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RESEARCH PAPER

Identifying Volunteers' Motivation: A Factor Analysis Study

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Abstract

This paper focuses on the motivational factors that influence the volunteering acts of Universiti Utara Malaysia (UUM) students from the Foundation Management course by using factor analysis. The volunteering programme at the university are vastly expanded in the form of charity works, funding, sports activities, events, and other aspects by which the main and primary volunteers are students. This study was conducted to identify students' volunteer motivation that complement the programme organiser goal and objectives. This is a quantitative research by using factor analysis method and questionnaire survey is conducted on the UUM students (n=204). In this study, only variables with factor loading of greater than 0.4 is included in the analysis. From extraction sums of squared loading, 5 factors with eigenvalues higher than one were extracted. The volunteer's motivation of UUM students may be summarized in 5 factors which represents 61.49% of total variance explained. Research findings reveal only four main reasons that influenced students' volunteer motivation. The main factor that influenced students' volunteer motivations was self-enhancement. The other factors that follows were expression of values, career orientation, and interpersonal contacts. In the future, any volunteering programme that is planned needs to consider the students interests in order to fully maximize the students' participation which concurrently would help the organiser to achieve the desired objective and outcome of the programme itself.

Keywords: Factor analysis; Volunteers' motivation; Motivational factors

INTRODUCTION

The volunteering works have been largely expanding over the time as it is no longer constrained to only charity or funding activities but now has widen its' field and exposure in the employment sector to reach out for the students in the future. Volunteer programs have been introduced from the primary education and continuously progressing into the secondary and tertiary education. Researches on volunteer motivations are essential for the students as it would provide an upper hand towards securing and building up careers, reputation and community expectation. It has become a part of the evaluations in various areas including career opportunities (Howell, 2019).

In Malaysia, students who have graduated from institutions of higher learning are more than 200,000 students (Leo, 2018). The challenges is high for fresh graduates as they are competing with advanced technologies and human skills in starting their career; building their

own foundation along the path. The volunteering act are introduced at an early age and expected to progressively continue from time to time. Students are highly encouraged and motivated to participate in any volunteering activities. Understanding students' motivation factors in volunteering are significant either to the charity, event or any program organiser. The more volunteers participate in the activities, the more successful it is for the organiser (Doherty, 2009). For the students, their participation in any volunteering activities must have been driven by certain factors. Thus, it is very important for the event organiser to plan any event or programs that could attracts people's attention to attend voluntarily especially to the students. Hence, motivation factors plays an important role to ensure the students progressively participates in the future volunteering programme as it may help the students to pave their way to the desired goals. The main aim of this study is to identify the factors that motivate the students to volunteer.

Volunteering activities may teach students to adapt to a new situation and environment, as it can help students to improve their communication skills (Worthington, 2008). According to Cnaan et al. (2010), students' volunteers are influenced by various type of motivations including their past involvement between those volunteering regularly, those volunteering occasionally, and those not volunteering. It also stated students' voluntary activities directly affected by other youth participation.

Previous studies have discovered multiple motivations factors that influence volunteering activities. Bang and Chelladurai (2009) found six-factors using 2002 FIFA World Cup volunteer sample namely: expression of values, patriotism, interpersonal contacts, personal growth, career orientation, and extrinsic rewards by using exploratory factor and confirmatory factor analyses. By using functional approach and mixed method (Clary et al.,1996), it is found that people were motivated towards five-functions; expression values, career, social, enhancement and protective function.

Another opinion by Barron and Rihova (2011) argues that event volunteering activities is motivated by the desire to develop skills and enhance career opportunities. Holdsworth (2010) mentioned that the motives of students' volunteering can change over the course of time and stated that volunteering activities will enhance student's resume. There is also a different motives between female and male when it comes to volunteering (Park & Lee, 2008).

MATERIALS AND METHODS

Participants

This study used secondary data that was conducted to 204 Foundation of Management, UUM students. A total of 55 male (n = 55) and 149 female (n = 149) respondents, aged between 18 and 19 years old. There were Malays, Chinese, Indian and other races origin from both rural and urban area.

Instruments

The questionnaire was based on the item's modification of volunteer motivation study of Clary et al. (1996). The 32-items instrument was rated on a seven-point semantic scale ranging from 1(strongly disagree) to 7 (strongly agree). Questionnaires were distributed among Foundation of

Management student. A demographic questionnaire included was gender, age, and educational background.

