



Effects of civic education on adolescents' organized and personal volunteering: Mediating role of civic interest

Suran Guo¹, Hongmin Chen²

¹Psychological and Educational Research Center, University of International Relations, People's Republic of China

²School of Marxism, Capital Normal University, People's Republic of China

How to cite: Guo, S., & Chen, H. (2022). Effects of civic education on adolescents' organized and personal volunteering: Mediating role of civic interest. *Social Behavior and Personality: An international journal*, 50(12), e11882

This study explored the mediating effect of civic interest in the relationship between adolescents' civic education and volunteering (organized and personal). Participants were 967 adolescents in northern China (435 girls, 520 boys, 12 who did not specify their gender; $M_{\text{age}} = 15.31$ years), who completed the Civic Interest Scale, the Civic Education Scale, and the Volunteer Behavior Scale in a cross-sectional survey. Results indicated that personal volunteering was significantly more common than organized volunteering, and that civic interest partially mediated the relationships between civic education and organized volunteering, and between civic education and personal volunteering. School location (big city/small city vs. small town) moderated the mediating model, with larger mediating effects being present for respondents living in a small city compared to a big city, but no significant differences being found in the structural path between big-city and small-town settings or between small-city and small-town settings. In sum, during adolescence, personal volunteering was the main form of volunteer activity, and the partial mediating mechanism of civic interest was common to both organized and personal volunteering types.

Keywords

personal volunteering, civic education, civic interest, organized volunteering, adolescence, school location

Article Highlights

- Personal volunteering was found to be more common than organized volunteering during adolescence.
- Civic interest mediated the relationship between civic education and both organized and personal volunteering types.
- There were significant differences in the mediating effect of civic interest between big-city and small-city settings.
- There were no significant differences in the mediating effect of civic interest between big-city and small-town settings or between small-city and small-town settings.

Volunteering, which is defined as any activity in which time and effort are given freely to benefit another person or group (Wilson, 2000), is part of a larger cluster of helping or civically oriented behaviors. Adolescence (ages 13–18 years) is the crucial period to develop civic interest and start engaging in civic activities (Zeglovits & Zandonella, 2012). Parents' encouragement, community service, and prosocial friends promote adolescents' volunteering (van Goethem et al., 2014). Compared with the influence of family and friends, school is where the greater part of citizenship awareness

is formed, through curriculum and social practice (Koskimaa & Rapeli, 2015). This study focused on civic education in school and whether it influences volunteer behavior through motivating internal factors (e.g., civic interest).

Volunteering can be measured by frequency or motivation. The most commonly used measurement is asking how often or how long people spend on volunteering (van Goethem, 2009). However, most voluntary activities for adolescents in China are based on school-organized programs (Li, 2017), and students start and finish around the same time. Furthermore, adolescents have little extracurricular time to join volunteering organizations (H. Y. Li et al., 2014). It has been our experience that volunteering outside school programs is less organized, regular, and consistent. Thus, measuring by time or frequency cannot capture the principal characteristics of adolescents' volunteering.

Motivation, which is another factor to distinguish types of volunteering, comes in intrinsic (naturally satisfying to be volunteers) and extrinsic (achieving some related outcome from volunteering) types, as well as self-oriented (motivated primarily by self-interest) and other-oriented (motivated primarily by others, e.g., church or family) types (Finkelstien, 2009; Ranapurwala et al., 2016). Whether the definition of volunteering includes motivation is also subject to debate (Wilson, 2000). Adolescents in the United States are required to complete a certain number of hours of volunteering for graduation, and more than half of high school students report feeling pressured to engage in volunteering (Bode, 2017). Still, volunteer behavior shows benefits even if the motivation is not intrinsic, for example, it increases the probability of volunteering again in the future (Kim & Morgül, 2017).

Organized and Personal Volunteering

We divided volunteer behavior into organized and personal types. *Organized volunteering* (OV) is considered formal and is defined as unpaid activities intended to positively contribute to individuals, groups, or society within an organization (e.g., community service organized by a school; Shandra, 2017; van Goethem et al., 2014). In contrast, *personal volunteering* (PV) is considered informal and is defined as any assistance given directly—that is, not through a formal organization—to individuals in distress, for example, helping a neighbor or friend without receiving financial benefits in return (Eisenberg et al., 2006). OV often occurs within the public domain, whereas PV typically happens in private (Shandra, 2017). OV, as an extension of personal behavior into the public sphere, provides more opportunities for volunteering, which means it is more likely to be regular, planned, and sustainable (Brudney, 1990).

