Interpersonal Interaction and Subjective Life Satisfaction Among Older Adults in China: Evidence from CGSS 2017

Hui Huang *

Department of Philosophy, The London School of Economics and Political Science, London, United Kingdom

* Corresponding Author Email: 2474947005@qq.com

Abstract. Subjective life satisfaction is a primary indicator of quality of life among older adults. Given the problem of ageing in China's society, this paper explores the impact of interpersonal relationships on the happiness of older people. Based on the 2017 Chinese General Social Survey (CGSS 2017), a sample of 1,444 respondents aged 60 and over was analyzed using Pearson correlations and hierarchical (sequential block-entry) multiple regression across five nested models. The four kinds of interpersonal interaction are: marriage, contact with adult children, frequency of social interaction, and frequency of internet use. Contact with adult children and the frequency of social interaction are positively associated with subjective life satisfaction, whereas being never-married and being widowed are negatively associated with it relative to being married; divorced respondents do not differ significantly from married respondents. Frequency of internet use shows a positive zero-order correlation but a negative partial association once other factors are controlled, a sign reversal that most plausibly reflects confounding by correlated covariates rather than a substantive harmful effect. The findings broadly support the view that interpersonal interaction contributes to older adults' subjective life satisfaction, plausibly through social support and reduced loneliness.

Keywords: Older adults; subjective life satisfaction; interpersonal interaction; social support; CGSS.

1. Introduction

Population aging has become one of the most salient social transformations in China. The 2000 Fifth National Population Census already indicated that China's mainland had entered an aging society. By the 2020 Seventh National Population Census, the population aged 60 and above had grown by 103.15% relative to 2000, reaching 264 million, or about 18.7% of the national population, an increase of roughly 5.44 percentage points over 2010. The population aged 65 and above reached 190 million, about 13.5% of the total. The old-age dependency ratio reached 19.7%, an increase of 7.8 percentage points over 2010, so that on average roughly five working-age adults correspond to one older person.

Chinese aging is thus marked by a very large older population, an accelerating pace, and a rural level markedly higher than the urban one, and the older population is projected to approach 300 million during the Fourteenth Five-Year Plan period. With the progression of these changes, concerns about the well-being of older adults have gradually arisen, and research on older adults has thus gained increasing attention. The recurring problem in this study is the quality of later life, which can be divided into physical health and psychological factors such as loneliness, as well as the network of care and support; its importance lies in this focus on people.

The first index of the quality of life is life satisfaction. Low life satisfaction among older adults often indicates that they face various difficulties, and when these problems are systemic, they become social issues; thus, they can lead to depression and other diseases. This paper will explore the relationship between older adults' interpersonal relationships and their own sense of well-being, as well as the paths by which this relationship manifests, to help enhance the quality of life in later years. The main hypothesis (H0) is that a higher frequency of socialisation is positively related to the self-reported quality of life for older adults. Section 2 reviews literature and develops four hypotheses; Section 3 presents the data and methods; Section 4 reports the results; Section 5 discusses them; and Section 6 concludes.

2. Literature Review

2.1. Subjective life satisfaction and subjective well-being

Long ago, people thought of happiness and quality of life as the same thing. Some scholars consider life satisfaction to be one of the dimensions of subjective well-being, along with positive and negative affect [1]; in this cognitive-affective tradition, life satisfaction is viewed as a cognitive judgement of well-being and is frequently measured by global self-report instruments such as the Satisfaction with Life Scale [2]. This study treats the distinction between subjective life satisfaction and subjective well-being as one of degree rather than kind, since the theoretical boundary between them is not sharply drawn and the choice of term in empirical work often reflects survey wording rather than a substantive difference. Because the two constructs are closely associated, this review draws on both studies.

2.2. Determinants of subjective life satisfaction in later life

Early studies were largely exploration, enumerating a wide range of associated factors. Among older residents of Beijing, Xiang, Wu, and Liu identified 17 significant correlates of life satisfaction across eight domains, of which the strongest were self-rated health, family harmony, economic adequacy, mood, and education [3]. As such evidence accumulated, scholars sought to consolidate it: using meta-analysis, Ren and colleagues found that demographic variables predicted subjective well-being relatively weakly, whereas social support, coping style, and personality were stronger predictors [4], and the international meta-analysis of Pinquart and Sörensen likewise identified socioeconomic status, social network, and competence as systematic correlates of well-being in later life [5]. Attention later shifted from breadth toward mechanism-oriented studies of single factors, such as Feng and colleagues' analysis of economic income and marital and family circumstances [6]. Overall, family relationships and marital status do appear to matter, but they may interact with other factors in ways that bias estimates when left unmodelled.

