

# Statistical Analysis on Volunteering Activity Among Pre-University Students

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**Abstract:** *Volunteering activity is an opportunity for the students to provide service to a community on a short-term basis. Volunteering focuses on the service delivered, with the service recipient acting as the beneficiary. Student volunteering as a form of community participation is not only a key aspect of higher education's goal, but it is also a curricular activity that contributes significantly to experiential learning. In view of this, the influence on students following from the involvement in volunteer activities is worth to study. This paper discusses the implications for the students participating in volunteering activities with respect to their understanding, knowledge, social responsibility, personal development and academic performance. The response was based on the 10-points Likert scale. A total of 74 students are randomly selected in this study to answer the survey. Data analysis was presented in the form of tables and figure. From the findings, students agreed that the volunteering activities contribute to their academic performance with overall mean 8.02 which is the highest, followed with understanding (7.70) and knowledge (7.39) in volunteering. This shows that volunteering activities can enhance the academic performance, understanding and knowledge among the students. In addition, a correlation analysis was conducted to examine the relationship between the domains in volunteering. The results demonstrated that there is significant positive correlation between understanding, knowledge, social responsibility, personal development and academic performance in volunteering. This provides a positive direction that volunteering activities are highly encouraged to be incorporated in a subject.*

**Keywords:** Volunteering Activity, Pre-university Students, Social Responsibility, Academic Performance

## 1. Introduction

Volunteering is an act of participating in any activity which benefits another person or group without any rewards. The volunteering activity can be in offering energy, time, knowledge, services and skills (Tran et al., 2022). It has been widely encouraged to integrate the volunteering activity in a subject, especially in universities and colleges. Volunteering has a significant impact on both students and the communities in which they volunteer (Markos, 2024). Student is able to gain precious experience in involvement in volunteering activity. In addition, volunteering activity provides an opportunity to enhance the social skills among the participants (Evans & Yusof, 2023).

It is a challenge to produce a holistic graduate with academic excellence and with good social skills (Jamaludin & You, 2019). These skills are essential in the working environment after

graduation. In addition to academic performance, students are expected to demonstrate leadership qualities, communication skills, the ability to work in a team (You, Tan, et al., 2020). Nonetheless, it is possible for the social skills to complement the lower academic performance. Accordingly, enhancement of social skills is required in a student's life. For this, volunteering activity has been introduced in the subject as an integral component to enhance the students' social skills. Meanwhile, volunteering activity can help to decrease tension and mentally empower volunteers (Nichol et al., 2024).

This indicates that it is crucial to have volunteering activity in a course. There are five domains served by volunteering activity including understanding, knowledge, social responsibility, personal development and academic performance. The domains show how much the volunteering activity benefits the students. There have been a lot of studies to determine the benefits of volunteering activity to the host, less studies have been conducted in understanding the implications for the students in participating in the volunteering activity (You, Chong, et al., 2020; Young, 2024).

To the authors' knowledge, studies dealing with the benefits of volunteering activity on the pre-university students are limited in the literature. Hence, this study aims to assess the impact of volunteering activity on students. The rest of the paper is structured as follows: Section 2 presents the methodology used in this study. Section 3 demonstrates the results and discussion. Finally, the main conclusions are summarized in Section 4.

## 2. Methodology

This study implemented the quantitative research approach by conducting a survey among pre-university students. The questionnaire was adapted from Selvaratnam (2013) study. The right to use and modify the questionnaire were first acquired by the researchers. The questionnaire consisted of 19 items for five domains, which are understanding, knowledge, social responsibility, personal development and academic performance. There are four items for each domain, except for the academic performance which is with three items.

A simple random sampling was used to recruit students for this study. The students need to be involved in at least one volunteering activity which is under one program subject. The participation of the students was anonymous. Moreover, an informed consent was obtained prior to the study. A pilot test was conducted among 35 students selected using a simple random sampling procedure. A reliability test was employed and the questionnaire has a Cronbach's Alpha value of 0.83. This suggested that all items had a high level of reliability.

A total of 80 questionnaires were distributed. The response rate in this study was 92.5%, with 74 students participated in this study. Note that each item in the questionnaire is rated on a 10-point scale ranging from 1 = "least desirable" or "least acquired" to 10 = "most desirable" or "most acquired". The item scores were added to obtain a final score for each domain. Finally, mean and standard deviation for each domain were obtained. For inferential statistics, the correlation analysis was used to examine the relationship between the five domains. Here, the stated research hypothesis is a significant positive correlation exists between the domains.