School offers the chance for students to participate in civic activities (Manganelli et al., 2014). Among Chinese adolescents, altruistic behavior has been found to be high, but opportunities to participate in OV are limited (Cao et al., 2017). Therefore, we proposed the following hypothesis:

Hypothesis 1: Personal volunteering will be more common than organized volunteering among Chinese adolescents.

Effects of Civic Education

Barber and Torney-Purta (2014) defined *civic education* as the knowledge and skills that enable an individual to participate effectively in public issues. More civic knowledge enhances the number of civic activities in which a citizen engages (Manganelli et al., 2014). Adolescents who report being taught civic skills and knowledge at school are more likely to be involved in civic engagement, which includes civic communication and discussion around or participation in political or social issues (Torney-Purta, 2002). Therefore, we proposed the following hypotheses:

Hypothesis 2: Civic education will have a positive influence on the organized volunteering of Chinese adolescents.

Hypothesis 3: Civic education will have a positive influence on the personal volunteering of Chinese adolescents.

Mediating Effect of Civic Interest

Civic interest is the degree to which political or social issues inspire adolescents' intrinsic motivation to attend to public affairs (Stattin et al., 2017), such as participating in political or societal activities (Haziri, 2019; Koskimaa & Rapeli, 2015). Civic interest has been found to be positively correlated with volunteering among early adolescents (Martínez et



al., 2020). Therefore, we proposed the following hypotheses:

Hypothesis 4: Civic interest will have a positive influence on the organized volunteering of Chinese adolescents.

Hypothesis 5: Civic interest will have a positive influence on the personal volunteering of Chinese adolescents.

Self-determination theory (Ryan & Deci, 2000) purports that intrinsic motivation depends on how social contexts fulfill or deny the psychological needs for competence, relatedness, and autonomy. Civic education in schools facilitates the conditions needed to trigger and strengthen civic interest (Koskimaa & Rapeli, 2015; Russo & Stattin, 2017). Torney-Purta (2002) surveyed adolescents in 28 countries and found that having a civic education curriculum was associated with political interest. Thus, we proposed the following hypothesis:

Hypothesis 6: Civic education will have a positive influence on the civic interest of Chinese adolescents.

Since civic education triggers adolescents' interest in civic affairs, and civic interest inspires the desire for civic engagement, we proposed the following hypotheses:

Hypothesis 7: Civic interest will mediate the relationship between civic education and organized volunteering among Chinese adolescents.

Hypothesis 8: Civic interest will mediate the relationship between civic education and personal volunteering among Chinese adolescents.

Wilson (2002) reported that girls are more likely to become involved in volunteering than are boys. However, less is known about whether and how gender moderates the relationships between civic education, civic interest, and volunteering. Further, big cities in China tend to be allocated more public resources that are required for volunteering, such as books, digital resources, teachers, and educational materials (Wen & Gu, 2017). We therefore tested the mediation model for differences between boys and girls and also school locations (big cities, small cities, small towns).

Method

Participants and Procedure

We recruited 967 middle school students ($M_{\text{age}} = 15.31$ years, $SD = 1.67$, range = 11–19) via random sampling of five middle schools in the north of China, including two schools in big cities, two schools in small towns, and one school in a small city. Teachers and undergraduate students of psychology underwent a training program before administering the cross-sectional survey to the respondents. The purpose and nature of voluntary and confidential participation were emphasized. The study procedures met the ethical standards of the Ethics Committee of North China University of Science and Technology (approval no. 2020194) and those of the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. Participation was agreed upon by the school, adolescents themselves, and their parents. All participants signed an informed consent form to use their data and were given a small gift (pen, pencil, or notepad, valued at CNY 2/USD 0.29) at the end of the survey. Demographic details for the sample are shown in Table 1.

