

Analyzing The Effects Of Family, School, And Government Support On University Students' Volunteering Intentions And Behaviors: A Case Study In Heilongjiang

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Abstract

This study investigates the mechanisms through which family support, school support, and government support influence university students' volunteering service behavior in Heilongjiang Province, China. Using partial least squares structural equation modeling (PLS-SEM), the research examined both direct and indirect pathways from social support variables to volunteering behavior, with volunteering service willingness as a potential mediator.

The results reveal that only the path from volunteering service willingness (VSW) to volunteering service behavior (VSB) was statistically significant, highlighting the critical role of intention in predicting actual behavior. In contrast, direct effects from family support (FS), school support (SST), and government support (GS) on VSB were not significant. However, all three types of support showed significant indirect effects on VSB through VSW, confirming that volunteering service willingness fully mediates the relationship between social support and volunteering service behavior.

These findings contribute to the literature on prosocial behavior by emphasizing the mediating role of psychological intention in the translation of support into action. Practically, the results suggest that to promote youth volunteerism, policymakers and educators should focus on cultivating students' willingness to volunteer by reinforcing supportive environments across family, school, and governmental domains.

Key works: social support, volunteer service willingness, volunteer service behavior, university students, social support theory, theory planned behavior.

1. INTRODUCTION

Volunteer service among college students has become an increasingly important component of civic education and social development in China. Participation in volunteer activities is associated with the cultivation of public responsibility, interpersonal skills, and prosocial behavior, especially during the formative university years (Liu & Wei, 2023). The Chinese government has continuously promoted youth volunteerism through national programs and policies such as the "Volunteer Service Regulations," encouraging student involvement in public welfare, disaster relief, and community development.

Social support, defined as the perceived or actual resources provided by individuals or institutions, is one of the key drivers of volunteer engagement (House et al., 1988). In the context of university students, support typically originates from family, school, and government sources. Family support nurtures early altruistic values and empathy; school support offers guidance, civic education, and organizational platforms; and government support provides structural opportunities and policy-level incentives. While these three support sources are all important, previous studies have primarily focused on them separately, lacking a comprehensive examination of their combined or comparative influence on student volunteer behavior (Guo et al., 2021; Hu et al., 2023; Zhang et al., 2024).

Furthermore, few studies have examined the mediating mechanisms through which social support influences actual volunteering behavior. According to the Theory of Planned Behavior (Ajzen, 1991), behavioral intention is the most immediate predictor of action. In the volunteering context, willingness to volunteer serves as a cognitive motivational factor connecting external influences (like support) to actual behavior (Warburton & Smith, 2020). Recent research in China also supports the idea that willingness mediates the relationship between social-contextual factors and volunteer participation (Hu et al., 2023).

Heilongjiang Province, located in northeast China, offers a unique social context for examining youth volunteerism. As a less economically developed region undergoing demographic and structural shifts—including population aging, youth migration, and limited civil society infrastructure—Heilongjiang faces increasing demand for volunteer services. At the same time, traditional family structures and centralized governance continue to shape how students perceive and mobilize support (Shi et al., 2017). However, few studies have empirically investigated the dynamics of social support and volunteering in such regional contexts, making Heilongjiang an ideal case for extending existing theories.

This study aims to explore how family support, school support, and government support influence college students' willingness to volunteer and their actual volunteer service behavior in Heilongjiang. It also tests the mediating role of volunteering willingness in these relationships. By employing structural equation modeling (SEM) and survey-based quantitative analysis (using SPSS and Smart-PLS), the study seeks to (1) compare the effects of different sources of social support on students' volunteer behavior, (2) test the mediating role of volunteering willingness, and (3) provide contextual insights for policymakers and educators to improve civic participation among youth in underdeveloped regions.

2. LITERATURE REVIEW

2.1 Volunteer Service Behavior and Its Influencing Factors

Volunteering is defined as a formal behavior in which individuals willingly dedicate time or effort to assist others or serve their community, motivated by non-material rewards (Wilson, 2000; Zhao & Lilly, 2022). In recent years, international research has increasingly focused on the factors influencing university students' volunteer behavior, identifying altruistic values, types of motivation, psychological capital, and social support as key determinants (Xu et al., 2021). Ali and Abd Hamid (2020) highlight that students' intentions to volunteer are jointly driven by intrinsic motivations (e.g., helping others, personal growth) and extrinsic motivations (e.g., enhancing resumes, gaining experience). Moreover, religious beliefs are regarded as an important source of motivation, significantly shaping the depth and continuity of student engagement in volunteerism.

