

## How Chinese children' s filial piety beliefs affect their parents' life satisfaction and loneliness (Post-print)

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### Abstract

Guided by the dual filial piety model and socioemotional selectivity theory, this study explores the underlying mechanism of how adult children' s filial piety beliefs affect their parent' s life satisfaction and loneliness. A total of 350 pairs of parent-child data were collected through a parent-child pair design. Results show that emotional support provided by adult children and emotional support perceived by parents fully mediated the relationship between children' s reciprocal filial piety belief and parents' life satisfaction ( $\beta = 0.048$ , 95% CI: 0.021, 0.081) and loneliness ( $\beta = -0.050$ , 95% CI: -0.083, -0.024), and partially mediated the relationship between children' s authoritarian filial piety belief and parental life satisfaction ( $\beta = 0.028$ , 95% CI: 0.010, 0.051) and loneliness ( $\beta = -0.030$ , 95% CI: -0.053, -0.015). This finding suggests that to improve parental well-being, adult Chinese children should not only cultivate their filial piety, but also pay close attention to their parents' emotional needs.

### Full Text

#### Preamble

#### **Filial Piety, Life Satisfaction, and Loneliness: How Chinese Children' s Filial Piety Beliefs Affect Their Parents' Life Satisfaction and Loneliness**

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#### Abstract

Filial piety (or xiao) is a unique aspect of Chinese culture that affects older adults' life satisfaction and loneliness. Guided by the dual filial piety model

and socioemotional selectivity theory, this study explores how adult children's filial piety beliefs influence their parents' life satisfaction and loneliness. A total of 350 parent-child dyads were collected through a paired design. Results show that emotional support provided by adult children and emotional support perceived by parents (i.e., the transmission of emotional support) fully mediated the relationship between children's reciprocal filial piety belief and parents' life satisfaction and loneliness, and partially mediated the relationship between children's authoritarian filial piety belief and parents' life satisfaction and loneliness. However, instrumental support provided by adult children and instrumental support perceived by parents (i.e., the transmission of instrumental support) did not play such mediating roles. This finding suggests that to improve parental well-being, adult Chinese children should cultivate their filial piety and pay close attention to their parents' emotional needs.

**Keywords:** filial piety, life satisfaction, loneliness, instrumental support, emotional support

## Introduction

Aging is sweeping the world, and China has the largest number of older adults and the fastest growth rate of aging population globally [?]. By 2050, the population aged 65 and older in China is projected to reach nearly 380 million [?]. Consequently, factors affecting the subjective well-being of older adults have attracted scholarly attention [?, ?]. Life satisfaction and loneliness are two commonly used indicators for evaluating older adults' well-being.

Life satisfaction represents a subjective expression of quality of life [?] and is positively associated with mental health, quality of life, and well-being in older adults [?, ?, ?]. Loneliness is defined as a state of emotional distress and perceived social isolation [?] that is negatively correlated with older adults' well-being [?, ?]. Therefore, enhancing life satisfaction and reducing loneliness among older adults hold important practical significance in an aging society.

For older adults in China, filial piety (or xiao) is considered a unique factor influencing life satisfaction [?, ?] and loneliness [?, ?]. Rooted in traditional Chinese Confucian culture, filial piety represents an important virtue and responsibility in the parent-child relationship [?] and shapes the structure and form of Chinese families [?]. It prescribes how children should treat their parents. In the Chinese context of family interdependence, filial piety plays an essential role in Chinese social and psychological adaptation, including life satisfaction [?, ?], happiness [?], and family cohesion [?]. Extensive research has shown that individuals' filial piety beliefs are strongly associated with higher life satisfaction and lower loneliness [?, ?].

