



A Study on the Impact of Social Trust on Veterans' Subjective Well-Being

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Abstract. As veterans play a vital role in national defense, their social adaptation and well-being are critical issues in social governance. Based on data from the CFPS 2022, this study employs hierarchical linear regression analysis to examine the impact of four types of social trust—in parents, neighbors, local government officials, and doctors—on veterans' subjective well-being, while controlling for psychosocial factors such as social connections and a sense of life's meaning. The findings reveal that trust in parents and neighbors independently and positively predicts subjective well-being. Trust in doctors is explained by psychosocial factors, whereas trust in government officials has no significant effect. The study also found that psychosocial factors demonstrate stronger predictive power than social trust. Furthermore, the mechanisms through which different types of social trust influence well-being vary: trust in family and neighbors primarily exerts its effect through direct emotional influences, while trust in doctors relies on the mediating role of psychosocial factors.

Keywords: veterans, social trust, trust, well-being, multiple linear regression

1 Introduction

Veterans are a unique group that has contributed to national sovereignty, security, and development. Upon returning to civilian life, they often face complex physical and psychological challenges in adapting to society, and their well-being is particularly susceptible to multiple factors such as social relationships and mental health^[1]. As a key component of social capital^[2], social trust has been shown to positively predict individual well-being across various dimensions^[3]. However, existing research on veterans' well-being has largely focused on social support, depressive symptoms, and economic status, with relatively limited exploration of social trust. Furthermore, such studies often concentrate on a single object of trust and lack a systematic analysis of the mechanisms underlying different types of trust.

Based on this, this study examines trust in parents, neighbors, local government officials, and doctors to investigate their mechanisms of influence on veterans' subjective well-being (SWB). Well-being is a complex, multidimensional construct influenced by

factors such as life satisfaction, interpersonal relationships, and depressive symptoms⁴. Therefore, this study controls for social relationships, life satisfaction, sense of life meaning, and depression scores, and hypothesizes that all four types of social trust are significantly and positively correlated with subjective well-being. Based on social support theory, informal support from family and neighbors focuses on emotional needs, while formal support from government and healthcare emphasizes professional safeguards⁸. Consequently, this study further analyzes differences in the intensity of influence across various forms of social trust, aiming to address gaps in existing research and provide a reference for policy formulation by departments responsible for the management and service of veterans.

2 Methods

2.1 Data Sources

The data for this study were drawn from the 2022 China Family Panel Study (CFPS), which covers 25 provinces, municipalities, and autonomous regions in China and employs multistage probability sampling. Based on the database variable “Is a Veteran,” this study identified 685 respondents with military service experience as the initial sample. After removing missing and outlier values, the final valid sample consisted of 589 cases.

2.2 Variable Selection

Dependent Variable. Subjective well-being (SWB) serves as the dependent variable. It comprises two dimensions—emotional and cognitive—namely positive and negative emotions, and life satisfaction, which individuals use to assess their quality of life⁹. Therefore, this study measures subjective well-being using the question “How happy are you (on a scale of 0–10)?” The measurement employs an 11-point scale ranging from 0 to 10, with higher scores indicating greater happiness.

Independent Variables. Social trust is measured using a trust scale. It includes trust in parents, neighbors, Americans, strangers, local government officials, and doctors, with scores ranging from 0 to 10, where 0 indicates the lowest level of trust and 10 the highest. Since trust in Americans and strangers did not show a significant correlation with the dependent variable ($p > 0.05$), these two variables were excluded from this study.

Control Variables. These include social connections, sense of life’s meaning, life satisfaction, and depression index (CESD-20SC—post-scaling). Social connections and sense of life meaning were measured using the items “How good are your social connections?” (scored 0–10) and “Life is meaningful” (scored 0–10), respectively. Life satisfaction was measured using the item “Satisfaction with one’s own life” from the CFPS2022 Life Satisfaction Scale, with a score range of 1–5. Higher scores indicate better social relationships, a stronger sense of life meaning, and higher life satisfaction,

respectively. The depression index was measured using the Center for Epidemiological Studies Depression Scale (CES-D); CFPS2022 employed the 8-item abbreviated version of the CES-D, and higher scores indicate more severe depression. It should be noted that the original CES-D20 scale has a score range of 0–60, whereas the CFPS database reports scores on a 20–80 scale. Therefore, during data processing, this study subtracted 20 from the depression index to generate a new variable, “cesd20sc_subtracted,” prior to analysis.