2.3. Interpersonal interaction and internet use

With the spread of the internet, a body of work has examined internet use as a determinant of well-being. Jiang and Chen argued that internet use can enhance older adults' subjective well-being [7], and Du and Wang reached a broadly similar conclusion regarding life satisfaction while emphasising the underlying mechanisms [8]. International evidence is more divided: Cotten, Anderson, and McCullough found internet use associated with reduced loneliness and greater contact, consistent with a connection account [9], whereas the classic internet paradox study of Kraut and colleagues reported that greater internet use accompanied declines in social involvement and well-being, consistent with a displacement account [10]. More broadly, the importance of social ties for health is well established, with social disconnectedness and perceived isolation independently associated with poorer health among older adults [11], and recent evidence from China indicates that intergenerational support is positively associated with older adults' well-being [12]. Yet in-depth research focused on interpersonal interaction as a single factor remains relatively scarce, and existing studies have rarely considered its marital, intergenerational, social, and online dimensions jointly.

Interpersonal interaction has two types here. First, there is family-internal interaction, which is close-knit, tied to daily life, and for older adults primarily consists of marital and parent-child relationships. The second is family-external interaction, that is, social interaction, which has looser ties and includes both offline relationships with friends and neighbours and relationships formed online. These are considered distinct rather than interchangeable: offline and embodied interaction are likely to transmit higher-quality information by conveying cues beyond words and fostering shared memory in a common physical space; online interaction has a wider reach and greater convenience, and older adults may be more active in forming connections online in line with their interests.

2.4. Hypotheses

Accordingly, interpersonal interaction is decomposed into four dimensions, yielding four hypotheses under H0. H1. Adverse marital status is negatively associated with subjective life satisfaction. H2. Contact with adult children is positively associated with subjective life satisfaction. H3. The frequency of social interaction is positively associated with subjective life satisfaction. H4. The frequency of internet use is positively associated with subjective life satisfaction.

3. Data and Methods

3.1. Data

The data come from the 2017 Chinese General Social Survey (CGSS 2017), which collected 11,582 valid cases nationwide. Older adults are defined as citizens aged 60 and above, yielding an analytic sample of 1,444.

3.2. Measures

The dependent variable, subjective life satisfaction is the respondent's overall life-satisfaction rating (item c33), scored from 1 to 7. Interpersonal interaction is captured by four variables. Marital status collapses from item a69 into four mutually exclusive categories-never-married, married, divorced, and widowed-entered as dummy variables with married as the reference. Contact with adult children is the frequency of contact with the most-contacted adult child (item v951, scored 1 to 10); the frequency of social interaction in leisure time (item a311) and the frequency of internet use (item a285) are each scored 1 to 5. All models control gender, age, education, self-rated physical-and-mental health, and self-assessed social status, each coded from the corresponding CGSS item and each linked to life satisfaction in prior research. Because CGSS 2017 contains no items designed specifically for these constructs, the measures are necessarily proxies, an unavoidable constraint of secondary-data analysis.

3.3. Analytic strategy

Pearson correlations and hierarchical (sequential block-entry) ordinary least squares regression were estimated in SPSS 26.0. Predictors were entered in five blocks: the covariates first, then internet use, social interaction, contact with children, and finally the marital-status dummies. The term hierarchical denotes the staged entry of predictor blocks, not a multilevel data structure.

4. Results

4.1. Correlations

Table 1 reports the zero-order correlations among all variables. Subjective life satisfaction is most strongly correlated with self-rated health and social status, and also with contact with children and education, while gender and being divorced are the only predictors not significantly related to it. Two features anticipate the multivariate analysis. First, internet use is weakly but positively correlated with life satisfaction, the opposite of its sign in the regression models, an early indication that its bivariate association is confounded by correlated covariates. Second, the very high negative correlation between the married and widowed dummies reflects their near-complementary distribution, which contributes to the collinearity reported in Table 3.