## 3. Results and Discussions

The objective of this research is to investigate the impact of volunteering activity on the students. Based on the various activities organised for the subject and the learning process

throughout the semester, the students' responses to the survey were assessed. In light of this, five domains were taken into account, which are understanding, knowledge, social responsibility, personal development and academic performance. Table 1 shows the mean and standard deviation results for each domain.

**Table 1: Mean and standard deviation for five domains.**

	Understanding	Knowledge	Social Responsibility	Personal Development	Academic Performance
Mean	7.6993	7.3851	7.2128	7.2264	8.0225
Std Deviation	1.20784	1.23878	1.44635	1.41189	1.30487

From Table 1, we can see that academic performance with the highest mean, i.e. 8.0225, followed with understanding (7.6993) and knowledge (7.3851). This indicates that the participation in volunteering activity enhances the academic performance, understanding and knowledge of the students. This was useful in determining the benefits derived by the students through their participation in the volunteering activity. This has helped to prove that subject-based volunteering activity is successful in enhancing the academic performance of the students.

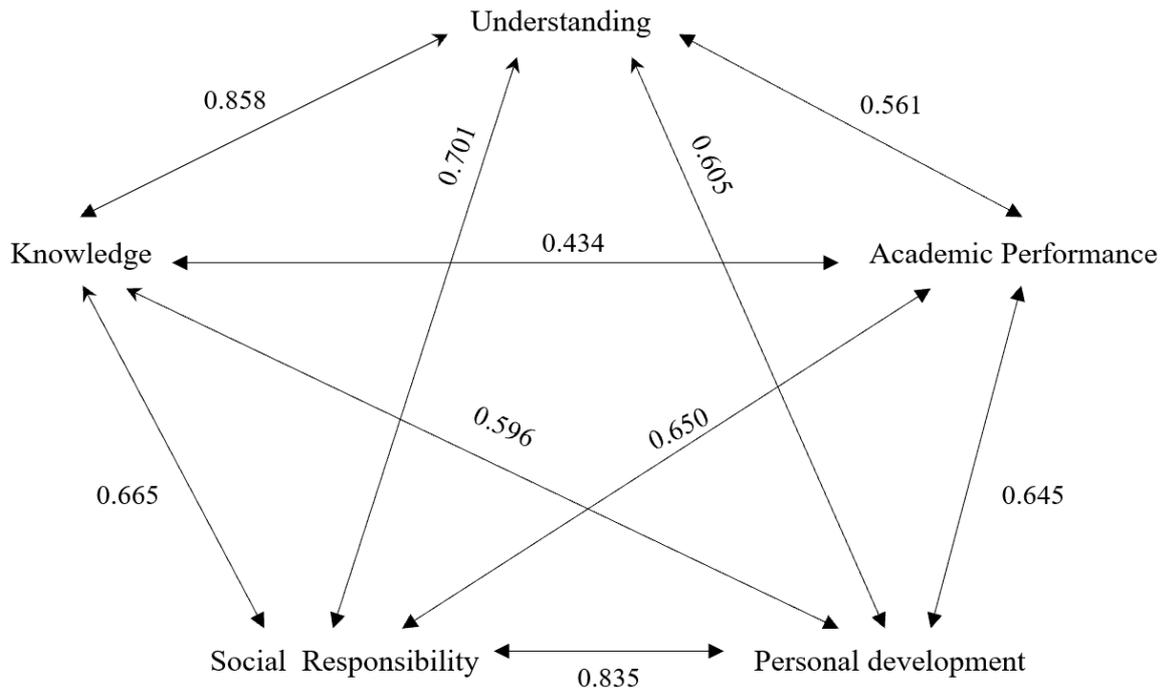
Table 2 displays the analysis results for every item in the five domains. For understanding domain, the average minimum and maximum values are 2.25 and 10, respectively. Meanwhile, the students' understanding on volunteer shows the highest mean, which is 8.0270. This indicates that students understand the volunteering activity they have carried out. Next, for the knowledge domain, the mean minimum and maximum values are 3 and 10, respectively with the knowledge in volunteer is the highest, i.e. 7.6351. It was noticed that the understanding in volunteering activity is higher than the knowledge in volunteer. This implies that the students' understanding is better than the knowledge in volunteering activity. On the other hand, both of the domains show that the students have higher understanding and knowledge in volunteering activity compared to other items in these domains.

