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HUMAN RESOURCE MANAGEMENT AND HUMANITARIAN OPERATIONS PERFORMANCE: A CASE STUDY OF HUMANITARIAN ORGANIZATIONS IN MALAYSIA

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ABSTRACT

Aim/Purpose	This research aims to analyze the effect of human resource management on humanitarian operations performance, using humanitarian organizations in Malaysia as a case.
Background	Humanitarian organizations need to develop and continue effective on-the-job human resource management, such as training and development and managing employee performance to enhance the performance of their humanitarian operations.
Methodology	The sampling technique that was conducted is probability sampling. In particular, the technique is called stratified sampling. This technique is chosen because it is involving the division of a population into a smaller group, called "strata". The questionnaire survey was distributed to humanitarian organizations in Malaysia to collect research data, and PLS-SEM analysis was conducted to validate the conceptual model.
Contribution	This research focuses on the effect of human resource management on humanitarian operations performance in humanitarian organizations with consistent training to ensure successful humanitarian operations.

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Findings	The results of PLS-SEM analysis confirmed that Training and Employee Development, Recruitment and Employee Selection, and Communicative Management Style are significantly correlated with humanitarian operations performance, giving 75.7% variations which means that these human resource management are critical factors for increasing humanitarian operations performance in Malaysian humanitarian organizations.
Recommendations for Practitioners	This research will enhance humanitarian operations performance for humanitarian organizations, in-line policies outlined under the Malaysia National Security Council Directive No. 20, and benefit the field of disaster management.
Recommendations for Researchers	This research can be used by the authorized individual involved in humanitarian operations to satisfy the needs of the victims, which ultimately contributes to the performance of these humanitarian organizations.
Impact on Society	This research highlighted the human resource management that is vital for humanitarian organizations, which will increase humanitarian operations performance in an organization.
Future Research	This study is conducted in the context of humanitarian organizations in Malaysia. It is unclear whether the key findings of this study can be generalized. Therefore, it is suggested that, in future research, the current research model should be extended to include different countries for validation.

Keywords	PLS-SEM, humanitarian operations performance, human resource management, humanitarian organizations

INTRODUCTION

Humanitarian operations are receiving increasing attention due to the numerous recent disasters and crises caused by both natural and man-made events, from the mass exodus to pandemics like COVID-19. Every year, thousands of people in Malaysia have to be moved out of their homes to temporary shelters due to heavy rainfall and the poor irrigation system that led to floods, especially during the monsoon season (Muhamad Tamyez et al., 2021). This movement operation requires effective management of humanitarian supply chains of human resource practices. Hence, this will facilitate performance evaluation, which in turn requires strong leadership on the so-called soft side of management (de Camargo Fiorini et al., 2021). The relationship between personnel development and organizational effectiveness has existed since the 1970s (Jha, 2014; Manani & Ngui, 2019). Poor talent management, mismanaged cultural diversity, and irregularities in staff selection procedures were among human resources weaknesses that are leading to corruption in humanitarian aid as determined by Chabke and Haddad (2018). The increasing competition between national and international organizations, the emergence of new markets, and the increase in global business transactions, as observed in the last few decades, are connected with the need for comparative human resource management (Manani & Ngui, 2019). Therefore, this paper aims to analyze the effect of human resource management on humanitarian operations performance, using humanitarian organizations in Malaysia as a case. This research will fill this knowledge gap via a quantitative approach among humanitarian government agencies.

Humanitarian Organizations (HOs) have two main activities: one related to the capacity building of the organizations such as recruitment, staff training, organizational structuring, and administrative work; and another related to relief operations as core business activities (needs assessment, conception, and implementation of transport of first aid kits, food, equipment, and rescue personnel, transfer and help of disaster victims to the health centers safely and quickly, relocation and help, provision of survival kits, etc.). The provision of resources for humanitarian aid operations while at the same

time building sufficient capacities, is a demanding task (Kaatrud et al., 2003; Sopha & Asih, 2018). The effectiveness of human resource management is certainly associated with investments in human capital and also with strategic cost minimization (Ashu et al., 2018). Employees are an important group of stakeholders and cannot be directed by any other body within the organization as a whole. In addition, their interests and needs are very important to the organization (Beardwell & Clark, 2007; Vardarlier, 2016).