Table 1. Pearson correlations among study variables (N = 1,444).

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Life satisfaction	1												
2. Status	.315**	1											
3. Education	.140**	.290**	1										
4. Age	.072**	.034	-.081**	1									
5. Gender	.022	-.022	-.199**	.036	1								
6. Health	.346**	.276**	.189**	-.046*	-.100**	1							
7. Internet use	.048*	.178**	.489**	-.180**	-.084**	.163**	1						
8. Social interaction	.087**	.058*	-.053*	-.046*	.059*	.107**	.028	1					
9. Contact with children	.175**	.130**	.106**	.047*	.066**	.096**	.097**	.039	1				
10. Never-married	-.119**	-.055*	-.051*	-.027	-.051*	-.016	-.018	-.042	-.390**	1			
11. Married	.103**	.038	.137**	-.326**	-.135**	.049*	.120**	-.018	.081**	-.217**	1		
12. Divorced	-.020	-.005	.080**	-.022	-.027	.053*	.056*	.037	-.073**	-.020	-.250**	1	
13. Widowed	-.064**	-.021	-.158**	.360**	.168**	-.065**	-.141**	.019	.061*	-.073**	-.899**	-.084**	1

Note. Variables are numbered as in the first column. * p < .05, ** p < .01 (one-tailed).

4.2. Hierarchical regression

Table 2 presents hierarchical regression. All five models are significant, and model fit improves at every step except the entry of internet use alone in Model 2; the marital-status block contributes the largest single increment, and the full model accounts for about one fifth of the variance in life satisfaction. Among the controls, self-rated health and social status are the strongest predictors, whereas education is significant in the intermediate models but not in the full model once the marital-status dummies are entered. Turning to the hypotheses, contact with adult children and social interaction are both positive and significant, supporting H2 and H3; being never-married and being widowed are associated with markedly lower satisfaction than being married, partially supporting H1, while the divorced-married contrast is not significant. Contrary to H4, internet use carries a small negative coefficient in the full model. Across models, it is non-significant when entered alone and strengthens as further predictors are added, a pattern consistent with suppression rather than a stable substantive influence.

Table 2. Hierarchical regression predicting subjective life satisfaction (unstandardised B).

Predictor	Model 1	Model 2	Model 3	Model 4	Model 5	β	VIF
(Constant)	2.738***	2.820***	2.697***	2.479***	2.272***		
Status	.256***	.258***	.255***	.245***	.243***	.211	1.177
Education	.023	.038*	.041*	.036*	.031	.052	1.479
Age	.011**	.010**	.010**	.010**	.014***	.101	1.186
Gender	.128*	.130*	.125*	.104*	.128*	.060	1.081
Health	.263***	.266***	.261***	.255***	.256***	.279	1.131
Internet use		-.043	-.045	-.050*	-.050*	-.061	1.368
Social interaction			.046*	.043	.045*	.048	1.032
Contact with children				.058***	.046**	.089	1.231
Never-married					-.543**	-.067	1.191
Divorced					-.255	-.036	1.026
Widowed					-.258***	-.103	1.209
R^2	.182	.184	.186	.198	.211		
Adjusted R^2	.179	.181	.182	.194	.205		
ΔR^2	.182	.002	.002	.012	.013		
F (overall)	63.981***	53.995***	46.968***	44.413***	34.825***		

Note. N = 1,444. Married is the reference category for marital status. β and VIF are reported for Model 5. * $p < .05$, ** $p < .01$, *** $p < .001$.

4.3. Collinearity diagnostics

Collinearity diagnostics qualify the above estimates. Although every variance inflation factor in Table 2 is below 3, the condition indices in Table 3 are all well over 10 for the final dimensions and peak at 43.0, with the intercept and age being the highest-condition dimensions. This dependence involves the intercept and age rather than the interaction variables of interest, and the marital dummies are additionally near-complementary by construction. The internet-use estimate should therefore be interpreted with caution given its sign reversal across models, even though its own variance inflation is low.

Table 3. Collinearity diagnostics for the full model (Model 5).