Methodology

The data is analysed statistically using SAS Enterprise Guide 7.1 and SPSS. First, the data was screened to check for the outliers, missing data and to meet the assumption of normality. Since the data is less than 2000, this study will refer to Shapiro Wilk Test of normality (Park, 2015). The statistics that close to 1 refer to normality. The internal consistency of the data was check by performing reliability test. The Cronbach's Alpha (Coefficient Alpha) calculated as below:

$$\alpha = \frac{k}{k-1}\left[1-\frac{\sum\sigma_i^2}{\sigma_i^2}\right]$$

where, α = coefficient of alpha, k = number of items, $\sum\sigma_i^2$ = total variance of the scale and σ_i^2 = variance of the scale. The $\alpha > 0.70$ indicates good, $\alpha > 0.80$ very good, and $\alpha > 0.90$ is excellent (McDaniel, 2018).

Next, the feasibility of the collected variables was tested using Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (Napitupulu et al., 2017) and Bartlett's Test of Sphericity. Napitupulu et al. (2017) suggest that KMO equal to or greater than 0.5, with $p < 0.05$ is suitable to be analysed.

The data is then further analysed by means of factor analysis. It is a series of statistical tests used to reduce numbers of variables into a few latent variables. Firstly, the inter-correlation between individual variables will be observed. Pearson correlation will be used to observe the linear relationship between two variables (Ly et al., 2018). It will be computed using the Pearson Product Moment function. The value of *r*,

$$r = \frac{\sum(x-\bar{x})(y-\bar{y})}{\sqrt{\sum(x-\bar{x})^2\sum(y-\bar{y})^2}}$$

Akoglu (2018) suggested that $-1 \le r \le -0.30$ and $0.3 \le r \le 1$ considered as moderate to perfect. For $-0.3 \le r < 0$ and $0 < r \le 0.3$ the variables said to have weak correlation, and for $r = 0$, there is no relationship at all.

Then, the factor analysis was conducted using principal component analysis. This is to simplify the variables into a few latent dimensions by reduction. Later the eigenvalues greater than 1 will be one of the references to retain number of factors. This study will look at the scree plot to determine the number of factors to be retained. To maximize the higher factor loading and minimize the lower factor loading, the rotational Varimax orthogonal rotation will be used. Variables that loaded onto any factor at a correlation level of > 0.5 were included in the analysis. According to Hair et al. (1995), factor loading ≥ 0.30 are at minimal level, ≥ 0.40 consider as more important and if the researcher decide to choose factor loading ≥ 0.50, it is practically significant.

RESULTS AND DISCUSSION

The data screening of 32 variables with 204 observations shown 7 missing values in the overall data. After careful observation and analysis, the missing values were replaced by the average of the respective missing variable. Some of the data have outliers, the outliers remain in the analysis since they are useful for the analysis. The normality of the variables is shown in Table 1. All the values of statistic in Shapiro Wilk for all variables were close to 1, so we can assume the variables were normally distributed.

Table 1. Test of normality.

	Shapiro-Wilk				Shapiro-Wilk		
Item	**Statistic**	**df**	**Sig.**	**Item**	**Statistic**	**df**	**Sig.**
Q1	.903	204	.000	**Q17**	.917	204	.000
Q2	.928	204	.000	**Q18**	.850	204	.000
Q3	.894	204	.000	**Q19**	.699	204	.000
Q4	.931	204	.000	**Q20**	.902	204	.000
Q5	.889	204	.000	**Q21**	.906	204	.000
Q6	.929	204	.000	**Q22**	.894	204	.000
Q7	.918	204	.000	**Q23**	.905	204	.000
Q8	.888	204	.000	**Q24**	.929	204	.000
Q9	.889	204	.000	**Q25**	.860	204	.000
Q10	.873	204	.000	**Q26**	.890	204	.000
Q11	.890	204	.000	**Q27**	.850	204	.000
Q12	.907	204	.000	**Q28**	.899	204	.000
Q13	.853	204	.000	**Q29**	.842	204	.000
Q14	.831	204	.000	**Q30**	.870	204	.000
Q15	.871	204	.000	**Q31**	.850	204	.000
Q16	.863	204	.000	**Q32**	.843	204	.000

Reliability testing conducted to check the suitability of the data to perform factor analysis. The result of Cronbach Coefficient Alpha is 0.953209. This indicate there is internal consistency between variables in the data. The KMO Measure of Sampling Adequacy return the value of 0.934 with Bartlett's Test of Sphericity less than 0.05. This represent the feasibility and suitability of the data to perform exploratory data analysis.

The determinant of the correlation matrix is less than 1, and this indicates the correlation between variables is not equal to 0, so the next step to perform factor analysis may continue. The principle component analysis returns eigenvalues with 5 factors greater than or equal to 1 (Table 2). So, it suggested 5 factors to be retained. It consists of Factor 1 with the highest value, explains 43.56% of total variance. The five factors representing 61.49% of total variance.