A study conducted at the University of Gondar (Wondimu & Admas, 2024) further confirms that students' volunteering motivations encompass not only value-based and career development functions but also the cultivation of skills and a sense of social responsibility. In the Chinese context, volunteer service has been recognized as an effective means of fostering university students' social responsibility, teamwork skills, and employability (Zhang & Liu, 2023). Similarly, Rabun et al. (2020) found in a Malaysian sample that altruism significantly affects students' commitment to volunteering, and gender plays a notable role in shaping participation patterns.

Furthermore, studies based on the MOA model (Motivation–Opportunity–Ability) suggest that psychological motivation and opportunity conditions—such as government support and organizational resources—have a substantial impact on volunteer branding and service quality (Qu & Wang, 2023). Alić et al. (2022), in research conducted in Bosnia and Herzegovina, emphasize that under a social marketing framework, the MOA model effectively enhances youth volunteer engagement and service quality, especially in nonprofit organizational contexts.

2.2 Definitions and Pathways of Family, School, and Government Support

Recent scholarship on volunteerism has increasingly focused on the tripartite support system—family, school, and government—in shaping youth engagement in volunteer activities. Family support typically refers to emotional encouragement, transmission of values, and provision of tangible resources from parents or guardians. Although empirical studies on this dimension remain relatively scarce, research within Western educational collaboration frameworks has shown that active parental involvement and encouragement significantly enhance adolescents' propensity for prosocial behavior (Stuart, 2020). Einolf (2021) further demonstrated that the volunteering behaviors of family members serve as role models for youth, especially when parents jointly participate in volunteer activities, fostering sustained volunteer intentions among their children.

School-based support encompasses the institutional climate, curricular design, and extracurricular opportunities for service learning, as well as the cultivation of civic identity through value education. An evaluation of school-based volunteer programs in Australia by Burns et al. (2025) found that integrating academic learning with volunteer practice significantly enhances students' empathy, critical thinking, and sense of social responsibility. Moreover, organizational strategies such as institutional leadership, brand development, and training mechanisms contribute to embedding a volunteer culture within campus ecosystems (Malakouti et al., 2025).

Government support primarily manifests through macro-level mobilization mechanisms, policy incentives, and

institutional arrangements. Zhao and Lilly (2022) identified China's legislative actions and state-organized mobilization strategies as pivotal in advancing volunteerism, influencing student participation behaviors and reinforcing civic norms. The United Nations Volunteers (UNV) program's "State of the World's Volunteerism Report" similarly underscores the central role of government in creating inclusive environments for volunteering, particularly in the post-pandemic era when coordinated policy and resource integration amplified the societal impact of volunteer efforts (Chadwick El-Ali, 2022).

In addition, Malaysia's national volunteer policies and civil society movements—such as those documented in the country's Voluntary National Review (Malaysia VNR, 2025)—exemplify collaborative governance models where state and civil actors jointly promote youth volunteerism. These mechanisms not only expand youth engagement but also support the institutionalization and sustainability of volunteer behaviors.

2.3 Evidence on Volunteer Intention as a Mediating Variable

In recent years, research on volunteer behavior has progressively shifted from examining the direct relationship between motivation and behavior to investigating the mediating role of volunteering intention between social support and actual engagement. Grounded in the Theory of Planned Behavior (TPB), empirical studies consistently demonstrate that individuals' perceived levels of social support significantly influence their intention to volunteer, which in turn serves as a direct predictor of actual participation (Ajzen, 1991; Esfandiar & Hadinejad, 2025). A chained mediation model constructed by Xu et al. (2021) further reveals that psychological capital enhances individuals' perception of social support, thereby stimulating volunteer motivation and intention, ultimately leading to volunteer behavior.

Within the framework of the Motivation–Opportunity–Ability (MOA) model, Qu and Wang (2023) found that motivation, shaped by sources of social support, plays a significant mediating role between institutional opportunities and behavioral outcomes. This finding aligns with Puttamanjaiah and Thangamuthu's (2025) work in the domain of sustainable behavior adoption, which underscores the critical mediating function of motivation between ability and behavioral intention.

Additionally, Zhang et al. (2024), in a study focused on Chinese higher education institutions, identified that volunteer role identity and motivational cognition serve as mediators between organizational encouragement and actual volunteer participation. Although the term "intention" is not explicitly used, the path structure reflects high alignment with the TPB framework. From a volunteer management perspective, Cho et al. (2020) confirmed that volunteer satisfaction fully mediates the relationship between management practices and sustained volunteer intention, emphasizing the importance of organizational support in shaping intention.

Notably, in the post-pandemic era, sustained intention to participate in community volunteering has emerged as a critical research theme. The extended commitment–trust model proposed by Zhang, Wang, and Liu (2025) demonstrates that both community commitment and volunteer satisfaction exert direct effects on sustained intention, while trust mechanisms play an indirect role in shaping behavioral intention. This model offers new insights into the psychological mechanisms underlying volunteer intention.

