

Fostering Sustainable Service for Disabled Communities Through Youth Volunteerism: An Analysis of Key Characteristics Using Fuzzy Delphi Methodology

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Abstract

Purpose: Services for Persons with Disabilities (PWD) not only involve physical needs, but educational services, particularly in the area of religious education. This includes the study of the Quran and *fardhu ain*, which are crucial for PWD who practice Islam. However, special needs and specific methods must be considered to ensure that Islamic education can be effectively conveyed, whether by individuals or volunteer organizations. Since outreach efforts for PWD require a lot of manpower and specific skills, this study takes the approach that there is a need for youth volunteers who can provide services to PWD. While there are various types of volunteer organizations available, there are not many that focus on outreach efforts for PWD in Malaysia. This has led to a lack of understanding and appreciation of Islam among the PWD community. Therefore, the objective of this study is to foster sustainable services for the PWD community through youth volunteers by analyzing the key characteristics of volunteers using Fuzzy Delphi.

Design/methodology/approach: This study uses a design method and a developmental research approach that has three phases. In this study, the researchers focused on the second phase of Fuzzy Delphi. 13 experts were involved in this study to rank the elements in developing a model for volunteer outreach efforts for PWD.

Findings: The findings showed that all elements such as thinking, attitude, and skills, exceeded 70%, which is considered suitable, applicable and a must to the volunteers for PWD.

Research limitations/implications: This research involves volunteers among typical person who service PWD. For future, it hopes research might be conducted among PWD who involve in volunteering service.

Practical implications: These finding can be a reference to any development of training module for volunteers service especially which focusing on PWD. It is hoped that this findings could be as a guide for youth volunteers in teaching religious education for the PWD community.

Originality/value: The extraction of all the elements for the characteristic's dimension of volunteers solely taken from the participants' view and experience.

Keywords: Fuzzy delphi, disable community, sustainable service, youth volunteerism.

Introduction

Services for Person with Disabilities (PWD) community play a crucial role in fostering inclusivity, empowerment, and an improved quality of life for individuals with disabilities. These services encompass a wide range of support, including healthcare, education, employment, social integration, and accessibility enhancements. The significance of such services is underscored by their potential to address the unique challenges and barriers faced by people with disabilities, enabling them to fully participate in society and lead fulfilling lives. One of the most compelling reasons for prioritizing services for the PWD community is to promote equal opportunities. As highlighted by the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) May-Simera (2018), access to essential services is a fundamental human right, and denying these services can lead to marginalization and exclusion. According to a report by the World Health Organization (2011), about 15% of the global population lives with some form of disability. Neglecting their needs not only hampers their individual growth but also limits the societal potential that could be unlocked through their participation.

Literature Review

Services tailored to the PWD community contribute to economic growth and sustainability. A study conducted by the World Bank (2019) suggests that providing adequate services to people with disabilities can lead to increased employment rates, higher productivity, and reduced dependency on social welfare programs. When individuals with disabilities receive proper support to access education and vocational training, they become better equipped to contribute their skills and talents to the workforce. In terms of healthcare, specialized services ensure that individuals with disabilities receive appropriate medical attention and rehabilitation, addressing their unique health needs. Failure to provide these services can exacerbate health disparities and hinder individuals from achieving their full potential. Moreover, services focusing on assistive technologies and accessible environments improve mobility and communication, enhancing the overall quality of life for disabled individuals.

Social integration is another critical aspect that services for the PWD community address. By facilitating participation in recreational activities, community events, and social interactions, these services help reduce social isolation and foster a sense of belonging. This, in turn, leads to a more diverse and enriched societal fabric where everyone's voice is valued and heard. In conclusion, the importance of services for the PWD community cannot be overstated. They uphold human rights, boost economic potential, enhance healthcare outcomes, and promote social inclusion. By investing in these services, societies can move closer to realizing the principles of equity, diversity, and equal opportunity for all individuals, regardless of their abilities.