During disaster response operations, the ability of humanitarian organizations depends on the ability to discover, cultivate, and exploit their main capabilities, particularly during economic austerity when the organization fully utilized the scarce resources (Apte et al., 2016). Anjomshoae et al. (2018) proposed a performance measurement scheme that was integrated to gain relevant information and ease the decision-making process. This finding was supported by Farooq et al. (2021) who stated strategic decision making was integrated with operation management in optimizing sustainable operations, especially in certain environments. By improving the efficiency and performance of humanitarian operations, accountability and transparency can be enhanced for disaster response. The efficiency of an organization can improve through effective communication (Villa et al., 2017), coordination (John et al., 2020), and managing the stakeholders' concerns properly (Fontainha et al., 2017). Preparation for crisis is not only focusing on preparing stocks in advance but the preparation of skilled humanitarian workers has been stressed by researchers (Kovács & Sigala, 2021). All these common characteristics established a working relationship in providing the best performance of humanitarian aid in Malaysia.

This study begins with a literature review on humanitarian organizations in Malaysia, humanitarian operations performance, and human resource management. The methodology section explains the questionnaire development and analysis of the data obtained from the sampling undertaken. The results section displays the measurement model analysis along with the respective tables. The discussion section indicates previous findings and those found in this study. The conclusion section presents the outcomes of the study.

LITERATURE REVIEW

HUMANITARIAN ORGANIZATIONS IN MALAYSIA

Humanitarian organizations actively provide emergency assistance to affected populations in a disaster. In October 2015, an agency known as the National Disaster Management Agency (NADMA) was introduced in Malaysia. NADMA is an agency that is fully committed to Disaster Risk Management (DRM). Compliance with the procedures laid down by the National Security Council (MKN) under NADMA and a national policy on disaster management mechanisms and disaster aid need to be implemented (Omar Chong & Kamarudin, 2018).

Meanwhile, non-governmental organizations (NGOs) also play a crucial role during a disaster in order to relieve government authorities in handling humanitarian operations. Their role has grown dramatically in recent years as many researchers discussed their involvement. Daly and Feener (2016), who reported the involvement of different types of agencies and non-profit groups, was observed in Asia as a result of the rise in civil society and private sector engagement as non-traditional actors, particularly in the context of post-disaster reconstruction. The agencies that mobilize their capacities and know-how for disaster relief are seen as efficient state partners for cooperation in the implementation of reconstruction projects. In Malaysia, during this pandemic, broader collaboration was reported on medical humanitarian aid among the Islamic Medical Association of Malaysia (IMAM) and the Response and Relief Team (IMARET) engaged with 33 collaborators and 92 partners and funders to successfully raise RM $3 million (US $740,000) in 85 days. Other local NGOs and the public have been generous in raising funds and even producing their own PPE (Abd Samat et al., 2021; Shah et al., 2020) in addition to government efforts. This response was recognized by the Ministry of Health (MOH) as a relevant component in Malaysia's measures to combat COVID-19 (Abd Samat et

al., 2021; Zainul, 2020) and thus all fulfilled guideline No. 20, the need for NGOs to work together as supporting teams (Malik et al., 2020; National Security Council, 1997).