3. Theoretical Background and Hypotheses Development

3.1 Theory of Planned Behavior (TPB) in This Study

The Theory of Planned Behavior (TPB) posits that an individual's behavioral intention is jointly determined by three key psychological constructs: attitude toward the behavior, subjective norm, and perceived behavioral control (PBC). Among them, behavioral intention serves as the most direct predictor of actual behavior (Ajzen, 1991). In the context of volunteerism, attitude reflects a positive evaluation of volunteer activities, subjective norm refers to perceived social expectations and pressures from sources such as family, schools, and government, while PBC denotes one's assessment of the ease or difficulty in participating in volunteer work, including factors like time availability and opportunity access.

In this study, volunteer service willingness (VSW) corresponds to the behavioral intention component of TPB. Social support from family, school, and government is considered an antecedent that influences students' attitudes, normative beliefs, and control beliefs, thereby strengthening their willingness to volunteer. Previous research has demonstrated that subjective norm and PBC significantly predict volunteering intention among undergraduate students (Abdulelah et al., 2023; Zhang et al., 2025).

In recent years, extended TPB models have incorporated social support as a distal predictor that affects behavioral intention through mediating psychological constructs. Wang and Wei (2022) found that organizational support enhances volunteer motivation by promoting self-efficacy and control beliefs. Likewise, Karim Amrullah et al. (2025) reported that within a TPB framework, PBC emerged as the strongest predictor of behavioral intention,

outperforming attitude and subjective norm in explanatory power.

Therefore, this study adopts TPB as the theoretical framework to describe the psychological formation path of volunteer service willingness. Social support acts upon attitude, subjective norm, and control beliefs, which in turn generate behavioral intention and drive actual volunteer service behavior (VSB). This pathway provides a solid foundation for constructing mediating mechanisms between support and behavioral outcomes.

3.2 Social Support Theory in This Study

Social support theory conceptualizes social support as the emotional, informational, instrumental, and companionship assistance provided by individuals or institutions within one's social network (Wills, 1991; Coach Foundation, 2023). It is typically categorized into perceived support—the subjective belief that support is available—and received support—the actual support obtained. Social support can exert a direct effect by enhancing behavioral motivation and resource accessibility, or a buffering effect by mitigating the negative impact of stressors and barriers on behavioral outcomes (Cohen & Wills, 1985; Mao et al., 2024).

In this study, social support is operationalized through three distinct sources:

Family Support (FS): Emotional encouragement, moral guidance, and material assistance from parents or guardians.

School Support (SST): Institutional support from universities, including volunteer platforms, service-learning curricula, and campus culture.

Government Support (GS): Policy incentives, volunteer infrastructure, training mechanisms, public recognition, and resource allocation.

According to the direct effect model, these support systems provide essential resources, behavioral motivation, and normative reinforcement, thereby directly enhancing students' willingness to engage in volunteer service (VSW) and increasing the likelihood of actual participation (VSB). Moreover, under the buffering effect model, support can reduce perceived barriers such as time constraints or lack of opportunity, thus improving perceived behavioral control (PBC) and intention strength.

This theoretical integration complements the TPB framework by positioning social support as an antecedent that influences attitude, subjective norm, and control beliefs. It also aligns with recent empirical findings that emphasize the mediating role of psychological constructs such as self-efficacy and motivation in translating support into behavioral intention (Wang & Wei, 2022; Ha & Park, 2024).

3.3 Conceptual Framework and Hypotheses

This study integrates the Theory of Planned Behavior (TPB) and Social Support Theory to construct a systematic analytical framework aimed at revealing how social support influences university students' volunteer behavior through psychological mechanisms. Specifically, three types of social support—family, school, and government—are proposed to act upon the core components of TPB from distinct dimensions.

First, social support may shape the perceived social significance and personal value of volunteerism, thereby enhancing individuals' attitudes toward volunteer behavior. Second, expectations and normative pressures conveyed by family members, campus culture, and government policies are instrumental in reinforcing individuals' perceived subjective norms. Third, by providing resources, opportunities, and institutional guarantees, social support significantly enhances individuals' perceived behavioral control—their sense of capability and confidence in performing volunteer activities.

These three psychological factors jointly influence Volunteer Service Willingness (VSW), which in turn largely determines whether such willingness is transformed into actual Volunteer Service Behavior (VSB). Accordingly, this study posits that willingness plays a mediating role between social support and volunteer behavior, while also examining the direct impact of different support sources.