So that, the objective of this study is to foster sustainable services for the PWD community through youth volunteers by analyzing the key characteristics of volunteers using fuzzy delphi. Using this purpose of study, the role of youth volunteers is very essential dan important to look forward. Hence, the role of youth volunteers is multifaceted and can have a significant impact on various aspects of society. Here are some key roles that youth volunteers often play such as in Education and Mentorship, youth volunteers can serve as mentors, tutors, or role models for younger individuals. By sharing their knowledge and experiences, they can positively influence the lives of others and contribute to educational and personal growth. Another the role of youth volunteers is Social Change and Advocacy, youth volunteers often advocate for social and environmental issues they are passionate about. They can raise awareness, mobilize

communities, and work towards creating positive changes in policies and attitudes. Lastly, the role of youth volunteers is Skill Development, with volunteering provides young people with opportunities to learn and develop a wide range of skills, including leadership, teamwork, communication, problem-solving, and project management. These skills are valuable for personal growth and future career prospects.

Therefore, sustainable services for persons with disabilities (PWDs) refer to services that are designed to meet the long-term needs of PWDs in a way that is socially, economically, and environmentally responsible. These services should be accessible, affordable, and inclusive, and should promote the independence, autonomy, and participation of PWDs in all aspects of society. Sustainable services for PWDs may include, but are not limited to, healthcare, education, employment, transportation, housing, and assistive technology. These services should be designed and delivered in consultation with PWDs and their families or caregivers and should take into account the unique needs and preferences of each individual. Additionally, sustainable services should be supported by policies, regulations, and funding mechanisms that ensure their continuity and effectiveness over time. By providing sustainable services for PWDs, we can promote their full inclusion and participation in society and ensure that they have equal access to opportunities and resources to achieve their full potential.

Methodology

The development of this study is carried out using the Fuzzy Delphi Technique or Fuzzy Delphi Method (FDM). The Fuzzy Delphi approach, introduced by Kaufmann and Gupta (1988), combines Fuzzy Set Theory and the Delphi Technique, which was introduced by Murray, Pipino, & Gigch (1985), and it is not a new technique. The Fuzzy Delphi method is a decision-making analysis method that combines Fuzzy Theory with Traditional Delphi. Fuzzy set theory was introduced by a mathematics expert in 1965, Lotfi Zadeh (Zadeh, 1965), and according to Mohd Ridhuan (2016), it serves as an extension of classical set theory in which each element in a set is evaluated based on a binary set (Yes or No). This is because the FDM is more of an improvement on the Delphi technique and is an instrument that has added value to the existing Delphi technique.

Futhermore, Fuzzy Delphi technique is capable of processing ambiguity of the predictive items, the respondents' information, and the participants' individual characteristics.

In a nutshell, the Fuzzy Delphi method is used to ascertain consensus among experts who serve as respondents by applying quantitative methods. Hence, this study applies the Fuzzy Delphi method to obtain expert consensus in identifying the characteristics of youth volunteerism in fostering sustainable service for PWD communities. The validity and reliability of the data through the FDM were obtained through expert consensus on the items presented to them.

Sampling

This study used purposive sampling technique by selecting experienced and relevant experts who are involved in the field of religion for learning disabilities. The panel of experts is made up of 13 experts who agreed to take part in the study. The panel of experts in this study were classified by the researcher based on the following criteria:

1. Having more than three years of experience in learning disabilities and religion.
2. Skilled in providing assistance in special education for religion.
3. Actively involved as educators for special education in religious education.

Participants

The 13 experts consist of experts from Quranic for Special Needs Field, Islamic Education Field and non-government organization are selected to answer the questionnaire. Experts in fuzzy method in is non-probability sampling or judgement sampling (Mustapha and Darussalam, 2018) based on their expertise. The details of the expert are as follows in Table 1.

Table 1: List of the participants

No.	Participant	Expert field	Place of work
1	A01	Islamic education field	Volunteer
2	A02	Islamic education field	Volunteer
3	A03	Non-government organization	Persatuan Kanak-Kanak Istimewa Bangi
4	A04	Non-government organization	Persatuan Kanak-Kanak Istimewa Bangi
5	A05	Islamic education field	Akademi Fitrah
6	A06	Islamic education field	Akademi Fitrah
7	A07	Islamic education field	Universiti Sains Islam Malaysia
8	A08	Islamic education field	Universiti Sains Islam Malaysia
9	A09	Islamic education field	Universiti Sains Islam Malaysia
10	A10	Islamic education field	Universiti Sains Islam Malaysia
11	A11	Quranic for Special Needs Field	Yayasan FAQEH
12	A12	Quranic for Special Needs Field	Yayasan FAQEH
13	A13	Islamic education field	Volunteer

Instrument

This instrument consists of three elements on the content of sustainable service for PWD communities through youth volunteerism (1) Thinking, (2) Attitude, (3) Skills. This research used fuzzy Delphi Questionnaire with 48 items with seven points fuzzy linguistic scale; strongly disagree, disagree, somewhat disagree, neither agree or disagree, somewhat agree, agree, and strongly agree. A reliability test was conducted for this study.