Table 1. *Description of Sample Demographics*

		<i>n</i>	%	<i>M</i>	<i>SD</i>
Gender	Girls	435	45.0	15.10	1.76
	Boys	520	53.8	15.48	1.62
	Not specified	12	1.2		
School type	Junior high school	492	50.9	14.01	1.14
	Senior high school	475	49.1	16.67	0.93
Grade	First grade junior high	205	21.2	12.99	0.73
	Second grade junior high	161	16.6	14.53	0.81
	Third grade junior high	125	12.9	15.03	0.55
	First grade senior high	165	17.1	16.12	0.80
	Second grade senior high	199	20.6	16.65	0.76
	Third grade senior high	156	10.7	17.56	0.72
School location	Big city	156	16.1	15.03	1.99
	Small city	675	69.7	15.28	1.72
	Small town	136	14.2	15.84	1.03
Total		967	100.0	15.31	1.67

Measurements

Volunteer Behavior Scale for Adolescents

Volunteer behavior was measured with six self-reported items developed for this study, with responses made on a 6-point Likert scale ranging from 0 = *never* to 5 = *always*. The measure comprises two dimensions: OV (four items: being a volunteer for an organization, joining in community service activities, participating in a public welfare organization, and joining an environmental protection organization), and PV (two items: helping out elders in the neighborhood and assisting people who are living in poverty). The items were decided on following an informal interview with five middle school administrators and a review of other studies in the literature. A confirmatory factor analysis (CFA) showed the scale had good structural validity, chi square/degrees of freedom (χ^2/df) = 2.88, $p < .001$; root mean square error of approximation (RMSEA) = .04, standardized root mean square residual (SRMR) = .03, normed fit index (NFI) = .98, incremental fit index (IFI) = .99, comparative fit index (CFI) = .99. Cronbach's alphas in this study were .77, .75, and .74 for the whole scale and the OV and PV subscales, respectively.

Civic Education

Civic education was measured with 12 self-reported items rated on a 6-point Likert scale ranging from 1 = *never* to 6 = *very frequently* (Luo, 2007). The items assessed civic education knowledge and skills acquired in course experience. Higher total scores indicate a higher level of civic education. Cronbach's alpha in this study was .89.

Civic Interest

Civic interest was measured with nine self-reported items rated on a 6-point Likert scale ranging from 1 = *never* to 6 = *very frequently*. Items were designed to assess the frequency of adolescents' concern about public issues (Luo, 2007). The higher the score, the greater the interest in public issues. Cronbach's alpha in this study was .90.

Demographics

A final section of the questionnaire contained demographic variables, including age, gender, and years of education completed by father and mother.

Data Analysis

This study used SPSS 22.0, Amos 22.0, and HLM Student 6.0 to analyze data.

Results

Test of Common Method Bias

We conducted a CFA by modeling one, two, three, and four common factors, and the results show that the fit statistics were poor for both the one-factor model, $\chi^2/df = 13.42$, $p < .001$; RMSEA = .10, NFI = .62, IFI = .64, CFI = .64, and the two-factor model, $\chi^2/df = 7.41$, $p < .001$; RMSEA = .08, NFI = .79, IFI = .82, CFI = .82. The fit of the three-factor model was acceptable, $\chi^2/df = 3.87$, $p < .001$; RMSEA = .06, NFI = .89, IFI = .92, CFI = .92, and that of the four-factor model was good, $\chi^2/df = 2.95$, $p < .001$; RMSEA = .06, NFI = .92, IFI = .95, CFI = .95. Therefore, common method bias was not a significant concern in this study.

Preliminary Analysis

Preliminary analysis showed that school type and school location should be controlled for in the mediating model, and that the intraclass correlation coefficient was .09, which is below the recommended minimum threshold of .10. Thus, the data were not suitable for hierarchical linear regression modeling (Kreft, 1996).

Instead, we conducted a mixed analysis of variance with volunteering type as the within-subjects factor and school type as the between-subjects factor. The result for PV was significantly higher than that for OV, $F(1, 964) = 627.97$, $p < .001$, $\eta^2 = .39$, and the interaction term reached statistical significance, $F(1, 964) = 12.85$, $p < .001$, $\eta^2 = .01$. A simple effects analysis showed that in both junior high school and senior high school, the result for PV was significantly higher than that for OV, $M_{PV-junior} = 4.85$, $SD_{PV-junior} = 1.12$, $M_{OV-junior} = 3.62$, $SD_{OV-junior} = 1.35$, $M_{PV-senior} = 4.70$, $SD_{PV-senior} = 1.11$, $M_{OV-senior} = 3.77$, $SD_{OV-senior} = 1.20$, $ps < .001$. Thus, Hypothesis 1 was supported.

All Pearson correlations between any two key variables were positive and statistically significant ($r = .34-.58$, $ps < .01$; see Table 2). The number of years of education completed by mother and father were positively correlated with both OV and PV, so we controlled for these factors in subsequent analyses.