Based on these premises, the following theoretical model is constructed:

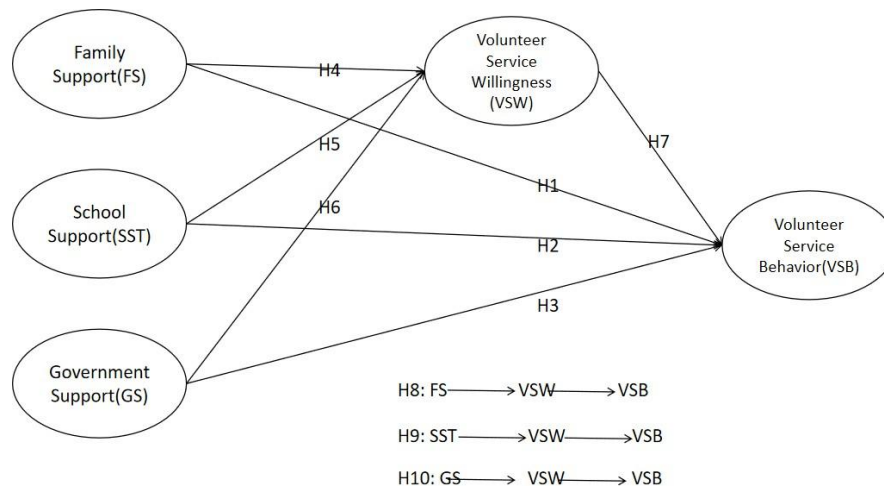


Figure 1: Conceptual Framework

Hypotheses

- H1: Family support positively influences volunteer service behavior. H2: School Support positively influences volunteer service behavior.
- H3: Government Support positively influences volunteer service behavior. H4: Family support positively influences Volunteer Service Willingness H5: School Support positively influences Volunteer Service Willingness
- H6: Government Support positively influences Volunteer Service Willingness
- H7: Volunteer Service Willingness positively influences volunteer service behavior.
- H8: Volunteer service willingness mediates the relationship between family support and service behavior. H9: Volunteer service willingness mediates the relationship between school support and service behavior.
- H10: Volunteer service willingness mediates the relationship between government support and service behavior.

5. METHODOLOGY

5.1 Research Design

This study adopted a quantitative research design and primarily collected data through a structured questionnaire to explore the influence of family, school, and government support on college students' volunteer intentions and behaviors. The research participants were full-time undergraduate students enrolled in public universities in Heilongjiang Province, China, and a total of 77 valid questionnaires were collected.

The questionnaire was distributed online via the Wenjuanxing platform, and the completion process was anonymous and voluntary to ensure objectivity and reliability of the data. Given the large population size and wide geographical distribution, the study employed a cluster sampling method under the framework of probability sampling. First, universities were divided into two clusters based on their geographic locations: universities located in Harbin and those outside Harbin. Then, students from each cluster were randomly selected to complete the questionnaire.

This sampling method balances representativeness and feasibility, effectively enhancing the breadth of the data and the generalizability of the research findings.

5.2 Measurement

Table 1: Measure items

Variables	Items No	Items	Reference
Social support	FS1	My family supports my participation in volunteer activities	Mao et al., (2024); Wang, (2014);
	FS2	I often get encouragement from my family when I do volunteer work	
	FS3	My family members will volunteer together	
	FS4	I can freely share my volunteer experience with my family	
	SST1	The resources provided by the school effectively facilitated my participation in volunteer services	
	SST2	My teacher encouraged us to volunteer	

	SST3	I can get volunteer training and guidance provided by the school	
	SST4	I feel that the school has given me full support in the volunteer program	
	GS1	I think government support policies for volunteer work	
	GS2	I understand the volunteer resources provided by the government	
	GS3	When I do volunteer work, I feel supported by the government	
	GS4	I think the government should increase rewards and incentives for volunteers	
Volunteer service willingness	VSW1	I am willing to participate in volunteer activities	Wang (2014)
	VSW2	I will try to participate in volunteer activities in the future	
	VSW3	I'm very likely to do volunteer work in the future	
	VSW4	When I'm a volunteer, I'm willing to tell people around me that I'm a volunteer	
	VSW5	I will promote volunteer activities to my classmates and friends	
	VSW6	I will encourage people around me to participate in volunteer activities	
Volunteer service activities	VSA1	I will spend time helping the volunteer team	Rodell (2013)
	VSA2	I will use my skills to help a volunteer team	
	VSA3	I'll put my energy into a volunteer group	
	VSA4	I will participate in activities to support a team of volunteers	
	VSA5	I will use my talent to help a volunteer group	

5.3 Data Analysis Techniques

To ensure the rigor and validity of the findings, a combination of statistical software packages was used for data analysis. SPSS 26.0 was employed to conduct descriptive statistics, assess multicollinearity, and perform reliability and validity analyses. Descriptive statistics provided a general overview of the sample characteristics and distribution of key variables. Multicollinearity was examined using variance inflation factors (VIF) to ensure that the predictors in the model were independent.