The experts were given a set of questionnaires, and they need to fulfil the answer according to the seven point of agreement. Once they had done the answer, the experts returned the instrument to the researcher.

Procedure Of Fuzzy Delphi Methods

The fuzzy delphi methods steps are as follows:

Step one: Determination of experts or number of experts involved.

In total, 13 experts were selected to answer the questionnaire instrument.

Step two: Construction of expert questionnaire

The construction of expert questionnaires is carried out. In this process, the construction of expert questionnaires can be conducted through several methods, namely (1) interviews; (2) discussions via focus groups; (3) construction through document analysis and literature review. Additionally, the use of survey forms is also incorporated, taken from relevant literature studies concerning a specific issue under investigation.

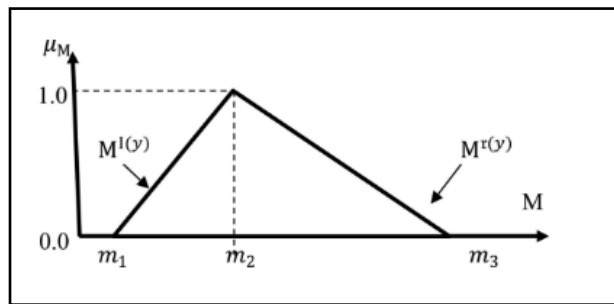
Step three: Dissemination and data collection

The process of distributing questionnaires and data collection. There are several approaches that can be used, including (1) Workshop seminars by inviting involved experts; (2) Individual meetings with experts; (3) Distributing questionnaires to selected experts via email and so on. However, in this phase, the researcher chooses to meet online with the selected and identified experts to facilitate discussions and explanations of potential issues that may arise in the items and so forth.

Step four: Determination of linguistic variables

Determination of linguistic variables (determining linguistic scale). This process involves converting all linguistic variables into triangular fuzzy number notation (Hsieh, Lu, and Tzeng, 2004). The linguistic scale is like the Likert scale used in other studies but is augmented with fuzzy numbering based on triangular fuzzy notation. Each received response has three fuzzy values representing expert opinions (fuzziness of expert opinion). Three values are as illustrated in Figure 1 below:

Figure 1 : Fuzzy triangle number



In other words, the linguistic h scale is used to convert linguistic variable scales into fuzzy numbers. The agreement scale must be (3, 5, and 7 linguistic scale). The higher the scale, the more accurate the analysis of the obtained responses (Mohd Ridhuan, 2016). Table 2 displays the levels of agreement and the Fuzzy 7 scale, illustrating measurement statements for a given item and the represented fuzzy scale values.

Table 2 : Seven points of linguistic scale and fuzzy scale

Number of Likert Scale	Interpretation of Likert Scale	Fuzzy Scale		
		M ₁	M ₂	M ₃
1	Strongly Disagree	0.00	0.00	0.10
2	Disagree	0.00	0.10	0.30
3	More or Less Disagree	0.00	0.30	0.50
4	Undecided	0.03	0.50	0.70
5	More or Less Agree	0.50	0.70	0.90
6	Agree	0.70	0.90	1.00
7	Strongly Agree	0.90	1.0	1.00

Step five: Determination of distance

The process of identifying the Threshold value (d). Data analysis based on triangular fuzzy numbers aims to determine the Threshold value (d). The Threshold value is crucial in identifying the level of agreement among experts (Thomaidis et al., 2006). The distance for each fuzzy number, $m = (m_1, m_2, m_3)$ and $n = (n_1, n_2, n_3)$, is calculated. The Threshold value plays a crucial role in determining consensus among experts. According to Cheng and Lin (2002), if the Threshold value is less than or equal to 0.2, expert consensus is considered to be achieved. Meanwhile, the overall group consensus must exceed 75% agreement for each item; otherwise, a second round of deliberation is required.