However, previous studies have mainly focused on how respondents' own filial piety beliefs affect their life satisfaction and loneliness [?, ?, ?], with less attention paid to how children's filial piety beliefs contribute to their parents' successful aging [?]. As the basic family support unit in China, adult children

are the primary avenue through which parents acquire resources [?]. Adult children often provide various forms of social support to their parents, affecting their aging experience [?]. Therefore, this study explores how adult children's filial piety beliefs affect the level of social support they provide to their parents and how this support is perceived by and influences parents' life satisfaction and loneliness.

## Theoretical Framework

### Dual Filial Piety Model

Though originating from traditional Chinese Confucian culture, filial piety is no longer a purely Chinese notion but rather a psychological concept focusing on parent-child relations [?]. Yeh and Bedford [?] proposed the dual filial piety model (DFPM), comprising reciprocal and authoritarian filial piety, suggesting that filial piety encompasses two distinct aspects that differ in connotation, nature, and operational function. Beliefs and behaviors about reciprocal filial piety are motivated by gratitude for parents' sacrifice and characterized as intimate, reciprocal, and natural, representing genuine appreciation that children have toward parents who nurtured them [?]. Authoritarian filial piety takes hierarchical ranking of authority and cultural norms as prototypes, accentuating children's respect for and obedience to their parents [?, ?].

Although differences exist between the two, both reciprocal and authoritarian filial piety emphasize that adult children are expected to care for their parents physically and emotionally to repay the labor and love given during their upbringing [?]. Therefore, the more children agree with filial piety values, the more they will do to meet parents' needs and expectations and ensure them a happy, high-quality life [?].

Previous studies have found that children's reciprocal filial piety belief helps reduce conflicts with parents and maintain harmonious parent-child relationships [?, ?], while children's authoritarian filial piety belief is closely associated with respect and obedience, extending their effort to meet parents' filial expectations [?]. These findings suggest that both forms of filial piety could enhance parents' life satisfaction and reduce their loneliness [?, ?]. A study using a parent-child dyad design found that children with high filial piety beliefs predicted high levels of their parents' subjective well-being [?]. Based on the DFPM, this study proposes Hypothesis 1: Both forms of filial piety in adult children positively predict parents' life satisfaction and negatively predict parents' loneliness.

### The Role of Adult Children's Social Support in Parents' Life Satisfaction and Loneliness

Social support refers to supportive resources individuals obtain through a network of mutual assistance [?]. According to socioemotional selectivity theory, social support networks decline normatively in later life [?]. Due to feelings regarding limited time, older adults selectively seek social support from intimate

partners and invest heavily in emotionally meaningful activities to maximize well-being. Compared with other social members, adult children are the closest to their parents and represent essential sources of instrumental support, caregiving, and affective bonding [?]. Therefore, social support from adult children extensively influences parents' daily lives, loneliness, and quality of life [?, ?].

Previous studies have found that perceived social support is associated with higher life satisfaction and lower loneliness in older adults [?, ?, ?]. However, social support is a comprehensive concept that can be divided into instrumental and emotional support [?]. Instrumental support refers to tangible assistance, such as providing living expenses and housework, while emotional support emphasizes satisfying emotional needs, including expressing comfort, listening, and communicating [?, ?]. Different support types may have different relationships with well-being [?]. Receiving instrumental support is related to loss of autonomy and increasing dependence, potentially decreasing well-being [?], whereas emotional support is associated with higher well-being [?]. Studies have shown that emotional support is more effective at reducing loneliness and increasing well-being than instrumental support [?, ?]. However, these studies mainly focused on how individuals' perceived instrumental and emotional support affected their own well-being, leaving unclear whether adult children's instrumental and emotional support equally affect their parents' life satisfaction and loneliness.

### **Adult Children' s Filial Piety and Social Support to Parents**

Can adult children' s reciprocal and authoritarian filial piety beliefs predict their instrumental and emotional support to parents? Research suggests yes, but results are inconsistent. Yeh et al. [?] proposed that reciprocal filial piety emphasizes offspring' s repayment of parental investment. Chinese adults with greater reciprocal filial piety tend to provide more instrumental and emotional support, predicting higher frequencies of giving money, doing housework, and satisfying emotional concerns [?]. However, authoritarian filial piety entails complying with parents' wishes and obeying their absolute authority [?], predicting only behaviors with mandatory attributes, such as giving alimony and caring for sick parents [?].