Recently, a survey was conducted to show that Malaysia is encountering a critical humanitarian operations performance crisis affected by floods due to the heavy rainfall between November and February yearly (Safiah Yusmah et al., 2020), starting with the greatest destructions in this century by the Asian tsunami in 2004 (Syamsidik et al., 2021). In this situation, maximizing resources is crucial, especially in managing logistic activity. The logistics activity for humanitarian operations must fully support humanitarian organizations in performing response operations. This support depends on efforts to improve humanitarian performance through improved cooperation and coordination thus eliminating redundancies (Salam & Khan, 2020). Therefore, Hirata (2019) developed a modern humanitarian logistics implementation that focuses on the digitization of all information that is present in all existing logistics processes, the quality of the staff who work for service providers, and the quality of the customer service that the service providers provide to customers. All these are needed to ensure that the flow of material and information is seamless (Casado-Vara et al., 2019) to avoid unexpected problems and uncertainties. A few studies were conducted on the relationship between measuring and monitoring work performance using tracking and surveillance technologies (Olsen, 2019), and algorithmic decision-making as regards training and development and managing employee performance (Harrower, 2019; Kassick, 2019). This automation and artificial intelligence technologies adoption changed the performance of organizational structure as a result of improving the comprehension of the workforce and supervising staff under human resource management.

Humanitarian Operations Performance

Humanitarian operations performance has become crucial in fulfilling the objectives of the humanitarian operations, which are to save lives, reduce their suffering, and secure donor funding (accountability) for the viability of the economy (Laguna Salvadó et al., 2017). Thus, a unanimous agreement on the definition of humanitarian operations has not been consolidated. Traditionally, operations performance was defined by Neely et al. (1995) as the effectiveness of activities and operations (Shiyam Sundar et al., 2018). There was a correlation between individual performance and humanitarian organizational performance, but not all skills contributed to an individual or organizational performance (Rajakaruna et al., 2017). A humanitarian case study by Bisri et al. (2016) about the West Java Earthquake of 2009 and the West Sumatra Earthquake of 2009 discussed more the collaboration between different organizations that led to increased operational performance. On the other hand, there is a need to identify indicators of operating performance that are set against the standards, goals, and expectations of the organization's stakeholders. Some researchers applied a performance measurement framework based on the widely used supply chain operations (Baki & Abuasad, 2020; Qing et al., 2016). Since the top priority of collaboration also involves prevention and strengthening the preparedness of dealing with unexpected situations, Abidi et al. (2019) suggested the measurement practice was relevant and can be adapted from performance management practices used in business.

Conducting operations effectively is a complex process regardless of the type of crisis (sudden or prolonged emergencies, natural disasters, public health emergencies, complex emergencies such as international or internal armed conflict, etc.), regardless of the gross national income level of the land (low, medium or high) or legal status of the affected population, with obligations only focusing on the most disadvantaged children and their families (UNICEF, 2020). In short, in disaster-prone areas and knowledge transfer gained through learning experiences and training (Aksh, 2018) in humanitarian activities are relatively close to the performance, with the right candidate especially in logistics (Behl & Duta, 2020). However, this can be lost due to personnel changes within the organization (Dubey et al., 2016).

Inadequate monitoring and evaluation capacities continue to lead to unsustainable results in many humanitarian projects (Wang'aya & Kagiri, 2018). Blecken (2010) elaborated that only 20% of humanitarian organizations consistently monitor their performance (Santarelli et al., 2015). Safarpour et al. (2020) identified the barriers and challenges in improving the performance and management of humanitarian operations such as education, leadership and coordination, communication and information, rules, safety, traffic and overcrowding, assessment, delivery system, and the cultural environment. Another obstacle has been limited human resources, especially in developing countries, and the role of volunteers, mainly managed by humanitarian organizations, has become more important. This condition has become a challenge in the assignment, both to help disaster victims and to build organizational capacity effectively. The study by Sopha and Asih (2018) indicated that there are trade-offs in the allocation of human resources for relief operations and capacity building. This result underscores that the allocation of 20% of the resources for capacity building is necessary to sustain relief efforts in the long term, in particular, to save more people quickly and to have a positive effect on the performance of the organization. Improvements in the operations performance can be achieved when the implemented measures provide feedback on the goals of the humanitarian operation by increasing its chances to achieve these goals effectively. A good performance is expected to benefit the operations by outlining what is needed and expected, providing a way for members to monitor their performance, create feedback, and identify areas for improvement.