Step six: Aggregation of Fuzzy Assessment

Determining the Group Agreement Percentage. Identifying the aggregate alpha level of fuzzy assessment after expert consensus is obtained by summing the fuzzy numbers for each item (Mohd Ridhuan, 2016). The calculation and determination of fuzzy values are performed using the formula: $A_{max} = (1/4) (m_1 + m_2 + m_3)$. The expert consensus percentage value must be equal to or greater than 75.0% (Chu & Hwang, 2008; Murry & Hammons, 1995).

Step seven: Defuzzification

The Defuzzification Process Phase. Data analysis employs the average of fuzzy numbers or average response. The aim of this analysis is to obtain the fuzzy score value (A). To ensure the third condition is met, the fuzzy score value (A) must be greater than or equal to the median value (α -cut value), which is 0.5 (Tang & Wu, 2010; Bodjanova, 2006). This indicates that the element is accepted by expert consensus. Another function of the fuzzy score value (A) is its use as a determinant of the position and priority of a particular element according to expert consensus. The formula involved in obtaining the fuzzy score value (A) is as follows:

- a. $A_{max} = 1/3 * (m_1 + m_2 + m_3)$
- b. $A_{max} = 1/4 * (m_1 + m_2 + m_3)$
- c. $A_{max} = 1/6 * (m_1 + m_2 + m_3)$

Step eight: Determining the Score (ranking)

The process of determining ranking or a sub-phase of the model. The process of determining ranking involves selecting model elements based on defuzzification values according to expert consensus, where elements with the highest values are assigned the most significant positions within the model (Fortemps & Roubens, 1996).

Results

In this phase, the data has been processed using Microsoft Excel following the steps recommended by Chang et al. (2000) and Mohd Ridhuan Mohd Jamil et al. (2017). It should be noted that within the context of the Fuzzy Delphi Method, group consensus needs to be obtained prior to addressing both research questions. Therefore, the criteria used to assess group consensus based on agreement conditions must exceed 75% (Chu & Hwang, 2008; Murry & Hammons, 2017), the threshold value $d(m, n)$ must be less than or equal to 0.2 (Cheng & Lin, 2002), and the obtained α -cut value must be equal to or greater than 0.5 (Bodjanova, 2006; Tang & Wu, 2010). Accordingly, the distance between two fuzzy numbers has been calculated by measuring the deviation between the average and expert assessment data using the Threshold value formula "d" as follows:

$$d(m,n) = \sqrt{1/3 [(m_1 - n_1)^2 + (m_2 - n_2)^2 + (m_3 - n_3)^2]}$$

Therefore, there are three contents of sustainable service for PWD communities through youth volunteerism namely thinking, attitude and skills. Based on the analysis of the threshold value d (m, n) for these three contents, it is less than 0.2. Meanwhile, the percentage of agreement for all three contents of sustainable service for PWD communities through youth volunteerism exceeds 75%, and the obtained α -cut value is above 0.5. Hence, the objective of this study has achieved group consensus. Table 3 presents the final findings for the overall elements within the content of thinking through the analysis of the Fuzzy Delphi Method (FDM), consensus, and suggestions from the expert panel.

Table 3 : The content of thinking in sustainable service for PWD communities through youth volunteerism based on Fuzzy Delphi Analysis (FDM)

Thinking		Triangular Fuzzy Numbers		Fuzzy Evaluation Process				Experts Consensus
		Threshold value, d	Percentage of Expert Group Agreement, %	$m1$	$m2$	$m3$	Skor Fuzzy (A)	
1	Volunteering is beneficial work	0.056	92.31	0.869	0.977	0.992	0.946	ACCEPTED
2	Tasks Given as Worship	0.071	92.31	0.854	0.969	0.992	0.938	ACCEPTED
3	Tasks Given are a Trust	0.082	92.31	0.838	0.962	0.992	0.931	ACCEPTED
4	The Noblest Person is the One Who is Pious	0.082	92.31	0.838	0.962	0.992	0.931	ACCEPTED
5	Preaching to PWD is One Way of Self-Reflection	0.095	92.3	0.808	0.946	0.992	0.915	ACCEPTED
6	Preaching to PWD is One Way of Self-Discovery	0.095	92.3	0.808	0.946	0.992	0.915	ACCEPTED
7	Preaching to PWD is One Branch of Jihad	0.116	84.6	0.808	0.938	0.985	0.910	ACCEPTED