Other researchers suggest that reciprocal filial piety motivation arises from deep emotional connection, whereas authoritarian filial piety motivation stems from social and moral responsibility [?, ?]. These authors found that children' s reciprocal filial piety predicted higher emotional support, while authoritarian filial piety predicted financial or material support. Although studies show inconsistent results, the core of filial piety requires children to prioritize parents' needs and bear caregiving obligations [?]. Therefore, we assume that both forms of adult children' s filial piety beliefs predict higher instrumental and emotional support to parents.

## The Influence of Filial Piety on Life Satisfaction and Loneliness via Social Support

According to the DFPM, adult children's filial piety beliefs affect filial behaviors, typically manifested in providing social support [?, ?]. Previous studies have found that parents' perceived social support mediates the influence of children's perceived filial piety on parents' life satisfaction and loneliness [?, ?, ?]. Regarding how children's social support affects parents' outcomes, two possibilities exist. First, according to the main effect model, increasing social support directly improves mental health [?], suggesting children's social support may directly increase parents' life satisfaction and decrease loneliness. Second, the DFPM indicates filial piety is a psychological concept emphasizing operating mechanisms between parents and children [?], suggesting children's social support may affect parents' well-being depending on whether parents perceive that support. In other words, children's social support may influence parents' life satisfaction and loneliness via parents' perception of support.

### The Present Study

Although previous studies show filial piety beliefs predict higher life satisfaction and lower loneliness, two limitations remain. First, most studies rely on unilateral data from either children [?, ?] or parents [?, ?], potentially producing common method variance bias where predictive and outcome variables from the same sample overestimate shared variance. Second, previous studies mostly explored how children's filial piety affects their own well-being rather than extending to parents' life satisfaction and loneliness. This study proposes social support as a bridge connecting these parties.

Therefore, we propose serial mediating roles of support provided by children and support perceived by parents in the relationship between children's filial piety beliefs and parents' life satisfaction and loneliness. Using a parent-child dyad design, we investigated adult children's filial piety beliefs and their parents' life satisfaction and loneliness. Notably, adult children rated their frequency of providing social support, while parents evaluated their perceived frequency. We propose the following hypotheses:

**Hypothesis 2:** The instrumental support provided by children and instrumental support perceived by parents play serial mediating roles in the relationship between children's filial piety beliefs and parents' life satisfaction and loneliness.

**Hypothesis 3:** The emotional support provided by children and emotional support perceived by parents play serial mediating roles in the relationship between children's filial piety beliefs and parents' life satisfaction and loneliness.

## Method

### Participants

Participants could opt out of the survey. This study did not elicit adverse physiological or psychological reactions but only measured simple behavioral responses. Therefore, the Ethics Committee of the School of Psychology at Fujian Normal University waived the requirement for written informed consent and approved the study. We employed college students to collect data during summer vacation from seven Chinese cities: Fuzhou, Putian, Taiyuan, Tongren, Xiamen, Yangquan, and Zhumadian. Students first collected data using convenience sampling, then asked participants to take a paired questionnaire home for their father or mother (or one of their children) to complete. Participants were instructed to have the matched family member complete their questionnaire.

Older adults who could not complete questionnaires independently did so with guidance from college students or their children. A total of 430 paired questionnaires were collected. We screened valid dyads using these criteria: (1) no contradictory answers (e.g., reporting “widowed” marital status but “living with spouse and children” living arrangement, or child reporting “living only with parents” while parent reported “living only with spouse”); (2) missing less than 20% of items; (3) no obvious signs of proxy responding (e.g., child and parent giving identical answers on the same scale); and (4) no response patterns (e.g., selecting the same option for ten or more consecutive items). Eighty dyads were excluded, yielding an effective rate of 81.4%.