2.3 Analytical Strategy

This study employed the statistical software SPSS to conduct a stratified multiple linear regression analysis, with a significance level set at $p < 0.05$. The data were preprocessed using Pearson correlation analysis and descriptive statistics to filter out invalid samples.

Hierarchical regression models were constructed as follows: (1) Model 1 included only the independent variable “social trust” to examine the overall effect of social trust on subjective well-being; (2) Model 2 added four control variables to Model 1 to examine the independent predictive role of social trust.

3 Results

3.1 Descriptive Statistics and Correlation Analysis

The study sample included 10 women (1.7%) and 579 men (98.3%), as shown in **Table 1**. The age range of the sample was 23–87 years, with a mean age of 54.46 years ($SD = 15.39$), covering a spectrum of veterans from young adults to the elderly.

Table 1. Frequency table of respondents' gender.

Gender	frequency	percentage	Effective percentage	Cumulative percentage
female	10	1.7	1.7	1.7
male	579	98.3	98.3	100

In **Table 2**, the results show that all variables are significantly correlated with subjective well-being, and the correlations of the control variables are all higher than that of social trust. This demonstrates the validity of including control variables, ensuring the accuracy of the estimated effects of social trust. Veterans scored higher on well-being, sense of life's meaning, trust in parents, and interpersonal relationships, with trust in parents reaching as high as 9.39 points. This indicates that for veterans, regardless of age, the emotional bond with their parents remains strong.

Table 2. Descriptive statistics and correlation matrix.

Variable	N	MIN	MAX	M	SD	r
1 SWB	589	0	10	7.72	1.978	1
2 Parents	589	0	10	9.39	1.342	0.236***
3 Neighbors	589	0	10	6.8	2.132	0.362***
4 officials	589	0	10	5.57	2.644	0.242***

Variable	N	MIN	MAX	M	SD	r
5 Doctors	589	0	10	6.46	2.536	0.242***
6 Popularity	589	1	10	7.23	1.779	0.469***
7 Meaning	589	0	10	7.58	1.969	0.682***
8 Satisfaction	589	1	5	4.09	0.877	0.483***
9 Depression Index	589	2	52	12.3	7.814	-0.385***
10 Age	589	23	87	54.46	15.39	0.095*

Note: N=Sample size, M= the mean, SD =the standard deviation and r= Correlation coefficient. SWB=Subjective well-being; Parents= Trust in parents; Neighbors= Trust in neighbors; Officials= Trust in local government officials; Doctors= Trust in doctors; Popularity = Social Relationships; Meaning = Meaning of Life; Satisfaction = Life Satisfaction; Depression Index = cesd20sc_minus. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

3.2 Hypothesis Testing for Regression

The test results are as follows: (1) Normality: As shown in **Figure 1**, the data points generally follow a normal curve, exhibiting an approximate bell-shaped distribution with no obvious skewness or outliers. In **Figure 2**, the data points also closely follow the diagonal line, indicating that they generally follow a normal distribution; (2) Heteroscedasticity Test: As shown in **Figure 3**, the residuals are randomly distributed around the zero value, with no obvious funnel-shaped or bell-shaped trends, indicating that the model does not suffer from heteroscedasticity; (3) Independence: As shown in **Table 3**, DW = 1.972, proving that the residuals are independent and satisfying the assumption; (4) Collinearity Diagnosis: As shown in **Table 4**, there are no collinearity issues among the independent variables and control variables ($VIF < 5$), and there are no correlations between the variables.