In Table 3, the results of expert assessments on the content of thinking in sustainable service for PWD communities through youth volunteerism are presented. The analysis results indicate that the experts agree that the element of volunteering is beneficial work and clearly portrays the necessary in content of thinking for youth volunteerism service for PWD communities is of the highest quality, with a defuzzification score of 0.946. Furthermore, the experts also agree that the thinking of considering the assigned tasks given as worship is among the characteristics of youth volunteerism for PWD, with a defuzzification score of 0.938. Additionally, the experts also concur that the thinking of considering the assigned tasks given are a trust is included in the characteristics of youth volunteerism for PWD, with a defuzzification score of 0.931. The experts also agree that within the characteristics of youth volunteerism for PWD, the thinking of the noblest person is the one who is pious, with a defuzzification score of 0.931.

Moreover, the experts agree with the thinking that preaching to PWD is one way of self-reflection, with a defuzzification score of 0.915. Furthermore, the experts also concur that the thinking of engaging in preaching to PWD is one way of self-discovery is among the characteristics of youth volunteerism for PWD, with a defuzzification score of 0.915. Finally, the experts also agree that within the characteristics of youth volunteerism for PWD, there should be a thinking that considers preaching to PWD is one branch of jihad with a defuzzification score of 0.910. In conclusion, the analysis results based on expert consensus regarding the content of the thinking within the characteristics of youth volunteerism for PWD

provide strong evidence that this entire dimension is suitable for use and implementation in developing youth volunteerism for PWD who provide care and service to the PWD community.

Next Table 4 presenting the final findings for the overall elements within the content of attitude through the analysis of the Fuzzy Delphi Method (FDM), consensus, and suggestions from the expert panel.

Table 4: The content of attitude in sustainable service for PWD communities through youth volunteerism based on Fuzzy Delphi Analysis (FDM)

Attitude		Triangular Fuzzy Numbers		Fuzzy Evaluation Process				Experts Consensus
		Threshold value, d	Percentage of Expert Group Agreement, %	m1	m2	m3	Skor Fuzzy (A)	
1	Being Responsible for the Care of PWD Entrusted to Them	0.071	92.3	0.854	0.969	0.992	0.938	ACCEPTED
2	Having a Desire for Knowledge	0.071	92.3	0.854	0.969	0.992	0.938	ACCEPTED
3	Taking Care in Performing Worship Practices	0.082	92.3	0.838	0.962	0.992	0.931	ACCEPTED
4	Being Cautious About Actions That May Tarnish One's Reputation	0.082	92.3	0.838	0.962	0.992	0.931	ACCEPTED
5	Investigating Matters Before Conveying Them	0.082	92.3	0.838	0.962	0.992	0.931	ACCEPTED
6	Being Honest in All Matters	0.082	92.3	0.838	0.962	0.992	0.931	ACCEPTED
7	Consistency in Performing Good Deeds	0.082	92.3	0.838	0.962	0.992	0.931	ACCEPTED
8	Exhibiting Fairness	0.082	92.3	0.838	0.962	0.992	0.931	ACCEPTED
9	Exercising Wisdom in Preaching to PWD	0.082	92.3	0.838	0.962	0.992	0.931	ACCEPTED
10	Advocating for the Rights of PWD	0.082	92.3	0.838	0.962	0.992	0.931	ACCEPTED
11	Boldly Preventing Wrongdoing	0.082	92.3	0.838	0.962	0.992	0.931	ACCEPTED
12	Being Open to Receiving Advice	0.102	84.6	0.838	0.954	0.985	0.926	ACCEPTED
13	Showing Empathy Towards the PWD Community	0.091	92.3	0.823	0.954	0.992	0.923	ACCEPTED
14	Adhering to the Principle of Unity in Diversity	0.091	92.3	0.823	0.954	0.992	0.923	ACCEPTED
15	Showing Concern for PWD	0.091	92.3	0.823	0.954	0.992	0.923	ACCEPTED
16	Exercising Patience in Dealing with the Behaviour of Others	0.091	92.3	0.823	0.954	0.992	0.923	ACCEPTED
17	Exhibiting Appropriate Tolerance	0.091	92.3	0.823	0.954	0.992	0.923	ACCEPTED
18	Having a Spirit of Brotherhood	0.091	92.3	0.823	0.954	0.992	0.923	ACCEPTED
19	Concealing the Faults of PWD	0.091	92.3	0.823	0.954	0.992	0.923	ACCEPTED
20	Readiness to Assist and Care for PWD	0.091	92.3	0.823	0.954	0.992	0.923	ACCEPTED