Human Resource Management

Traditionally, almost all human resource activities are performed in-house, whereby an initial function was mostly confined to administrative or clerical duties involving keeping employee records and supervising work (Ochieng & Stephen, 2020). Since personnel management is one of the most important units of modern companies and organizations, it becomes even more important in times of crisis. This was due to the ability of the human resource management (HRM) to identify an important dimension of crisis management. It is well known that human resources policy has a huge impact on people; therefore, these measures should have humanistic consequences (Vardarlier, 2016).

There is evidence that human resource (HR) practices positively affect employee performance (Bashir & Khattak, 2008; Irshad et al., 2021) thus turning into organizational performance. This was supported by Ochieng and Stephen (2020) who understand that supporting HR function is essential in not only managing employees effectively but also in enabling the organization to achieve performance excellence. Successful management of humanitarian supply chains requires the effective use of human resource practices, which in turn requires strong leadership on the so-called soft side of management (de Camargo Fiorini et al., 2021). In addition, HRM has deployed and deployed the optimal number of staff in suitable positions and times in the past to enable the company to achieve its goals. Therefore, operating costs will decrease and profitability will increase (Vardarlier, 2016). However, Sopha and Asih (2018) found that, due to limited human resources, humanitarian organizations are challenged to use their resources in such a way that they both help the disaster victims and effectively build organizational capacities. Volunteers, managers, auxiliaries, and GOs suffered from a lack of knowledge, and the lack of a unique command post made the organization less efficient. Hence, the effectiveness of HR practices is of vital importance for companies, especially in times of crisis. For this reason, companies need to establish a contingency plan as a preventative practice for managing the risks associated with emerging HR issues and their impact on the business (Carnevale & Hatak, 2020). One possible measure is for organizations to invest in human capital through training before a crisis occurs (Vardarlier, 2016). The effectiveness of HR practices measures a company's ability to respond to emerging HR problems. Proper HRM can improve the employees' ability to acquire and use knowledge and contribute to corporate goals (Kianto et al., 2016). There was strong interconnection found by Patrucco et al. (2022) between humanitarian operations, such as supply chain management, and human resource management.

De Camargo Fiorini et al. (2021) showed that HRM can only insufficiently influence humanitarian organizations by preventing, preparing for, and responding to disasters. Training programs are given to personnel as part of the humanitarian responsiveness to acquire a skillful workforce in humanitarian operations. Based on previous empirical frameworks, human resource management is represented as a five-dimensional construct, which are compensation and benefits, development of employees and training, style of communicative management, recruitment and selection of employees, and cultural awareness and diversity management (Gómez-Cedeño et al., 2015; Smith-Doerflein et al., 2011). Findings from Lumme-Tuomala (2017) also support the significance of training, development, recruitment, and selection in humanitarian operations performance. Although talented and highly skilled human resource teams are seen as critical success factors, several empirical studies have examined the impact of human resource management practices on the implementation of humanitarian missions in organizations (de Camargo Fiorini, et al., 2021; Mohiuddin et al., 2022).

Measuring Human Resource Management

Figure 1 presents the proposed research model combination of the main ingredients in Smith-Doerflein et al. (2011) and Gómez-Cedeño et al. (2015). They developed a complete list of dimensions (training and employee development, recruitment and employee selection, and communicative management style) to gauge human resources management in logistics. In a developed nation, the questionnaire in humanitarian organizations is reliable and valid. Yet, in the developing world, the soundness of the instrument in humanitarian organizations is still vague. This model represents the relationship between human resources, their dimensions, and the performance of humanitarian operations. Based on Figure 1, it can be concluded that human resource plays a crucial role in creating or enhancing the humanitarian operations performance in humanitarian organizations.