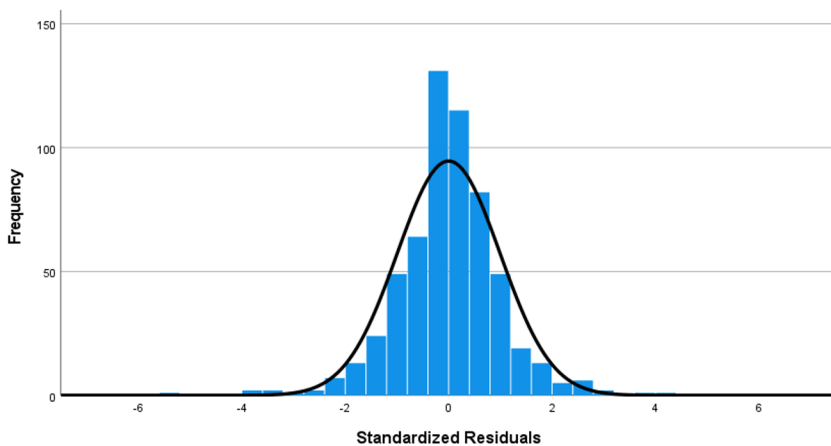


Fig. 1. Histogram.

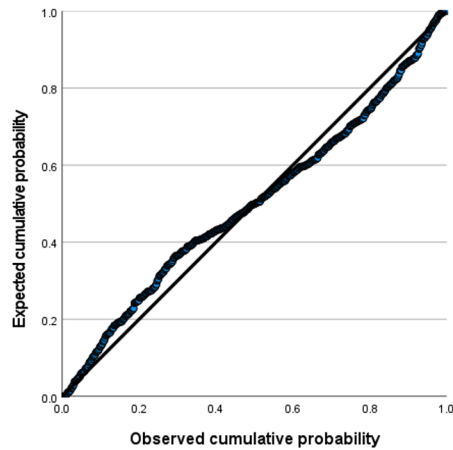


Fig. 2. Normal Probability Plot.

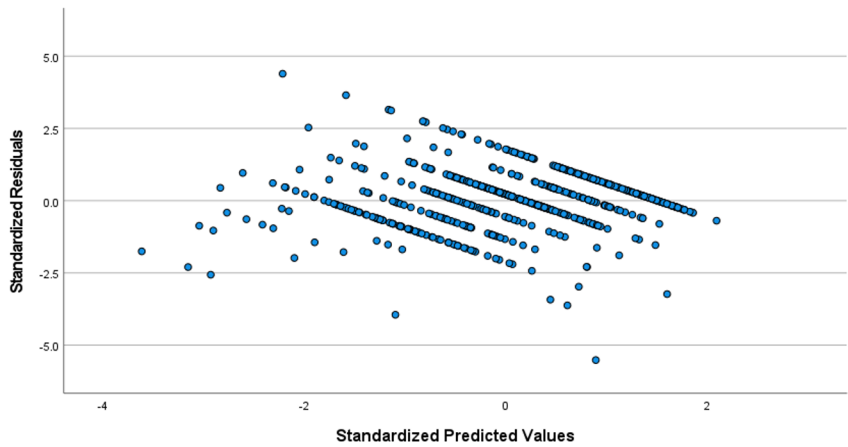


Fig. 3. Scatter Plot.

3.3 Results of the Regression Analysis

The goodness-of-fit values for the two models generated by the hierarchical regression were 0.171 and 0.585, respectively, with adjusted R^2 values of 0.165 and 0.58. The results indicate that Model 1 explains only 16.5% of the variance in SWB, whereas Model 2, after incorporating control variables, significantly improves the explanatory power for SWB.

Table 3. Model Summary.