Reliability analysis was conducted using Cronbach's alpha to assess internal consistency across construct items. Values exceeding 0.70 were considered acceptable. Validity was examined through exploratory factor analysis (EFA), with factor loadings above 0.50 indicating satisfactory item alignment with latent constructs.

For advanced analysis, SmartPLS 4.0 was utilized to perform structural equation modeling (SEM). This technique enabled the estimation of path coefficients between latent constructs and the evaluation of the proposed theoretical model. The Partial Least Squares (PLS) approach is appropriate for small sample sizes and exploratory studies. Bootstrapping with 5,000 resamples was conducted to assess the significance of path estimates, ensuring robustness in the model's predictive capacity.

6. Data Analyze

6.1 Descriptive Statistics

Table 2. Respondents' Demographic Information (N = 77)

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	21	27.3
	Female	56	72.7
Age	18 years old and under	7	9.1
	19 years old	27	35.1
	20 years old	19	24.7
	21 years old	6	7.8
	22 years old and above	18	23.4

Grade	First-year undergraduate	37	48.1
	Sophomore	18	23.4
	Junior	5	6.5
	Senior	17	22.1
Major	Engineering course	28	36.4
	Science departments	17	22.1
	Biology, medicine, agriculture & forestry disciplines	3	3.9
	Humanities and social sciences	29	37.7

A total of 77 valid responses were collected for the study. Among the participants, 27.3 percent were male (n = 21), while the majority were female, accounting for 72.7 percent (n = 56). This gender distribution reflects the prevalent trend of female dominance in university-based volunteer participation, as reported in recent research. In terms of age, most respondents were between 19 and 22 years old. Specifically, 35.1 percent (n = 27) were 19 years old, followed by 24.7 percent aged 20 (n = 19), 23.4 percent aged 22 and above (n = 18), 9.1 percent aged 18 or younger (n = 7), and 7.8 percent aged 21 (n = 6). The age distribution suggests that the sample mainly consisted of typical undergraduate students in early adulthood.

Regarding academic grade, 48.1 percent were first-year students (n = 37), 23.4 percent were sophomores (n = 18), 22.1 percent were seniors (n = 17), and only 6.5 percent were juniors (n = 5). This reflects a higher engagement in voluntary service research among freshmen, which may be due to their more flexible schedules or stronger motivation to participate in extracurricular activities.

As for academic disciplines, 37.7 percent of the participants (n = 29) were enrolled in humanities and social sciences, followed by 36.4 percent in engineering (n = 28), 22.1 percent in science-related majors (n = 17), and 3.9 percent in biology, medicine, agriculture, and forestry (n = 3). The predominance of students from humanities and engineering may indicate a greater interest or institutional emphasis on civic engagement within these disciplines.

Table 3: Descriptive Statistics

Descriptive Statistics

	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
FS1	77	4.62	.844	-2.696	.274	7.817	.541
FS2	77	4.64	.826	-2.826	.274	8.770	.541
FS3	77	4.39	1.066	-1.780	.274	2.465	.541
FS4	77	4.58	.864	-2.469	.274	6.526	.541
SST1	77	4.53	.954	-2.382	.274	5.632	.541
SST2	77	4.62	.828	-2.764	.274	8.471	.541
SST3	77	4.57	.938	-2.570	.274	6.586	.541
SST4	77	4.58	.864	-2.595	.274	7.192	.541
GS1	77	4.57	.895	-2.426	.274	5.954	.541
GS2	77	4.49	.995	-2.203	.274	4.498	.541
GS3	77	4.53	.940	-2.437	.274	6.063	.541
GS4	77	4.58	.864	-2.595	.274	7.192	.541
VSW1	77	4.65	.807	-2.967	.274	9.857	.541
VSW2	77	4.65	.839	-2.819	.274	8.395	.541
VSW3	77	4.66	.821	-2.958	.274	9.427	.541
VSW4	77	4.61	.861	-2.703	.274	7.668	.541
VSW5	77	4.70	.779	-3.360	.274	12.460	.541
VSW6	77	4.61	.905	-2.850	.274	8.303	.541
VSA1	77	4.61	.830	-2.704	.274	8.192	.541
VSA2	77	4.61	.797	-2.372	.274	6.024	.541
VSA3	77	4.64	.776	-2.549	.274	7.136	.541
VSA4	77	4.65	.774	-2.615	.274	7.443	.541
VSA5	77	4.61	.830	-2.704	.274	8.192	.541

Descriptive analysis was conducted to examine the central tendency and distribution characteristics of each measurement item. The mean scores of all items ranged between 4.39 and 4.70, indicating generally high levels of agreement among participants across the constructs. Standard deviations ranged from 0.774 to 1.066, reflecting relatively low response dispersion.