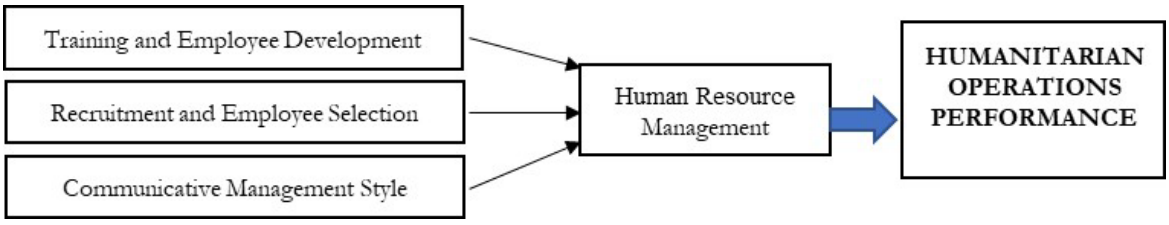

Figure 1. Proposed research model

Bridging Humanitarian Operations Performance and Human Resource Management

Human resources management is a crucial feature in organizational competitiveness as it brings a major contribution to determining the humanitarian operations performance (Jabbour et al., 2017; Longoni et al., 2018). Nevertheless, the evidence provided by these studies was not sufficient. Therefore, by narrowing the literature, this study aims to determine a workable model, which includes human resource management as an antecedent to the performance of the humanitarian operation.

Table 1 shows the significance of human resources management to humanitarian operations performance. This study aims to add to the literature by investigating the importance of human resources management on the performance of humanitarian operations in humanitarian organizations in Malaysia. Based on the existing literature, there is strong evidence of the connection between human resources management and humanitarian operation performance, as hypothesized theoretically by various authors. We will call this $\mathbf{H_1}$, i.e., a positive relationship between human resources management and humanitarian operation performance.

In conjunction with past research, the authors will examine this connection in detail from the perspective of three hypotheses. Therefore, the three hypotheses are as follows:

H_{1a}: There is a positive relationship between training and employee development and humanitarian operations performance
H_{1b}: There is a positive relationship between recruitment and employee selection and humanitarian operations performance
H_{1c}: There is a positive relationship between communicative management style and humanitarian operations performance

The first hypothesis, **H_{1a}**, on the positive relationship between training and employee development and humanitarian operations performance is derived from Aksh (2018). The second hypothesis, **H_{1b}**, on the positive relationship between recruitment and employee selection and humanitarian operations performance is derived from Behl and Dutta (2020), while the third hypothesis, **H_{1c}**, on the positive relationship between communicative management style and humanitarian operations performance is derived from Safarpour et al. (2020).

Table 1. Human resource management and humanitarian operations performance

Variables	Relevance to humanitarian operations performance	Proposed by
Humanitarian operation performance	Influence of humanitarian organizations, skills, and human resource approaches that can impact the performance of an organization (Measure: survey method)	Ellinger and Ellinger (2014); Hohenstein et al. (2014)
Training and employee development	Training increase NGO performance (Measure: 5-point Likert scale)	Aksh (2018)
Recruitment and employee selection	Knowledge transfer improves humanitarian performance (Measure: 5-point Likert scale)	Behl and Dutta (2020)
Communicative management style	Reduced the barrier and challenges in improving the performance and management of the humanitarian operation (Measure: content analysis method)	Safarpour et al. (2020)

METHODOLOGY

Relevant methodology and systematic research are crucial in determining scientific progress. The research aims to present responses to the questions and introduce new information (Marczyk et al., 2005; Masyudi, 2018). This research adopted the paradigm of positivist research to examine the connection between human resources management and humanitarian operations performance. Based on the philosophy of empiricism and rationale, positivism, also known as the 'scientific method', is established (Almpanis, 2016; Creswell, 2009). In a paradigm of positivist research, human resources management (the constructs) are examined quantitatively to estimate the cause and effect of the connection. The sub-sections provide extensive insight into the methodologies used in this study, and partial least squares scoring of structural equation models is used to develop the questionnaire.

QUESTIONNAIRE DEVELOPMENT

The research tool in this study is the questionnaire. It includes a series of questions to collect information and professional opinions from respondents about the context of the study (Cowles & Nelson, 2015). The questionnaire was developed in three parts. The first part collects the respondents'

demographic information, such as qualifications, position, experience, and types of organization. Demographic information is collected to confirm that the participant in the study has sufficient knowledge and experience related to the field of the study. We designed a questionnaire based on variables adapted from prior literature (Behl & Dutta, 2020; Ellinger & Ellinger, 2014; Hohenstein et al., 2014; Pradhan & Jena, 2017; Safarpour et al., 2020) that suggested individual performance, human resource management, learning experience, and communication are important to describe the performance of humanitarian operations in organizations in Malaysia, respectively. The questionnaire was created in Bahasa Melayu and English to ease the respondent's understanding of the details.