The adult children sample ( $N = 350$ ) had a mean age of 39.00 years ( $SD = 7.56$ ; range = 20–58); 52.9% were male, 82.3% were married, and 17.7% were widowed, divorced, or unmarried. Approximately 44.0% had junior high school education, and 56.0% had senior high school or above; 67.4% had monthly income of 5,000 yuan or less, while 32.0% earned more than 5,000 yuan.

The parent sample had a mean age of 67.62 years ( $SD = 7.47$ ; range = 44–91); 44.6% were male, 78.9% were married, and 19.7% were widowed or divorced. Approximately 28.3% had primary school education or below, 32.9% had junior high school, and 38.9% had senior high school or above; 46.0% had monthly income of 5,000 yuan or less, while 54.0% earned more than 5,000 yuan.

### Measures

**Filial Piety.** Adult children’s filial piety was measured with the 16-item Dual Filial Piety Scale (DFPS; [?]). This 6-point Likert scale (1 = extremely unimportant, 6 = extremely important) includes eight items each for reciprocal filial piety (e.g., “Supporting parents makes their lives more comfortable”) and authoritarian filial piety (e.g., “No matter what my parent asks, I do it immediately”). Subscale scores range from 8 to 48, with higher scores indicating stronger filial piety beliefs. Cronbach’s alpha coefficients were .844 for reciprocal and .772 for authoritarian filial piety.

**Support Provided by Adult Children and Support Perceived by Parents.** Two self-designed questionnaires measured intergenerational support: the Support Provided by Adult Children scale and Support Perceived by Parents scale (reliability and validity details are in Supporting Information 1). The Support Provided by Adult Children scale comprised 10 items (six instrumental, four emotional) rated by children on a 5-point frequency scale (0 = none, 4 = always), with higher scores indicating more support provided. Cronbach' s alpha coefficients were .795 for instrumental and .831 for emotional support.

The Support Perceived by Parents scale also contained 10 corresponding items (six instrumental, four emotional) rated by parents on the same 5-point scale, with higher scores indicating more support perceived. Cronbach' s alpha coefficients were .776 for instrumental and .872 for emotional support.

**Life Satisfaction.** Parents' life satisfaction was assessed with the 5-item Satisfaction with Life Scale (SWLS; [?]). Participants rated agreement with items such as "In most ways, my life is close to my ideal" on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). Higher scores indicate greater life satisfaction ( $\alpha = .871$ ).

**Loneliness.** Parental loneliness was measured with the 3-item UCLA Loneliness Scale [?], which asks: (1) How often do you feel you lack companionship? (2) How often do you feel left out? (3) How often do you feel isolated from others? Response options are: (1) Hardly ever, (2) Some of the time, (3) Often. Scores range from 3 to 9, with higher scores indicating stronger loneliness ( $\alpha = .807$ ).

## Data Analysis

SPSS 22.0 was used for preliminary data sorting, correlation analysis, and reliability testing. Structural equation modeling was conducted with M-plus 8.0 to test the hypothesized model. Mediation effects were tested using a two-step procedure [?]. First, confirmatory factor analysis assessed the measurement model' s goodness-of-fit. Second, structural equation modeling evaluated whether research hypotheses were supported. Model fit was evaluated using multiple indices [?]: chi-squared statistic ( $\chi^2$ ), root mean square error of approximation (RMSEA), comparative fit index (CFI), and Tucker-Lewis index (TLI). CFI and TLI  $> .900$  and RMSEA  $< .080$  indicated acceptable fit [?]. Finally, a bootstrap test with 2,000 resamples examined indirect effects; 95% confidence intervals excluding zero indicated significant mediation [?].