Model	R ²	Adjusted R ²	ΔR ²	Standard error	Durbin-Watson
1	0.171	0.165	0.171	1.807	
2	0.585	0.580	0.415	1.283	1.972

At the same time, both regression models were statistically significant ($p < 0.001$), as shown in **Table 4**. The study also yielded the following multiple linear regression model:

$$Y = -0.152 + 0.139X_1 + 0.068X_2 - 0.05X_3 + 0.047X_4 + 0.238X_5 + 0.451X_6 + 0.450X_7 - 0.029X_8(1)$$

The results of Model 1 show that veterans’ trust in parents, neighbors, and doctors has a significant positive effect on the dependent variable. Trust in neighbors had the strongest effect, while trust in government officials had no significant effect. Model 2, after controlling for covariates, found that the strongest effects were associated with a sense of life’s meaning and social connections. Trust in parents followed, with both it and trust in neighbors having positive effects. Trust in healthcare providers became non-significant, similar to trust in government officials, while depressive symptoms exhibited a significant negative effect. The hypothesis that trust in parents and neighbors has a significant positive effect on well-being was supported, whereas the hypothesis that trust in healthcare providers and government officials has a significant positive effect on well-being was not supported.

Table 4. Table of coefficients and corresponding F-values for the hierarchical regression model.

Variable	Model 1					Model 2				
	B	Beta	t	p	VIF	B	Beta	t	p	VIF
(Constant)	3.329***		6.091	0.000		-0.521		-1.026	0.305	
Parents	0.200***	0.136	3.44	0.000	1.100	0.139s***	0.094	3.356	0.000	1.107
Neighbors	0.247***	0.266	6.335	0.000	1.241	0.068*	0.073	2.376	0.018	1.336
officials	0.051	0.069	1.418	0.157	1.657	-0.05	-	-1.890	0.059	1.716
Doctors	0.084*	0.108	2.265	0.024	1.601	0.047	0.066	0.061	0.074	1.616
Popularity						0.238***	0.214	7.301	0.000	1.205
Meaning						0.451***	0.449	13.497	0.000	1.548
Satisfaction						0.405***	0.180	5.786	0.000	1.347
Depression Index						-0.029***	-	-3.93	0.000	1.190
F	30.131***					102.337***	0.115			

Note: Dependent variable: Level of happiness (in points). B = unstandardized coefficient; Beta = standardized coefficient. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

4 Discussion and Conclusions

The results of the regression analysis indicate that different forms of social trust have varying effects on veterans' subjective well-being, with informal social support having a stronger predictive effect than formal support. Psychological state and social networks have a greater impact on well-being than social trust itself.

As the core of strong-tie relationships, parents exert a stable influence on well-being that is less susceptible to psychosocial factors. They can directly provide veterans with a sense of security, belonging, and emotional support¹, thereby enhancing psychological resilience. Neighbors are likely the people veterans interact with most frequently after leaving the military. Veterans often experience adjustment issues such as loneliness and a sense of loss after leaving the military^[10,11]. Good neighborly relationships can effectively alleviate these negative emotions, enhance a sense of belonging, and thereby promote greater well-being.¹² The effectiveness of government assistance and the dissemination of information can directly influence individuals' perceptions of institutional trust and subjective well-being¹⁵. According to the regression results, veterans' trust in the government has no significant impact on well-being, likely because this effect is mediated through their perceived benefits from policies. When policies are not fully implemented or information dissemination faces barriers, veterans who trust the government may experience a psychological discrepancy that reduces their well-being. The effect of trust in doctors shifted from significant to non-significant, indicating that control variables accounted for its effect size; its impact on well-being is likely mediated through psychosocial factors. Trust in healthcare providers can alleviate negative emotions and enhance perceptions of life meaning and social support, while the reduction of negative emotions, the strengthening of psychological resilience, and the acquisition of social support can foster greater well-being¹⁶. Furthermore, professional and compassionate doctor-patient communication can further improve psychological well-being and enhance happiness¹⁸.

This study also has several limitations: cross-sectional analysis cannot establish causal relationships between variables; the selection of trust dimensions is limited; and individual differences such as military branch and length of service were not considered. Future research could address these areas to further refine the findings.

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Disclosure of Interests

The authors have no competing interests to declare that are relevant to the content of this article.

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