For the social responsibility, the average minimum and maximum values are 1.5 and 10, respectively. Among the four items in the domain of social responsibility, the item "I can contribute manpower in volunteer program" gained the highest mean score with 8.1757. This demonstrates that volunteering activity in a subject is able to encourage the student to be involved in volunteering program. This indirectly can increase the student's commitment in the community. This is in line with the study conducted by Emad et al. (2021), which shows that after the participants involved in the volunteering activities, the participants will always alert on the issue occurred around them. In addition, this motivates the participants to influence their friends or classmates to start the act of volunteering. Meanwhile, the mean minimum and maximum value for the domain of personal development is 2.25 and 10, respectively. The item "I am interested in volunteering" has the highest mean score, i.e. 7.9730. This shows that the student is interested in the volunteering activity following from the exposure in the subject-based volunteering program. Lastly, in the domain of academic performance, the average minimum and maximum value are 2.33 and 10, respectively. The highest mean score was observed in the item "involvement in volunteer program enhances my critical thinking" with 8.2027. In general, the students will encounter different circumstances in the involvement in volunteering activity and need to overcome the challenges, this has improved the participant's critical thinking in the process of completing the volunteering activity (Hii et al., 2023; You et al., 2021).

**Table 2: Student participation analysis results for five domains.**

	Minimum	Maximum	Mean	Std. Deviation
<b>Understanding</b>				
			7.6993	
Volunteer	3	10	8.0270	1.27110
Volunteerism	2	10	7.9054	1.29455
Volunteerism criteria	2	10	7.4189	1.46191
Involvement in volunteer program	2	10	7.4459	1.48178
<b>Knowledge</b>				
			7.3851	
Volunteer	2	10	7.6351	1.40034
Volunteerism	3	10	7.5000	1.31639
Volunteerism criteria	3	10	7.1892	1.41107
Involvement in volunteer program	4	10	7.2162	1.41683
<b>Social Responsibility</b>				
			7.2128	
I love to share information about volunteer programs	1	10	6.8514	1.91377
I will report if anyone needs a volunteer	1	10	6.7297	1.99518
I can contribute ideas for volunteer program	1	10	7.0946	1.58908
I can contribute manpower in volunteer program	3	10	8.1757	1.36851
<b>Personal Development</b>				
			7.2264	
I am interested in volunteering	4	10	7.9730	1.47093
I always find information about volunteering	1	10	6.6892	1.95094
I am able to manage volunteering program	2	10	7.0541	1.59530
I have interaction skills with others to make volunteering program successful	2	10	7.1892	1.60202
<b>Academic Performance</b>				
			8.0225	1.30487
Involvement in volunteer program helps in my academic performance	3	10	7.7162	1.49447
Involvement in volunteer program enhances my critical thinking	2	10	8.2027	1.55255
Involvement in volunteer program helps build persistence and retention levels	2	10	8.1486	1.38170

The correlation analysis was conducted to investigate the relationship between understanding, knowledge, social responsibility, personal development and academic performance to answer the stated hypothesis. Figure 1 displays the Pearson's correlation coefficient between the five domains. From Figure 1, there is a positive correlation between the domains with the correlation coefficient ranges from 0.434 to 0.858, i.e.  $0.434 < r < 0.858$ . This indicates that an increase in one domain of volunteering activity is associated with an increase in another. For example, there was a strong positive correlation between understanding and knowledge with  $r = 0.858$ . This shows that when understanding level in volunteering increases, the knowledge in this area also increases. On the other hand, weak positive correlation exists between knowledge and academic performance with  $r = 0.434$ . Note that all the results in Figure 1 is significant with  $p$ -value = 0.000. This suggests that a positive correlation exists within the broader population.



**Figure 1: Pearson's Correlation Coefficient between Understanding, Knowledge, Social Responsibility, Personal Development and Academic Performance.**

#### 4. Conclusion

The findings of this study show that the volunteering activity in enhancing the academic performance, understanding and knowledge among the students related to volunteer program. Moreover, there was significant positive correlation between understanding, knowledge, social responsibility, personal development and academic performance. This indicates that the domains are interrelated to one another. The volunteering activity also provides an opportunity and platform for the students to be involved in beneficial activities which could contribute to the community. From the volunteering activity, students have demonstrated the ability and capability in conducting the activities. This study used the survey form in determining the extent to which the students benefit from their involvement in the volunteering activity. The findings were useful in examining the level of benefit the students acquired from the volunteer program. This also shows that participants of voluntary program benefit academically, and they also show improvement in personal development such as in life skills, civic and social responsibility. In the future, researcher can use quantitative and qualitative method in the study for better triangulation of results.

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