## Results

### Descriptive Statistics and Correlation Analysis

Descriptive statistics and correlations are presented in Table 2 . Adult children' s higher reciprocal and authoritarian filial piety beliefs correlated with more instrumental and emotional support provided, more instrumental and emotional

support perceived by parents, and parents' higher life satisfaction. Both filial piety forms were significantly related to parents' lower loneliness. Additionally, children' s instrumental and emotional support predicted parents' perceived support. However, emotional support (but not instrumental support) provided by adult children was associated with parents' higher life satisfaction and lower loneliness. Both instrumental and emotional support perceived by parents were associated with their higher life satisfaction and lower loneliness.

### **Total Effects of Children' s Filial Piety on Parents' Life Satisfaction and Loneliness**

First, direct path coefficients from predictors (reciprocal or authoritarian filial piety) to criteria (life satisfaction or loneliness) without mediators were tested. This model fit well:  $\chi^2/df = 1.538$ , CFI = .978, TLI = .994, RMSEA = .039, SRMR = .033. Results indicated significant total effects of reciprocal and authoritarian filial piety on life satisfaction ( $\beta = .144$ ,  $p = .007$  for reciprocal;  $\beta = .190$ ,  $p < .001$  for authoritarian) and loneliness ( $\beta = -.137$ ,  $p = .010$  for reciprocal;  $\beta = -.203$ ,  $p < .001$  for authoritarian).

### **Serial Mediating Effects of Support Provided and Perceived**

Multiple serial mediation models tested whether support provided by adult children and support perceived by parents mediated relationships between filial piety and parents' life satisfaction/loneliness (see Figure 1 [Figure 1: see original paper]). Demographic variables (gender, age, marital status, education, income) for both children and parents were controlled. The model fit well:  $\chi^2/df = 1.882$ , CFI = .936, TLI = .907, RMSEA = .051, SRMR = .063. Results showed that children' s filial piety affected parents' outcomes only via serial mediating effects of emotional support provided and perceived. [Figure 1: see original paper]

A bootstrapping procedure examined mediating effects (see Table 3 ). Emotional support provided and perceived fully mediated relationships between reciprocal filial piety and parents' life satisfaction ( $\beta = .045$ , 95% CI: .020, .080) and loneliness ( $\beta = -.048$ , 95% CI: -.080, -.023). These variables partially mediated relationships between authoritarian filial piety and parents' life satisfaction ( $\beta = .030$ , 95% CI: .012, .055) and loneliness ( $\beta = -.032$ , 95% CI: -.055, -.015).

## **Discussion**

This study examined how children' s filial piety beliefs influence parents' life satisfaction and loneliness using a parent-child dyad design. Results show that: (1) children' s reciprocal and authoritarian filial piety beliefs predicted parents' higher life satisfaction and lower loneliness, though only authoritarian filial piety showed significant direct effects in the mediation model; (2) emotional support provided by children and perceived by parents fully mediated the relationship between reciprocal filial piety and parents' outcomes, and partially mediated the relationship between authoritarian filial piety and parents' outcomes; and

(3) instrumental support provided and perceived did not mediate these relationships.

In the mediation model, children's authoritarian (but not reciprocal) filial piety directly predicted parents' higher life satisfaction and lower loneliness, partially supporting H1. This provides further empirical evidence for the DFPM, demonstrating different operational functions for each filial piety type. Previous research indicates that filial piety concepts change with society [?], with different generations holding different understandings of children's duties. Authoritarian (but not reciprocal) filial piety aligns more closely with older adults' expectations [?, ?], consistent with traditional Chinese cultural values emphasizing absolute obedience to parents. This expectation is reflected in childrearing practices, with many Chinese parents wishing their children to abide by their opinions and obey their authority [?, ?]. Therefore, children's authoritarian filial piety predicted parents' outcomes, explaining why emotional support transmission fully mediated reciprocal filial piety's effects but only partially mediated authoritarian filial piety's effects.