21	Being Responsible for Conveying Accurate Knowledge to PWD	0.091	92.3	0.823	0.954	0.992	0.923	ACCEPTED
22	Being Prepared to Accept Given Instructions	0.095	92.3	0.808	0.946	0.992	0.915	ACCEPTED
23	Being Willing to Sacrifice Effort for Preaching to PWD	0.095	92.3	0.808	0.946	0.992	0.915	ACCEPTED
24	Making Every Effort to Complete Tasks According to Timelines	0.116	84.6	0.808	0.938	0.985	0.910	ACCEPTED
25	Actively Providing Thoughtful Suggestions	0.096	92.3	0.792	0.938	0.992	0.908	ACCEPTED
26	Wholeheartedly Engaging in Preaching to the PWD Community	0.096	92.3	0.792	0.938	0.992	0.908	ACCEPTED
27	Maintaining Moderation in Worldly Matters	0.119	100.0	0.792	0.931	0.985	0.903	ACCEPTED
28	Being Willing to Sacrifice Wealth for Preaching to PWD	0.139	100.0	0.762	0.908	0.977	0.882	ACCEPTED
29	Being Willing to Sacrifice Time for Preaching to PWD	0.160	100.0	0.746	0.892	0.969	0.869	ACCEPTED
30	Having Confidence in Every Matter	0.117	100.0	0.777	0.923	0.985	0.895	ACCEPTED

In Table 4, displays the results of expert assessments on the content of attitude in sustainable service for PWD communities through youth volunteerism are presented. There are 30 elements in the overall content of attitude, namely being responsible for the care of PWD entrusted to them with a defuzzification score of 0.938, having a desire for knowledge with a defuzzification score of 0.938, taking care in performing worship practices with a defuzzification score of 0.931, being cautious about actions that may tarnish one's reputation with a defuzzification score of 0.931, investigating matters before conveying them with a defuzzification score of 0.931, being honest in many matters with a defuzzification score of 0.931, consistency in performing good deeds with a defuzzification score of 0.931, exhibiting fairness with a defuzzification score of 0.931, exercising wisdom in preaching to PWD with a defuzzification score of 0.931, advocating for the rights of PWD with a defuzzification score of 0.931, boldly preventing wrongdoing with a defuzzification score of 0.931, being open to receiving advice with a defuzzification score of 0.926, showing empathy towards the PWD community with a defuzzification score of 0.923 and adhering to the principle of unity in diversity with a defuzzification score of 0.923.

Moreover, showing concern for PWD with a defuzzification score of 0.923, exercising patience in dealing with the behavior of others with a defuzzification score of 0.923, exhibiting appropriate tolerance with a defuzzification score of 0.923, having a spirit of brotherhood with a defuzzification score of 0.923, concealing the faults of PWD with a defuzzification score of 0.923, readiness to assist and care for PWD with a defuzzification score of 0.923, being responsible for conveying accurate knowledge to PWD with a defuzzification score of 0.923, being prepared to accept given instructions with a defuzzification score of 0.915, being willing to sacrifice effort for preaching to PWD with a defuzzification score of 0.915, making every effort to complete tasks according to timelines with a defuzzification score of 0.910, actively providing thoughtful suggestions with a defuzzification score of 0.908, wholeheartedly

engaging in preaching to the PWD community with a defuzzification score of 0.908, maintaining moderation in worldly matters with a defuzzification score of 0.903, being willing to sacrifice wealth for preaching to PWD with a defuzzification score of 0.882, being willing to sacrifice time for preaching to PWD with a defuzzification score of 0.869 and having confidence in many matters with a defuzzification score of 0.895.