Table 2. Initial factor method: The eigenvalues of the correlation matrix.

Eigenvalues of the Correlation Matrix: Total= 32, Average = 1				
	Eigenvalue	**Difference**	**Proportion**	**Cumulative**
1	13.937822	12.161807	0.4356	0.4356
2	1.7760156	0.1149434	0.0555	0.4911
3	1.6610722	0.3909607	0.0519	0.543
4	1.2701115	0.2386862	0.0397	0.5827
5	1.0314253	0.0579921	0.0322	0.6149

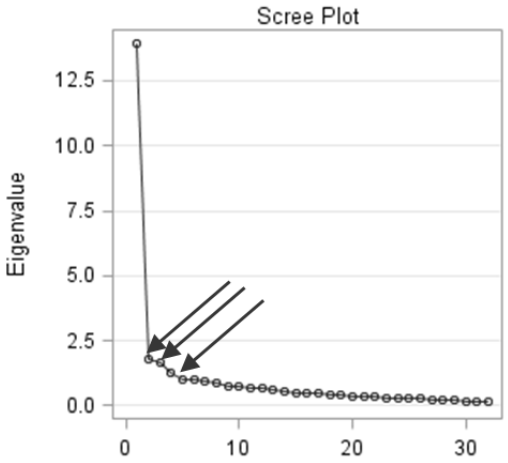

Figure 1. Scree plot.

The scree plots in Figure 1 shown a few inflexions point on the curve. This suggests that the number of factors is to be retained. Very sharp break occurs at second factor, third factor and fifth factors. The scree plot suggests either to retain 2, 3 or 5 factors. This study chooses to retain 5 factors as suggested by both the eigenvalue greater than 1 and the inflexion points on the scree plots.

The rotational orthogonal varimax optimising the factor structure is given in Table 3. The factors loading then decided to be greater than 0.4 as suggested by Hair et al. (1995). One item was removed because it falls in multi factors. Final items in each factor is, factor 1 with 10 items, factor 2 with 9 items, factor 3 with 4 items, factor 4 with 5 items and factors 5 with 3 items. The reliability of the data then tested again with 31 remained variables and by each factor.

From Table 4, this study identified only 4 main factors that represent volunteer motivations. There are factor 1, factor 2, factor 3, and factor 4. Factor 5 was removed due to poor level of internal consistency between variables in factor 5. These 4 factors were renamed as Self Enhancement, Social, Career and Interpersonal respectively (Figure 2).

Table 3. Final value of Cronbach Alpha for each factor.

Aspect	Cronbach Alpha	Interpretation
Overall	0.952	Acceptable
Factor 1	0.928	Acceptable
Factor 2	0.885	Acceptable
Factor 3	0.752	Acceptable
Factor 4	0.766	Acceptable
Factor 5	0.654	Not Acceptable

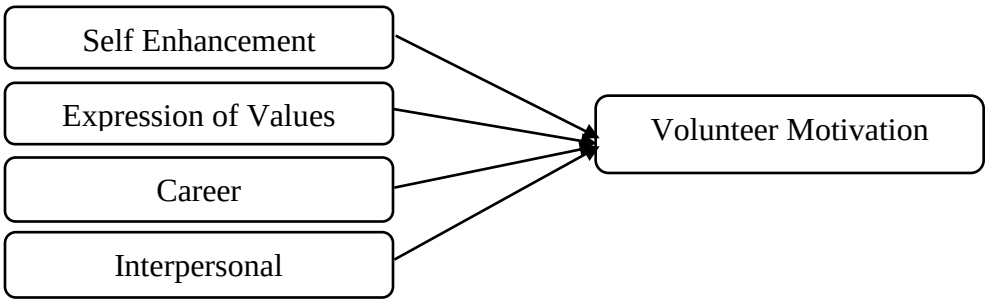

Figure 2. Framework volunteer motivation

Table 4. Item and factor loading for Factor 1 – SELF ENHANCEMENT.

Factor 1 -Self Enhancement	Item	Factor loading
I can learn more about the cause for which I am working.	Q12	0.513555
Volunteering increases my self-esteem.	Q13	0.535325
Volunteering allows me to gain in a new perspective on things.	Q14	0.723721
I feel compassion towards people in need.	Q16	0.711295
Volunteering lets me learn things through direct, hands on experience.	Q18	0.795134
I feel it is important to help others.	Q19	0.620576
I can learn how to deal with a variety of people.	Q25	0.693968
Volunteering is a way to make new friends.	Q29	0.685132
Volunteering is a way for me to help the natural environment.	Q31	0.610594
I can explore my own strengths.	Q32	0.678222

The first aspect renamed as self enhancement consist of 10 items. Internal consistency between variables, the Cronbach Alpha is 0.928. This indicates very strong consistency between variables in this factor. According to the items in Table 4, this factor is consistent with Clary et al. (1996).