Dim.	Eigenvalue	Cond. index	1	2	3	4	5	6	7	8	9	10	11	12
1	8.206	1.000	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	1.017	2.840	.00	.00	.00	.00	.00	.00	.00	.00	.00	.32	.39	.10
3	1.006	2.856	.00	.00	.00	.00	.00	.00	.00	.00	.00	.45	.41	.00
4	.757	3.294	.00	.00	.01	.00	.00	.00	.02	.00	.00	.05	.18	.59
5	.344	4.885	.00	.00	.05	.00	.02	.01	.46	.03	.00	.00	.00	.16
6	.177	6.803	.00	.10	.09	.00	.06	.30	.20	.13	.00	.00	.00	.02
7	.149	7.413	.00	.02	.22	.00	.03	.43	.12	.19	.01	.00	.00	.01
8	.122	8.217	.00	.01	.24	.00	.12	.10	.09	.58	.02	.00	.00	.01
9	.106	8.795	.00	.86	.22	.00	.00	.10	.06	.00	.02	.00	.00	.00
10	.071	10.713	.00	.00	.10	.00	.48	.04	.01	.00	.52	.06	.01	.00
11	.040	14.327	.04	.01	.06	.09	.25	.01	.02	.05	.41	.11	.00	.01
12	.004	43.012	.95	.00	.00	.90	.04	.01	.02	.02	.01	.01	.00	.10

Note. Columns 1-12 are variance proportions for: 1 Constant, 2 Status, 3 Education, 4 Age, 5 Gender, 6 Health, 7 Internet use, 8 Social interaction, 9 Contact with children, 10 Never-married, 11 Divorced, 12 Widowed. On the highest-condition dimension (index 43.0) the constant (.95) and age (.90) load most heavily, indicating that the collinearity chiefly involves the intercept and age rather than the substantive predictors.

5. Discussion

The positive associations of social interaction and contact with adult children are consistent with two structural pathways. Both can reduce loneliness and perceived isolation [11], and both serve as channels of social support, emotional and economic, for older adults [12]. These pathways offer a plausible account of the findings and lend support to H2 and H3.

For marital status, adverse statuses are associated with lower satisfaction, while the divorced-married contrast is not significant. Being married is a broad category that encompasses both harmonious and conflictual marriages, so it does not uniformly predict higher satisfaction; the non-significant result for divorce may be related, since divorce may have occurred long ago or may have ended a conflictual relationship, and the analysis of income and marital circumstances by Feng and colleagues similarly cautions against treating marital categories as homogeneous [6]. Being never-married, by contrast, is a persistent state, and widowhood is a major late-life transition, both of which plausibly underlie the significantly lower satisfaction observed for these groups.

Internet use presents the most complex picture, with a negative partial association that runs counter to several earlier studies [7][8]. Substantively, internet use may produce a presence-substitution effect, in which low-quality online activity crowds out co-present interaction without relieving loneliness, consistent with the internet paradox [10] even though other work reports the opposite, connection-enhancing pattern [9]. Methodologically, the sign reversal is typical of confounding; internet use is positively correlated with education and social status, and both of these are positively related to satisfaction, so after controlling for them, the bivariate positive association of internet use is reversed. Due to a low variance inflation factor, internet use is not highly correlated with the other predictors; given the small coefficient and a slight reversal, H4 is better considered unsupported under the current specification rather than as proof of a strong negative effect.

6. Conclusion and Limitations

Based on CGSS 2017, this paper investigates the connection between interpersonal interaction and the sense of life in older age for older adults in China. Contact with adult children and social interaction are positively associated with life satisfaction; never-married and widowed are negatively correlated with it compared to married individuals, while divorced respondents are not significantly different from married ones; internet use shows a positive zero-order correlation but a negative partial association that should be interpreted cautiously. On the other hand, the evidence supports H0: interpersonal interaction is generally beneficial to the subjective life satisfaction of older adults, and it may be due to social support and reduced loneliness.

The three below are deficiencies. First, independent variables use proxy items because CGSS 2017 does not have items specifically created for these constructs, and thus measurement error may occur. Second, although collinearity was found, it could not be corrected; therefore, some of the estimates, such as those for internet use, may have been affected. Third, the data are cross-sectional and thus do not allow for causal inference; the proposed mechanisms are only descriptive in nature. Future studies may use instruments designed for interpersonal interaction, a longitudinal design, and specifications that better distinguish between online and offline interactions.

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