Based on the findings presented in this study, it is evident that all the elements within the entire attitude have been unanimously accepted by the experts. This serves as proof that all these attitudes are suitable for use as characteristics of youth volunteerism for PWD communities.

Next Table 5 presents the final findings for the overall elements within the content of skill through the analysis of the Fuzzy Delphi Method (FDM), consensus, and suggestions from the expert panel.

Table 5 : The content of skill in sustainable service for PWD communities through youth volunteerism based on Fuzzy Delphi Analysis (FDM)

Skill	Triangular Fuzzy Numbers		Fuzzy Evaluation Process				Experts Consensus	
	Threshold value, d	Percentage of Expert Group Agreement, %	m1	m2	m3	Skor Fuzzy (A)		
1	Enthusiastic in Doing Good Deeds	0.082	92.3	0.838	0.962	0.992	0.931	ACCEPTED
2	Leading Based on Shariah Principles	0.091	92.3	0.823	0.954	0.992	0.923	ACCEPTED
3	Skilful in Managing One's Own Emotions	0.095	92.3	0.808	0.946	0.992	0.915	ACCEPTED
4	Adept at Distinguishing Between Right and Wrong	0.119	100.0	0.792	0.931	0.985	0.903	ACCEPTED
5	Aims to Provide Beneficial Assistance to PWD	0.117	100.0	0.777	0.923	0.985	0.895	ACCEPTED
6	Critical in Problem Solving	0.148	92.3	0.777	0.915	0.969	0.887	ACCEPTED
7	Skilful in Managing the Behaviour of PWD	0.172	92.3	0.762	0.900	0.962	0.874	ACCEPTED
8	Creative in Delivering Knowledge to PWD	0.181	84.6	0.762	0.900	0.954	0.872	ACCEPTED
9	Critical in Decision Making	0.181	84.6	0.762	0.900	0.954	0.872	ACCEPTED
10	Critical in Making Choices	0.181	84.6	0.762	0.900	0.954	0.872	ACCEPTED
11	Skilful in Program Management	0.200	84.6	0.731	0.877	0.946	0.851	ACCEPTED

In Table 5, displays the results of expert assessments on the content of skill in sustainable service for PWD communities through youth volunteerism are presented. The analysis results indicate that the experts agree that the skill of being enthusiastic in doing good deeds provides a clear depiction of the necessary skill dimension for characteristics of youth volunteerism for PWD, with a defuzzification score of 0.931. Furthermore, the experts also agree that the skill of leading based on Shariah principles is among the characteristics of youth volunteerism for PWD, with a defuzzification score of 0.923. Additionally, the experts also concur that the skill of skillfully managing one's own emotions is included in the characteristics of youth volunteerism for PWD, with a defuzzification score of 0.915. The experts also agree that within

the characteristics of youth volunteerism for PWD, there is a need for the skill of adeptly distinguishing between right and wrong, with a defuzzification score of 0.903.

Moreover, the experts agree with the skill of targeting assistance forms that benefit PWD, with a defuzzification score of 0.895. Furthermore, the experts also agree that the skill of being critical in problem solving is among the characteristics of youth volunteerism for PWD, with a defuzzification score of 0.887. Additionally, the experts concur that within the characteristics of youth volunteerism for PWD, there should be a skill of skillfully managing the behavior of PWD, with a defuzzification score of 0.874. The experts also agree that within the characteristics of youth volunteerism for PWD, the skill of being creative in delivering knowledge to PWD is necessary, with a defuzzification score of 0.872. Moreover, the experts agree with the skill of being critical in decision making, with a defuzzification score of 0.872. Finally, the experts also concur that the skill of program management is included in the characteristics of youth volunteerism for PWD, with a defuzzification score of 0.851.