Self-enhancement specifically a motivation that will reflect directly towards individual. It also represents the perception of oneself in overly positive terms (Krueger, Heck & Asendorpf, 2017). By volunteering, the person or student will have gain a sense of accomplishment.

Table 5. Item and factor loading for Factor 2 – SOCIAL.

Factor 2 – Expression of Value	Item	Factor loading
I am concerned with those less fortunate than myself.	Q03	0.549754
Volunteering makes me feel important.	Q05	0.662023
No matter how bad I've been feeling, volunteering helps me to forget about it.	Q07	0.78441
I am genuinely concerned about the particular group I am serving.	Q08	0.416076
By volunteering I feel less lonely.	Q09	0.712654
Doing volunteer work relieves me of some of the guilt over being more fortunate than others.	Q11	0.582981
Volunteering makes me feel needed.	Q26	0.577993
Volunteering makes me feel better about myself.	Q27	0.642494
I feel volunteering is a religious duty.	Q30	0.474826

The next factor is factor 2, renamed as expression of values. There are 9 items that shown in Table 5 that included in this factor. The Cronbach Alpha value is 0.885, that indicates strong internal consistency between items in this factor. These items particularly describe how the students feel while participating in the volunteering works. It involves the sense of duty towards others that are less fortunate in life. It also includes, the self-values within oneself. This factor is consistent with the study that was carried out by Clary et al. (1996). Such motivation occurs when people feel the needs to be a part of the social groups that are important. In this context, expression of value represents the desire to help others at any occasion regardless the situation either it will be beneficial to them or not.

Table 6. Item and factor loading for Factor 3 – CAREER.

Factor 3 – Career	Item	Factor loading
I can make new contacts that might help my business or career.	Q10	0.512523216
Volunteering allows me to explore different career options.	Q15	0.439965004
Volunteering will help me to succeed in my chosen profession.	Q21	0.578379187
Volunteering experiences will look good on my resume.	Q28	0.766981398

The third factor that consist of 4 items renamed as "Career". This finding also consistent with Bang and Chelladurai (2009) and Clary et al. (1996). The Cronbach alpha value shows 0.752. The internal consistency between items is acceptable. This factor may results from the desire of the student to secure a better job in the future. The items as shown in Table 6, relates with the

students' desire to explore job experiences, and adding some values in their resume. In current situation, while people are fighting to get a job, this experience, may enhance their opportunities to be selected. Volunteering activities also help students to meet with other people that directly involve in the company or in other words is building rapport. The more people they meet, it will likely to provide more job opportunities in the future.

Table 7. Item and factor loading for Factor 3 – INTERPERSONAL.

Factor 4 – Interpersonal	Item	Factor loading
Volunteering can help me get my foot in the door at a place where I would like to work.	Q01	0.505442
My friends volunteer.	Q02	0.829676
People I'm close to want me to volunteer.	Q04	0.626823
People I know share an interest in community service.	Q06	0.540315
Others with whom I am close place a high value on community service.	Q17	0.450331

The factor 4 with 5 items, renamed as Interpersonal. The Cronbach Alpha value is 0.766. The items as stated in Table 7 refer to the factors that relate with other people around the individual or student. The student does care what people see and think about volunteering activities. This aspect, interpersonal contact with others, is consistent with Clary et al. (1996) idea. It represents that the desire to join volunteering activities may results from the feeling of having positive social contact with friends and community.

CONCLUSIONS

The aim of this study was to identify the factors that motivate student to volunteer by using factor analysis. The main factor concluded as self-enhancement which contributed 43.56% proportion of variances of the sample. The main reason that students want to volunteer is because they want to enhance themselves. The second factor consist of 5.55% of proportion variance, is values of expression. The third factor, with 5.19% is career and factor four with 3.97% is interpersonal. For factor 2, factor 3 and factor 4, the proportion are almost close to each other. The volunteering activities will work as an extra point to the students in the area of values, career opportunities and interpersonal relationship.

This finding provides useful implications for other researchers who are working in this field. Nearly all students in Malaysia universities' are encouraged and required to participate in many volunteering programme that is held at the university including talk, sports, event organization, and others. Their involvement would directly and indirectly assist to the success of the event. This study recommends the program organiser to highlight the importance of the events or programs in order to attract students to participate in volunteering activities. This would be an important task to the organiser towards maximizing the participation rate in volunteering activities in this target group which by the end of the day would become a relevant contribution to their current and future career.

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