The following part of the questionnaire was adopted from Smith-Doerflein et al. (2011) and Nguyet et al. (2021) and Employee Development, Recruitment and Employee Selection, and Communicative Management Style. The third section measures the dependent variable, which is Humanitarian Operations Performance. This section presents four dimensions, as suggested by Tatham and Hughes (2011) and Wilson et al. (2018). The answers were based on a Likert scale with 5 points from 1 = totally disagree to 5 = totally agree. Twenty respondents were randomly selected from the population to ensure that the questionnaire was valid and reliable. Several modifications to the statements that measure the human resource were done for greater understanding. Pilot test responses were excluded from this study.

Sample and Data Collection

The components in the population from the selected sample are represented by the sampling frame (Clinning, 2016; Sekaran & Bougie, 2016), which is also known as the working population (Taher, 2020; Zikmund et al., 2009). A sampling frame is needed to choose a suitable sample to assess the issue in this study. In this study, the sampling frame involves individuals who are directly involved in disasters and consists of 3,732 people across Malaysia. The database of potential respondents was obtained from the National Disaster Management Agency (NADMA). The survey was conducted in 2018.

This study uses a formula by Krejcie and Morgan (1970) and Johnson and Shoulders (2019) to calculate the sample size. In this case, the sample size for the sample frame of 3,732 was 346. According to Hair et al. (2010), 100 samples is the suggested size of the sample needed for the Structural Equation Modeling (SEM) technique if there are five or fewer latent constructs where each latent construct had more than three items in the proposed theoretical framework (Memon et al., 2020). The HRM construct was adopted from Khan et al.'s (2016) framework and humanitarian operation performance was extracted from Behl and Duta (2020) and Safarpour et al. (2020). The reflective construct was examined with respect.

Stratified sampling, which is also probability sampling, was used to gather the quantitative data. This method was chosen because researchers divide the population into smaller groups that do not overlap but rather represent the entire population. During sampling, these groups can be organized, and then a sample can be drawn separately from each group. In this study, 2,000 paper questionnaires were disseminated to the respondents across the nation through various humanitarian organization offices. However, only 593 returned questionnaires were reliable. Table 2 presents the demographic profiles of the participating respondents. Based on Table 2, the largest responses come from the government agencies such as the Malaysia Civil Defense Force, and APM.

The government agencies contributed to the fact that 25.8% of the respondents came from the eastern zone, followed by the southern zone with 23.1%, the northern zone with 22.1%, and the central zone with 16.2%. Meanwhile, for non-governmental organizations (NGOs), the major outcome was sourced from the Malaysian Red Crescent with 3.4%, followed by MERCY Malaysia with 3%, Islamic Relief Malaysia (IRM) with 2.7%, other NGOs with 2%, and Humanitarian Care Malaysia (MyCare) with 1.7%. As for the qualifications, 42.2% of participants are Malaysian Certificate of Education (SPM) holders, 39% with Diplomas, 16.7% with Bachelor's degrees, 1.2% with Master's Degrees, and

1% with PhDs. In these organizations, the voluntary teams (others) were accommodated by 44.7% overall, and 22.3% from administrative positions. As for the experience in humanitarian operations, the average period was 7 years.