Children with higher reciprocal filial piety provided more instrumental and emotional support, whereas authoritarian filial piety predicted only more emotional support. Previous research investigating three support types—financial support, housework/daily care, and emotional concern—consistently found reciprocal filial piety predicted emotional concern but not authoritarian filial piety [?, ?, ?, ?]. Results for financial and housework support were mixed, with only one study [?] finding reciprocal filial piety predicted these behaviors, while three others found authoritarian filial piety predicted only financial support. The present study used more comprehensive indicators (four instrumental and six emotional support items), yielding more stable results. Additionally, previous data were collected in 2006 and may not reflect contemporary young people's filial piety-support relationships. However, further research is needed to explore how different filial piety beliefs influence instrumental and emotional support provision.

This study also found that children's instrumental and emotional support did not directly predict parents' outcomes. No previous research has examined whether children's self-rated support affects parent-rated life satisfaction and loneliness. Prior studies typically investigated parents' perceptions of support from children [?, ?, ?], finding perceived support associated with higher life satisfaction and lower loneliness. These results support our finding that parents must perceive children's support for it to affect their well-being.

Most importantly, this study found that children's filial piety beliefs affected parents' life satisfaction through emotional support transmission, not instrumental support transmission. Emotional support transmission fully mediated reciprocal filial piety's effects and partially mediated authoritarian filial piety's effects. These results support H3 but not H2, consistent with socioemotional selectivity theory, which posits that seeking emotional satisfaction becomes an increasingly primary goal with age. Older adults focus on intimate, satisfying relationships and invest in emotionally meaningful activities [?]. Children's

emotional concern meets parents' emotional needs, aligning with research showing emotional support is more important than instrumental support for older adults' well-being [?, ?]. Furthermore, instrumental support' s effect on subjective well-being depends on whether emotion is integrated into that support [?]. Thus, emotional rather than instrumental support transmission mediated filial piety' s influence.

This study advances research by conceptualizing social support as a bridge linking children' s filial piety to parents' life satisfaction and loneliness. It reveals that children' s filial piety affects parents' well-being via emotional support transmission, confirming the applicability of DFPM and socioemotional selectivity theory. The study also demonstrates that unilateral single-sample investigations may yield biased results, suggesting paired-sample designs to eliminate such bias.

Practically, findings suggest we should emphasize cultivating children' s filial piety—both reciprocal and authoritarian—through school and community activities. However, unconditionally satisfying parents' authoritarian expectations may contradict universal values of independence and equality [?]. Therefore, we advocate appreciating authoritarian filial piety while transforming it into “love and respect.” Moreover, parents value emotional support (respect and concern) more than instrumental support, suggesting adult children should attend to parents' emotional needs when practicing filial piety.

### Limitations

Several limitations warrant consideration. First, the cross-sectional design precludes causal inferences. Future research should use longitudinal panel designs to replicate findings. Second, social support is interactive [?], and parents' support to adult children may also improve their life satisfaction [?, ?]. Investigating bidirectional support interactions may better explain how children' s filial piety affects parents' well-being.

Third, intergenerational support is affected by provider age [?, ?, ?], with older adult children providing more support. However, our sample ( $n = 350$ ) had a wide age span (20–58), preventing analysis of age effects and reducing result validity. Future research should expand sample sizes across age groups.

Finally, respondents were from seven mainland Chinese cities with different political, economic, cultural, and environmental contexts, but our relatively small sample precluded regional difference analyses. Nevertheless, filial piety is often considered an “Asian” value, emphasized in Japan, Korea, Hong Kong, Taiwan, and Singapore [?]. Research has also examined filial norms in Europe and the United States, finding overlapping attributes with Chinese filial piety [?]. Thus, filial piety may represent a cultural consensus, with Chinese people across regions holding similar views. Future studies interested in regional differences should expand sample sizes and select representative regions.