Table 2. *Pearson Correlation Results for Key Variables*

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Organized volunteering	1.06	1.28	1						
2. Personal volunteering	4.76	1.09	.43**	1					
3. Civic education	4.67	0.87	.35**	.34**	1				
4. Civic interest	4.23	1.06	.55**	.41**	.45**	1			
5. Age	15.31	1.67	.06	-.05	-.06	.01	1		
6. Years of education of father	10.69	2.99	.07*	.07*	.02	.06	-.04	1	
7. Years of education of mother	10.66	3.14	.09*	.07*	.01	.08*	.02	.62**	1

Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Tests of Mediating Effects

Structural equation modeling was used to test the mediating model (see Figure 1). Model fit indices were as follows: $\chi^2/df = 3.10$, $p < .001$; RMSEA = .05, SRMR = .05, NFI = .89, IFI = .92, CFI = .92. In the measurement model, standardized factor loadings ranged from .52–.72 for civic education, .57–.81 for civic interest, .73–.79 for PV, and .52–.79 for OV.

For OV, the indirect effect was .29 ($SE = 0.03$), 95% confidence interval (CI) [0.23, 0.35], the direct effect was .15 ($SE = 0.04$), 95% CI [0.06, 0.23], and the total effect was .43 ($SE = 0.04$), 95% CI [0.36, 0.51]. The amount of variance explained by the mediating effect was $.29/.43 = 66.05\%$. Thus, civic interest partially mediated the effect of civic education on OV. Therefore, Hypotheses 2, 4, 6, and 7 were supported.

For PV, the indirect effect was .18 ($SE = 0.03$), 95% CI [0.13, 0.25], the direct effect was .24 ($SE = 0.06$), 95% CI [0.12, 0.26], and the total effect was .42 ($SE = 0.04$), 95% CI [0.36, 0.48]. The amount of variance explained by the mediating effect was $.18/.42 = 43.68\%$. Thus, civic interest partially mediated the effect of civic education on PV. Therefore, Hypotheses 3, 5, and 8 were supported.

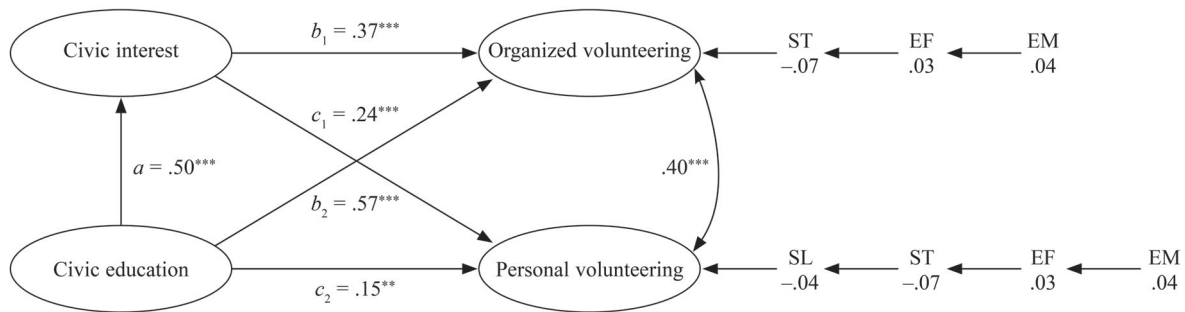


Figure 1. *Structural Equation Model Examining the Mediating Role of Civic Interest in the Link Between Civic Education and Organized or Personal Volunteering*

Note. Standardized path coefficients are presented. SL = school location (city/ town); ST = school type (junior/senior high school); EM = years of education of mother; EF = years of education of father. Because school type and school location were categorical variables, we entered the following dummy codes into the model: 0 = junior high school, 1 = high school; 0 = school located in a city, 1 = school located in a town.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Critical ratios for the differences between parameters showed that there were statistically significant path coefficients for c_1 and c_2 ($z = 5.44$, $p < .001$), and between path coefficients b_1 and b_2 ($z = 5.71$, $p < .001$). Because the mediating effect was $a \times b$, the mediating effect for OV was greater than that for PV.