Table 2. Demographic profile of the respondents

Variable	Frequency	Percent (%)
Qualification		
Malaysian Certificate of Education (SPM)	250	42.2
Bachelors	99	16.7
Masters	7	1.2
PhD	6	1.0
Total	593	100.0
Position Held		
Manager	24	4.0
Professional	23	3.9
Administration	132	22.3
Supervisor/Executive	48	8.1
Clerical	101	17.0
Others	265	44.7
Total	593	100.0
Humanitarian Operation Related Experience		
Less than 5 years	278	46.9
6 to 10 years	200	33.7
11 to 15 years	70	11.8
16 to 20 years	26	4.4
20 years plus	19	3.2
Total	593	100.0
Types of Organization		
A. Government Agency (Malaysia Civil Defence Force, APM) State		
- North Zone	131	22.1
- Central Zone	96	16.2
- South Zone	137	23.1
- East Zone	153	25.8
B. Non-Governmental Organization (NGOs)		
- MERCY Malaysia	18	3.0
- Malaysian Red Crescent	20	3.4
- Islamic Relief Malaysia (IRM)	16	2.7
- Humanitarian Care Malaysia (MyCare)	10	1.7
- Others	12	2.0
Total	593	100.0

Analyzing the Data

Initially, the data was evaluated and understood using univariate and bivariate techniques. Yet, a more advanced multivariate technique is needed to examine the relationships between several variables. It was found that structural equation modeling (SEM) is suitable for researchers to investigate the relationship between different variables at the same time. SEM is divided into two sub-categories: (i) covariance-based structural equation modeling (CB-SEM); and (ii) partial least squares structural equation modeling (PLS-SEM).

The PLS-SEM technique is employed in this study as it has a stronger forecast of the cause-and-effect relationship between the variables. In addition, PLS-SEM has proven its capabilities as it surpasses all data distribution assumptions (non-parametric), controls construct with a single element,

overcomes complicated models with multiple structural model connections and higher-order constructs, counts the number of unresolved discrepancies, and yields a high power (Hair et al., 2016). The PLS-SEM consists of two parts: (i) analysis of the measurement model; and (ii) analysis of the structural model (Becker et al., 2012; Crocetta et al., 2021). When analyzing the measurement model, the researcher can assess the relationship between the latent (unobservable) variables and their items. Meanwhile, by analyzing the structural model, the researcher can analyze the relationship between the exogenous (independent) construct and the endogenous (dependent) construct. In addition, the proposed hypotheses can be answered with the help of the structural model analysis.

RESULTS

This study employs a two-stage approach to analyze the quantitative data, as proposed by Becker et al. (2012) and Crocetta et al. (2021). In the first stage, the collinearity, internal consistency, and validity were analyzed using the measurement model. Figure 2 presents the measurement model. In Figure 2, the numbering of variables Xb.1 … Xb.10 for the three constructs of HRM (Training & Employee Development, Recruitment & Employee Selection, and Communicative Management Style) is because these are independent variables of the second hypothesis $\mathbf{H_{1b}}$, while Zb.1 … Zb.14 are the dependent variables of the Humanitarian Operations Performance of the second hypothesis $\mathbf{H_{1b}}$. The list of these variables is in the Appendix.