Skewness values were all negative, from -1.780 to -3.360, suggesting a left-skewed distribution with most respondents selecting higher values on the Likert scale. Kurtosis values ranged from 2.465 to 12.460, indicating leptokurtic distributions with a strong peak around the mean. These results suggest that the data were not perfectly normally distributed, but the high consistency and concentration of responses demonstrate good internal coherence within the constructs. Such distribution patterns are common in self-reported attitudinal surveys, especially when measuring favorable perceptions or behaviors.

6.2 Reliability Analyze

Table 4: Reliability Analyze

Construct	Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
Family Support (FS)	FS1	.902	.911	.941
	FS2	.903	.912	
	FS3	.798	.953	
	FS4	.876	.918	
School Support (SST)	SST1	.903	.941	.957
	SST2	.809	.967	
	SST3	.927	.933	
	SST4	.946	.928	
Government Support (GS)	GS1	.950	.971	.979
	GS2	.930	.978	
	GS3	.967	.966	
	GS4	.945	.973	
Volunteering Willingness (VSW)	VSW1	.899	.977	.978
	VSW2	.965	.971	
	VSW3	.963	.971	
	VSW4	.909	.976	
	VSW5	.960	.972	
	VSW6	.884	.979	
Volunteering Behavior (VSB)	VSB1	.974	.978	.985
	VSB2	.938	.984	
	VSB3	.970	.979	
	VSB4	.967	.980	
	VSB5	.929	.985	

The internal consistency of each construct was assessed using Cronbach's Alpha and corrected item-total correlation. All constructs demonstrated excellent reliability, with Cronbach's Alpha values ranging from 0.941 to 0.985, significantly exceeding the acceptable threshold of 0.70. Specifically, Family Support ($\alpha = 0.941$), School Support ($\alpha = 0.957$), and Government Support ($\alpha = 0.979$) indicated strong internal consistency. Similarly, Volunteering Willingness ($\alpha = 0.978$) and Volunteering Behavior ($\alpha = 0.985$) also exhibited high reliability. Furthermore, all corrected item-total correlations were greater than 0.79, suggesting that each item contributed meaningfully to the overall scale. These findings confirm that the measurement scales used in this study are psychometrically robust and suitable for subsequent structural equation modeling.

Table 5: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.810
Bartlett's Test of Sphericity	Approx. Chi-Square	4073.827
	df	253

Sig.	.000
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This study conducted the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity. The results showed that the KMO value was 0.810, exceeding the recommended threshold of 0.70, indicating that the sample data were suitable for factor analysis (Hair et al., 2020). In addition, Bartlett's test of sphericity was significant ($\chi^2 = 4073.827$, $df = 253$, $p < 0.001$), suggesting that the correlation matrix was not an identity matrix and that the variables were sufficiently correlated.

6.3 Assessment of Multicollinearity Table 6: Analysis of Multicollinearity Coefficients^a

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics	
						Tolerance	VIF
1	(Constant)	.270	.166	1.630	.107		
	MeanFS	-.020	.112	-.175	.861	.088	11.351
	MeanSST	.125	.151	.828	.410	.047	21.120
	MeanGS	-.066	.096	-.691	.492	.104	9.571
	MeanVSW	.898	.095	9.440	.000	.134	7.441

a. Dependent Variable: MeanVSB

To examine potential multicollinearity among the variables, the Variance Inflation Factor (VIF) and tolerance values were assessed. The results indicated that all VIF values exceeded the commonly accepted threshold of 10, particularly for school support (VIF = 21.120), family support (VIF = 11.351), and government support (VIF = 9.571), suggesting severe multicollinearity among these predictors. In contrast, the VIF for volunteering willingness was 7.441, which, while below 10, still suggests a relatively high degree of collinearity. These findings imply that the support variables may be highly intercorrelated, potentially distorting regression estimates. Therefore, it is recommended to further assess model specification or consider dimensional reduction techniques (e.g., factor analysis or removing redundant variables) to address this issue.

