<0.001)	0.440*** (P<0.001)	0.452*** (P<0.001)	0.434*** (P<0.001)
AGE	0.068 (P>0.05)	0.066 (P>0.05)	0.035 (P>0.05)	0.032 (P>0.05)
EDU	0.467*** (P<0.001)	0.481*** (P<0.001)	0.434** (P<0.01)	0.423** (P<0.01)
MAR	0.182** (P<0.01)	0.180** (P<0.01)	0.199** (P<0.01)	0.094* (P<0.05)
CHI	0.180** (P<0.01)	0.183** (P<0.01)	0.140* (P<0.05)	0.091* (P<0.05)
Main Effect				
InterGTP		-0.487*** (P<0.001)	-0.490*** (P<0.001)	-0.493*** (P<0.001)
EDC			0.414*** (P<0.001)	0.503*** (P<0.001)
Moderating Effect				
InterGTP*EDC				0.265** (P<0.01)
R ²	0.121	0.226	0.289	0.394
ΔR^2	0.121	0.105	0.063	0.105
ΔF	16.751	14.598	20.220	18.204
F	16.751***	12.488***	47.277***	13.504***

Note:

* $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$
(Test of two-tailed)

Therefore, if residents have different educational cognition levels, the degree to which the IntraGTP among different residents affects FT is also different. We conclude that the empirical results support H5a. Thus, it is tenable that educational cognition plays a positive moderating role in the intra-generational transmission of residential poverty on family thriving.

4.4.2 Analysis of the moderating effect of educational cognition on InterGTP

As shown in Table 5, Regression M5 and Regression M6 indicate the test results of the main effects. In M5, the InterGTP has a significant negative impact on FT, and the coefficient of interGTP is -0.487 ($p < 0.001$), which means that for each unit adding in the InterGTP, the FT will decrease by 0.487 units.

In M6, the InterGTP significantly negatively affects FT; its coefficient is -0.490 ($p < 0.001$), representing that for each additional unit in the interGTP, FT will decrease by 0.490 units. The moderating variable, the EDC, has a significant positive impact on FT, and the coefficient of EDC is 0.414 ($p < 0.001$), which means that for each unit adding in the educational cognition, the family thriving will increase by 0.414 units.

In M7, the InterGTP has a significant negative association with FT, and the coefficient of the InterGTP is -0.493 ($p < 0.001$), representing that for each unit adding in the InterGTP, the FT will decrease by 0.493 units. The moderating variable, the EDC, has a significant positive impact on FT, and the coefficient of EDC is 0.503 ($p < 0.001$), representing that for each

additional unit in EDC, FT will increase by 0.503 units. The product of InterGTP and EDC (InterGTP*EDC) has a significant positive impact on FT, which is the dependent variable. The regression coefficient of InterGTP*EDC is 0.265 ($p < 0.01$), which means that for each unit adding in InterGTP*EDC, FT will increase by 0.265 units.

Therefore, if residents have different levels of educational cognition, the extent to which intergenerational transmission of poverty affects family thriving varies across residents. We conclude that the empirical results support H5b. Thus, it is tenable that educational cognition plays a positive moderating role in the inter-generational transmission of residential poverty on family thriving.

5 Conclusion and enlightenments

5.1 Conclusion

By developing the research hypotheses, the research questions are answered by the empirical test. We concluded three findings. First, for Chinese residents, the stronger the excessive consumption they make, the less likely they will achieve the family thriving. The greater the intra- and inter-generational transmission of poverty is, the less likely it is for the residents to achieve family thriving. Second, we found that residents' excessive consumption reduces people's demand for family thriving by increasing their intra- and inter-generational transmission of poverty. In addition, the effect of intergenerational transmission of poverty on family thriving is influenced by the moderating role of educational cognition. We also found that the effect of reducing intra-and inter-generation transmission of poverty on achieving family thriving was stronger among higher education cognitive residents.

5.2 Enlightenment for poverty reduction in the public sector

First, cognitive education is required to change the mindset of those suffering from poverty caused by excessive consumption. On the one hand, the government should analyze the reasons for the emergence of over-consumption poverty among Chinese residents while experiencing consumption optimization and upgrading. The government should take targeted measures to help them realize the harm of excessive consumption. On the other hand, the cognitive load of the victims of excessive consumption should be reduced, and their attention in the face of economic difficulties should be enhanced to avoid the effect of other external stimuli. Furthermore, the beliefs and abilities of the poor residents to escape from poverty productively should be cultivated. In addition, publicity on moderate consumption should be intensified to enhance residents' ability to make reasonable consumption arrangements, achieve money-consumption matching, and escape poverty (D'Urso et al., 2020).

Second, we recommend that public sectors strengthen education training to improve the family development capacity of victims of excessive consumption. On the one hand, the government should enhance the poverty victims' ability to seize jobs by optimizing their educational environment and raising their educational cognition levels. On the other hand, the government should expand the poverty alleviation team to conduct personalized and targeted training, especially on entrepreneurship with science and technology assistants.

Third, we suggest the government improve the risk assessment mechanism for the excessive consumption poverty victims, and improve their cognitive ability on consumption risk. In addition, the government should strengthen the regulation of the products and businesses of e-commerce and fintech companies to provide a healthy consumer environment for those who overconsume and lead to poverty. Unlike poverty caused by a lack of income, poverty caused by excessive consumption has the specificity of psychological reactions. Raising attention to the psychological diseases of the excessive consumption victims is essential. Therefore, it is necessary to invite community workers, experts, or volunteers to conduct regular psychological counseling services for such poor groups and help them regain a positive, tolerant, and open psychological statement. This movement may tap their motivation to get rid of poverty from the consciousness, enhance the vitality of residents and achieve family thriving.

5.3 Limitations and future research directions

First, in future studies, if the subdivided dimensional categories of family thriving are used as variables, these results will serve the exploration of intergenerational transmission of poverty intervention factors in a more detailed way. Second, significant emergencies deeply affect the intergenerational transmission of poverty caused by excessive consumption. If we take this variable into account in future studies, it will provide a new perspective. Moreover, according to the structure of excessive consumption residents, it includes rural residents and urban residents. We have not considered this sort of separation when we do the research. However, they are essential subject variables that affect the relative poverty governance in the stage of rural revitalization in China. We did not analyze cognitive factors other than educational cognition; the other factors can be further investigated.

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