Moderating Effects of Gender and School Location

The mediating model in Figure 1 was tested for moderation across gender. After carrying over the fully or partially constrained factors from the measurement models, the structural path was not fully invariant across genders, $\Delta\chi^2(32) = 48.90$, $p < .05$. Critical ratios for differences between parameters showed that the path coefficient from civic education to OV was significantly different between boys ($\beta = .31$, $p < .001$) and girls ($\beta = .06$, $p = .42$), $z = 2.82$, $p < .01$. Releasing this path resulted in an acceptable change in model fit, $\Delta\chi^2(12) = 21.75$, $p < .05$.

Moderation across school location (big city/small city/small town) was also tested. After carrying over the fully or partially constrained factors from the measurement models, differences in the structural path between big city and small town, $\Delta\chi^2(31) = 39.04$, $p > .05$, and small city and small town, $\Delta\chi^2(31) = 30.73$, $p > .05$, were not statistically significant. Critical ratios for differences between parameters showed that the path coefficient from civic education to civic interest was significantly different between big cities ($\beta = .30$, $p < .01$) and small cities ($\beta = .55$, $p < .001$), $z = 2.18$, $p < .01$. Releasing this path resulted in an acceptable change in model fit, $\Delta\chi^2(11) = 19.68$, $p < .05$. Furthermore, the indirect effects were significantly larger for the small cities ($\beta = .32$ and $.19$, respectively, for OV) than for the big cities ($\beta = .17$ and $.11$, respectively, for PV).

Discussion

Theoretical and Practical Implications

PV was found to be more common than OV among adolescents in this study. Highly technical skills are a critical determinant of choosing organized rather than informal volunteering activities (Lee & Brudney, 2012). Adolescents lack fixed extracurricular time and the service skills to engage in OV; additionally, opportunities provided by their school to join volunteer organizations are limited (Lv, 2012). In comparison, limitations to engaging in PV are fewer: it may lack the structure of OV but service skills are not a requirement.

This study found that civic education and civic interest positively predicted OV and PV, which is consistent with the findings of Koskimaa and Rapeli (2015) and Torney-Purta (2002). Through civic education, adolescents get more information and knowledge about public affairs, which increases their sense of social responsibility for civic engagement, including volunteering. They also learn how to deal with issues involving individuals who have different levels of education and occupations, which facilitates their public service skills. Altruism is a core value of philanthropic culture in China: the concept of “benevolence loves others” was proposed by Confucius and Mencius. Under this tenet, adolescents’ volunteer behavior should be cultivated and promoted (Lu & Sun, 2016).

We found that civic interest mediated the links between civic education and both OV and PV. Civic knowledge, curriculum experience, and skills have been reported to positively predict civic interest (Campbell, 2008; García-Albacete, 2013; Koskimaa & Rapeli, 2015; Zeglovits & Zandonella, 2012), which, in turn, enhances participation in civic activities or public issues (Verba et al., 1995). However, the mediating effect we observed for PV was lower than that for OV. Education is more strongly related to OV among adults, whereas internal factors like empathy correlate more strongly with PV (Mitani, 2012; Wilhelm & Bekkers, 2010).

In the mediating model, civic education significantly predicted OV among boys but not girls. In their empirical study, Lai et al. (2018) found that prosocial behavior showed no difference between boys and girls; however, prosocial norms, reasoning, and empathy were much higher among girls than boys. Thus, for girls, the combined results indicate that individual factors affect volunteer behavior more than do environmental factors.

The mediating model differed between school locations in big and small cities, with small cities having a more significant mediation effect of civic education on both OV and PV. Resource theory states that volunteering, organizational and communication skills, understanding of community affairs, and social networks are resources that increase the chances of volunteering (Mitani, 2014). As there are more educational resources in urban than rural areas, there are also more opportunities for volunteering in the former areas.

Limitations and Directions for Future Research

This study has limitations. First, our study design meant we could not establish a causal relationship between civic education and volunteering types. This link could be explored in future research by using a longitudinal study design. Second, analysis of educational resources and further demographic factors related to schools (e.g., roll size, faculty size and teaching experience, private vs. public) can be added in future studies. Third, we examined only civic education and civic volunteering as mediators. Other mediating or moderating mechanisms that may influence this relationship could be examined in the future.

Conclusion

Our results imply that OV and PV have a common mediating mechanism. Motivating civic interest and enhancing civic education and educational resources will help to promote volunteering from small-scale private or personal settings to larger organized behavior.

Acknowledgments

This study was supported by the Research Funds for NSD Construction, University of International Relations (2019GA39).

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