6.4 Structural Equation Model

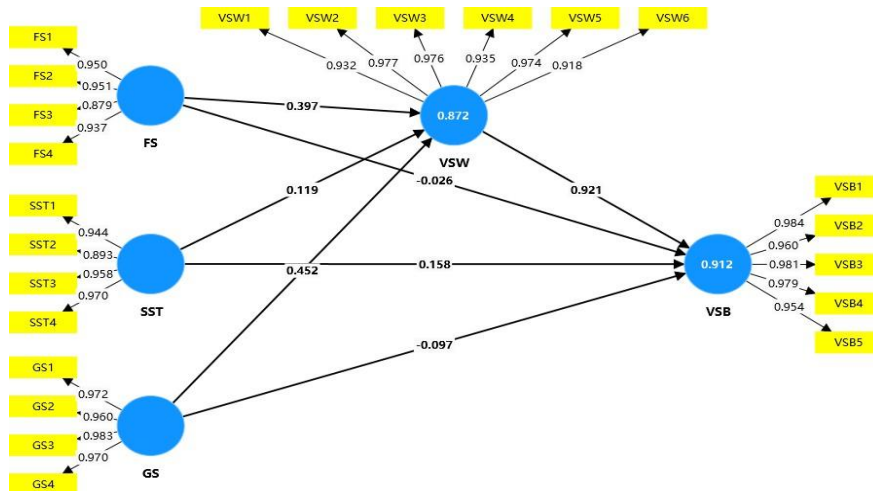


Figure 2: Structure Model

6.4.1 Measurement Model Assessment

Table 7: Composite Reliability (CR)

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
FS	0.947	0.951	0.962	0.864
GS	0.980	0.981	0.985	0.943
SST	0.957	0.958	0.969	0.887
VSB	0.985	0.986	0.988	0.944

VSW	0.979	0.980	0.983	0.907
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To assess the reliability and convergent validity of the constructs, composite reliability (CR), Cronbach's alpha, and average variance extracted (AVE) were examined. All constructs demonstrated excellent internal consistency, with Cronbach's alpha values ranging from 0.947 (FS) to 0.985 (VSB), and composite reliability (rho_c) values exceeding the recommended threshold of 0.70. Furthermore, the AVE values for all latent constructs were above the 0.50 benchmark, ranging from 0.864 (FS) to 0.944 (VSB), indicating satisfactory convergent validity (Hair et al., 2020). These results confirm that the measurement model exhibits strong reliability and convergent validity.

Table 8:Fornell–Larcker Criterion

	FS	GS	SST	VSB	VSW
FS	0.930				
GS	0.855	0.971			
SST	0.947	0.934	0.942		
VSB	0.865	0.858	0.886	0.972	
VSW	0.896	0.902	0.916	0.954	0.952

To assess discriminant validity, the Fornell–Larcker criterion was applied. According to this criterion, the square root of the average variance extracted (AVE) for each construct should be greater than its correlations with any other construct. As shown in Table 8, the diagonal values (square roots of AVE) are all higher than the corresponding off-diagonal correlations, confirming that discriminant validity is established among all constructs (Fornell and Larcker, 1981; Hair et al., 2020). These results suggest that each construct is empirically distinct from the others in the measurement model.

6.4.2 Structural Model Assessment

Table 9: Path Coefficients

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
FS -> VSB	-0.026	-0.027	0.307	0.086	0.932
FS -> VSW	0.397	0.392	0.250	1.592	0.011
GS -> VSB	-0.097	-0.107	0.226	0.429	0.668
GS -> VSW	0.452	0.521	0.327	1.380	0.038
SST -> VSB	0.158	0.200	0.384	0.410	0.082
SST -> VSW	0.119	0.051	0.441	0.269	0.038
VSW -> VSB	0.921	0.886	0.202	4.566	0.000

Table 10: Specific indirect effect

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
SST -> VSW -> VSB	0.109	0.040	0.417	0.262	0.023
FS -> VSW -> VSB	0.366	0.353	0.251	1.460	0.044
GS -> VSW -> VSB	0.416	0.460	0.323	1.288	0.018

As shown in Table 9, only the path from volunteering willingness (VSW) to volunteering behavior (VSB) was statistically significant ($\beta = 0.921$, $t = 4.566$, $p < 0.001$), indicating that intention is the primary driver of actual behavior. Direct paths from family support (FS), school support (SST), and government support (GS) to VSB were all non-significant ($p > 0.05$), suggesting no direct effect of these support types on behavior.

However, several significant indirect effects were observed. FS, GS, and SST all showed indirect effects on VSB through VSW. Specifically, the indirect effect of FS on VSB via VSW was significant ($\beta = 0.366$, $p = 0.044$), as was GS ($\beta = 0.416$, $p = 0.018$) and SST ($\beta = 0.109$, $p = 0.023$). These findings indicate that family, government, and school support influence volunteering behavior mainly by enhancing individuals' willingness to volunteer, which in turn leads to action. Therefore, VSW functions as a full mediator in this structural model.