## Conclusion

This study explored how children's filial piety affects parents' life satisfaction and loneliness. Its primary contribution is examining instrumental and emotional support transmission through a parent-child dyad design, bridging DFPM and socioemotional selectivity theory to clarify how children's filial piety influences parental well-being. Children with higher filial piety provide more emotional support, which parents perceive and subsequently improves life satisfaction and reduces loneliness. This study suggests adult children should cultivate filial piety beliefs and attend closely to parents' emotional needs to enhance parental well-being.

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**Table 1**  
Sociodemographic Information for Participants

Variables	Adult Children N (%)	Parents N (%)
<b>Gender</b>		
Male	185 (52.9%)	156 (44.6%)
Female	162 (46.3%)	193 (55.1%)

Variables	Adult Children N (%)	Parents N (%)
Missing	3 (0.9%)	1 (0.3%)
<b>Age (M ± SD)</b>	39.00 ± 7.56	67.62 ± 7.47
<b>Marital status</b>		
Married	288 (82.3%)	276 (78.9%)
Others	62 (17.7%)	69 (19.7%)
Missing	–	5 (1.4%)
<b>Education level</b>		
< 6 years	154 (44.0%)	99 (28.3%)
6-9 years	196 (56.0%)	115 (32.9%)
> 9 years	–	136 (38.9%)
Missing	2 (0.6%)	–
<b>Monthly income</b>		
≤5000	236 (67.4%)	161 (46.0%)
>5000	112 (32.0%)	189 (54.0%)
Missing	2 (0.6%)	–

*Note:* ‘Others’ for adult children includes widowed, divorced, or unmarried; for parents, it includes widowed or divorced.

**Table 2**

Means, Standard Deviations, and Correlations of Variables (N = 350)

Variables	1	2	3	4	5	6	7	8
1. RFP	–							
2. AFP	.332***	–						
3. ISPAC	.338***	.189***	–					
4. ESPAC	.478***	.395***	.468***	–				
5. ISPP	.288***	.135*	.565***	.255***	–			
6. ESPP	.324***	.256***	.222***	.505***	.462***	–		
7. Life satisfaction	.144**	.190***	.122*	.178***	.251***	.266***	–	
8. Loneliness	–	–	–	–	–	–	–	–
	.137**	.203***	.214***	.168**	.266***	.347***	.347***	

*Note:* RFP = reciprocal filial piety of adult children, AFP = authoritarian filial piety of adult children, ISPAC = instrumental support provided by adult children, ESPAC = emotional support provided by adult children, ISPP = instrumental support perceived by parents, ESPP = emotional support perceived by parents;  $p < .05$ ;  $p < .01$ ;  $p < .001$ .

**Table 3**

Indirect Effects and 95% Confidence Intervals for Model

Model Pathways	$\beta$	95%CI Lower	95%CI Upper
RFP → ESPAC → ESPP → life satisfaction	.045	.020	.080
RFP → ESPAC → ESPP → loneliness	-	-.080	-.023
AFP → ESPAC → ESPP → life satisfaction	.030	.012	.055
AFP → ESPAC → ESPP → loneliness	-	-.055	-.015

*Note:* RFP = reciprocal filial piety of adult children, AFP = authoritarian filial piety of adult children, ESPAC = emotional support provided by adult children, ESPP = emotional support perceived by parents.

[Figure 1: see original paper]

### Figure 1

The Serial Mediating Effects of Social Support Transmission Between Adult Children's Reciprocal Filial Piety and Parents' Life Satisfaction/Loneliness

*Note:* RFP = reciprocal filial piety of adult children, AFP = authoritarian filial piety of adult children, ISPAC = instrumental support provided by adult children, ESPAC = emotional support provided by adult children, ISPP = instrumental support perceived by parents, ESPP = emotional support perceived by parents;  $p < .05$ ;  $p \leq .01$ ;  $p \leq .001$ .

*Note:* Figure translations are in progress. See original paper for figures.

*Source:* ChinaXiv – Machine translation. Verify with original.