Discussion

From the study findings using the fuzzy Delphi technique, it demonstrates the position of the constructs of the key characteristic of youth volunteer in fostering sustainable service for disabled communities, indicating the thinking and attitude constructs show the highest defuzzification value of 0.946 and 0.938, whereas the skill construct has the lowest defuzzification value which is 0.851. Thinking and attitude constructs deemed as the most significant in shaping the characteristic of youth volunteer in fostering sustainable service for disabled communities. Thinking construct covers thinking that volunteering is a beneficial activity, the act of worship, responsibility, noble activity, mechanisms for self-reflection and determining the concept of self. The concepts presented are highly influential in shaping the attitudes and behaviors of youth volunteers. By internalizing these constructs, young volunteers can better understand the significance of their role and develop a more meaningful and impactful approach to their volunteer work. According to Mcree and Costa (2006) argue that knowledge received since childhood will form a pattern of thinking and belief that subsequently influences a person's behavior. The quality of our thinking is closely linked to the reliability and credibility of the sources from which we acquire knowledge. By seeking out and utilizing trustworthy sources, individuals can develop sound thinking skills that enable them to make informed decisions and navigate complex challenges with greater ease.

In the context of youth volunteering, thinking that volunteerism is beneficial, and an act of worship relates that activity with their life giving them strength to sustain. As mentioned in Self-Determination Theory, behavior is most likely to be sustained when individuals feel a sense of autonomy, competence, and relatedness.

Attitude constructs offers an extensive range of attributes that can be defined as an individual's demeanor, encompassing qualities such as accountability, a fervent love for learning, compassion, self-respect, fact-checking, honesty, dependability, fairness, wisdom, activism, courage, an accepting mindset, empathy, ethicality, a caring demeanor, patience, tolerance, brotherhood, discretion, readiness, responsibility, sacrifice, perseverance, simplicity, and conviction.

Each element of this category can be applied in real-life situations and considered as important for personal growth and development in crafting youth volunteers, regardless the nature of these elements, it can also be nurtured, learned, developed over time through practice and

feedback from others. In fact, the disabled communities in the world often face unique challenges such as social stigma, discrimination, despite their own physical limitations which consequently can impact their self-esteem and mental health. Thus, these elements seem to be able to cultivate a positive attitude, resilience and self-empowerment which help them to overcome their own challenges (Shogren et al., 2006).

Moreover, skill is constructed as the lowest score according to the fuzzy ranking value for the key characteristic of youth volunteers. The elements of this skill set can be categorized into five aspects to be emphasized, namely leadership, self-regulation, able to differentiate between good and bad, able to identify the needs of disabled people, problem solving, regulating the conduct of disabled people, deliver the knowledge, decision making, and program managing. Crucial role of leadership in volunteering, as it can inspire and maintain the motivation and commitment of volunteers to perform their duties effectively. Moreover, leadership plays a vital part in arranging strategic plans and defining milestones for successful volunteer programs (Erdurmazlı, 2019). Volunteers who assist persons with disabilities (PWD) must have a high awareness of the diversity of abilities and needs of PWDs, as well as the skills to manage their own emotions and regulate the conduct of PWDs. This will help them provide effective and efficient assistance to PWDs in challenging situations (Apgar & Cadmus, 2021). For example, individuals with autism spectrum disorder may have difficulty understanding and regulating their emotions, while those with physical disabilities may have difficulty managing prolonged pain or discomfort.

Effective problem-solving and decision-making skills are crucial for youth volunteers working with PWDs. Volunteering with PWDs can present various challenges, including logistical issues such as scheduling and transportation, as well as potential interpersonal conflicts with fellow volunteers or program participants. To perform their duties effectively, youth volunteers must exhibit critical and creative thinking abilities to overcome such obstacles and be open to seeking assistance when required (Ho & Chan, 2022). Furthermore, decision-making skills are of equal importance to youth volunteers working with PWDs. They must make swift, informed decisions with confidence to ensure that the PWDs they are working with receive the assistance they require. Such decisions may involve resource allocation, conflict management, and addressing unforeseen situations that arise during volunteering activities (Hughes & Wearing, 2021). Implication of this study is that this study is a first step to figure out the key characteristics to create a model of key characteristics of youth volunteers in fostering sustainable service for disabled communities. This guide can also be used as a reference for organizations or agencies involved in volunteering, based on the elements outlined within it.

CONCLUSION

In a nutshell, the development and design of characteristic of youth volunteer in fostering sustainable service for disabled communities shall emphasis the importance of access to support, learning rights of the disabled, manners, and universal design. Therefore, the way of learning shall be adapted to fulfil the wishes and needs of PWD with learning difficulties according to their functional level, which can be mild, moderate, or severe.

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