7. DISCUSSION

The findings of this study partially supported the proposed hypotheses. Specifically, school support (FS) and government support (GS) significantly influenced students' volunteer service willingness (VSW), which in turn had a strong and significant effect on their volunteer service behavior (VSB). The mediating role of VSW between FS, GS, SST (social support theory), and VSB was also confirmed. However, direct paths from FS, GS, and SST to VSB were not statistically significant, indicating that intention plays a pivotal mediating role in the transformation of support into behavior. These results resonate with the Theory of Planned Behavior (Ajzen, 1991), suggesting that perceived support increases behavioral intention, which then directly predicts behavior. This aligns with findings by Esfandiar and Hadinejad (2025), and Xu et al. (2021), who emphasized the crucial role of perceived support in activating volunteer intentions.

Compared with previous studies, this research further deepens the understanding of social support in the context of youth volunteerism. While earlier research recognized the value of family and institutional support (Einolf, 2021; Burns et al., 2025), this study confirms that school and government support, rather than family support, are the most effective predictors of volunteer willingness among university students. This discrepancy may reflect the increasing institutionalization of volunteer programs and the stronger influence of formal social structures over familial encouragement. Additionally, the strong path coefficient from VSW to VSB ($\beta = 0.921, p < 0.001$) provides empirical support for expanding the TPB framework by reinforcing the central role of "willingness" in bridging the gap between cognition and action. This complements Zhang et al.'s (2024) argument that motivational cognition and role identity serve as key intermediaries between organizational factors and actual participation.

Theoretically, this study extends the application of Social Support Theory by empirically demonstrating its multidimensional structure and its effect on prosocial behaviors through psychological pathways. While prior research often treated social support as a background variable (Alić et al., 2022), this study explicitly models it as a core antecedent influencing volunteer intention. Moreover, the study supports the MOA framework (Qu & Wang, 2023), confirming that motivation (VSW), shaped by environmental support, mediates the impact of institutional opportunity on behavior. Hence, the role of "intention" is not only pivotal but dynamic in translating support into sustained action.

From a practical standpoint, the findings suggest that higher education institutions should prioritize the cultivation of a volunteering-friendly campus culture through leadership endorsement, service-learning integration, and recognition mechanisms. As demonstrated by Burns et al. (2025), when volunteerism is embedded in academic and extracurricular settings, students' willingness and engagement increase significantly. Furthermore, training and branding initiatives can reinforce students' civic identities, increasing the sustainability of volunteer behavior.

For policymakers, the study offers clear guidance: enhancing governmental support structures—through resource allocation, incentive schemes, and volunteer policy frameworks—can significantly stimulate youth engagement. This is in line with the recommendations of the United Nations Volunteers (2022) and the Malaysia VNR (2025), which advocate for collaborative governance models that mobilize both state and civil actors. Especially in the post-pandemic context, government-led strategies can amplify social impact by integrating volunteerism into national youth development agendas.

8. CONCLUSION

This study investigated the influence of family support (FS), school support (SST), and government support (GS) on students' volunteering behavior (VSB), with volunteering willingness (VSW) as a mediating variable. The results showed that VSW was the only significant direct predictor of VSB ($\beta = 0.921, p < 0.001$), while FS, SST, and GS had no direct effect on behavior. This confirms the central role of intention in driving actual volunteering.

Importantly, FS, SST, and GS all exhibited significant indirect effects on behavior through VSW, suggesting that external support enhances students' willingness to volunteer, which in turn leads to action. These findings provide empirical support for the Theory of Planned Behavior and demonstrate that willingness functions as a full mediator between social support and volunteering behavior.

Theoretically, this study enriches the understanding of how contextual factors influence prosocial action via internal motivation. Practically, it underscores the need for policies and interventions that not only provide external resources but also actively cultivate students' willingness to engage. Universities, governments, and families should focus on fostering value-driven motivations to translate support into meaningful participation.

9. Limitations and Future Research

This study has several limitations. First, the sample was restricted to university students in Heilongjiang Province, which limits the generalizability of the findings. The absence of cross-regional or cross-cultural comparisons constrains our understanding of whether the observed patterns hold in different social or institutional contexts. Moreover, the relatively small sample size may reduce statistical power and increase the potential for sampling bias.

Second, the study adopted a cross-sectional design, which restricts the ability to draw causal inferences between social support, volunteering willingness, and behavior. Although structural equation modeling provides insight into potential pathways, it cannot establish temporal precedence or rule out reciprocal relationships.

Future research should consider longitudinal or experimental designs to track changes in volunteering intentions and behaviors over time. Additionally, incorporating contextual variables—such as post-pandemic recovery dynamics, institutional volunteer culture, or digital volunteering trends—may yield deeper insights into how support systems operate under evolving conditions.

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