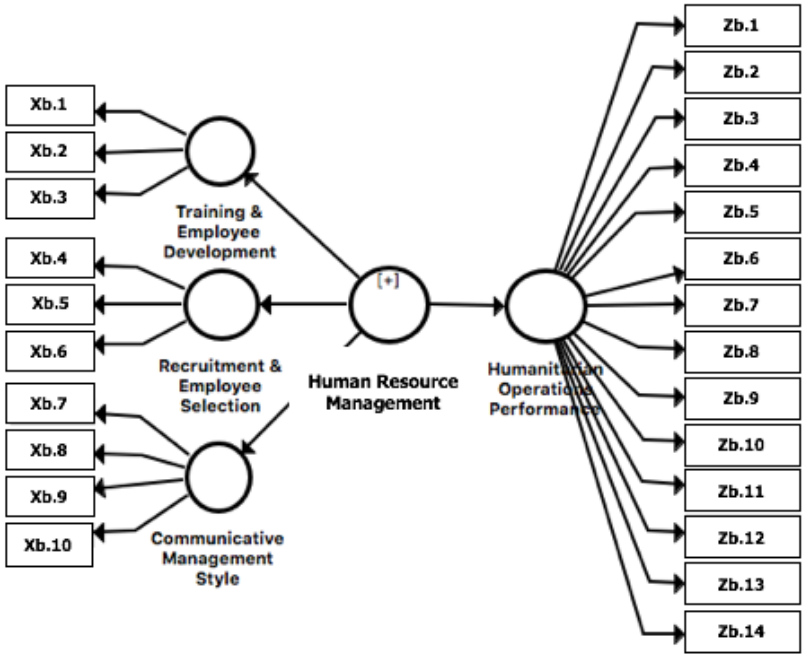

Figure 2. Measurement model

MEASUREMENT MODEL ANALYSIS FOR LOWER ORDER REFLECTIVE CONSTRUCTS (1ST STAGE)

Reliability

Overall, 593 out of 2000 disseminated questionnaires were obtained within 3 months for further analysis. Two techniques are used to examine the consistency of the internal elements or the reliability of the elements in the instrument. Traditionally, the Cronbach alpha (α) coefficient is used to observe the reliability of an instrument. An instrument is reliable when the alpha coefficient is more than 0.6 (Nawi et al., 2020; Nunnally & Bernstein, 1994; Wilson et al., 2018). Table 3 shows the alpha

values of all LOCs greater than 0.6. These data have met the higher threshold and confirmed scale reliability as discussed by Chin (2010) and Akter et al. (2017). Hence, it shows that the internal consistency is sufficient.

The Cronbach alpha coefficient is also crucial when examining the composite reliability (CR) instruments (Hair et al., 2016) to confirm the reliability of the individual indicators that contribute to a latent construct. Hair et al. (2016) found that the threshold for CR is 0.7 and above. However, the CR values of the latent variables in this study are far from the recommended threshold, which concludes that further analysis can be performed due to the reliability of the instrument. Table 3 presents the CR values for the latent variables.

Table 3. Results of the assessment of the measurement model for lower-order constructs

Construct	Items	Min. Factor Loading	AVE	CR	Cronbach's α
Communicative Management Style	4	≤ 0.825	0.729	0.915	0.876
Recruitment and Employee Selection	3	≤ 0.813	0.723	0.887	0.808
Training and Employee Development	3	≤ 0.830	0.746	0.898	0.829
Humanitarian Operations Performance	14	≤ 0.702	0.563	0.964	0.961

Convergent validity

The validity of the instrument is then tested after confirming the reliability of the questionnaire. Validity refers to the accuracy degree in assessing what we intend to measure (Cowles & Nelson, 2015). The PLS-SEM examines the instrument's convergence and discriminant validity (Hair et al., 2016). The size of the indicators associated with its alternative measures is the convergent validity. The convergent validity is determined when the factor loadings and the Average Variance Extracted (AVE) are evaluated. When the factor loadings are more than 0.7, it shows that the indicators are similar. However, if the range of the indicator loadings is from 0.4 to 0.7, it is also sufficient if the construct AVE is far from the threshold. Table 3 displays the constructs' minimum factor loadings in this study. Based on the table, the constructs' minimum factor loadings are in the satisfactory range. Meanwhile, Average Variance Extracted (AVE) is the aggregate variance determined by the latent construct indicators. Hair et al. (2016) set the threshold value for the AVE at 0.5 and above. Table 4 shows the values for the AVE and it can be seen that they are well above the threshold. The instrument thus fulfills the criterion of convergent validity.

Table 4. Discriminant validity of the lower order constructs

		1	2	3	4
Communicative Management Style	(1)	**0.854**			
Humanitarian Operations Performance	(2)	0.716	**0.750**		
Recruitment and Employee Selection	(3)	0.704	0.686	**0.851**	
Training and Employee Development	(4)	0.723	0.712	0.680	**0.864**

Discriminant validity

Next, the discriminant validity of the constructs is assessed. Discriminant validity is referred to as the unit in which a variable empirically differs from one another (Henseler et al., 2015). This study uses Fornell-Larcker standards to examine discriminant validity (Ab Hamid et al., 2017; Fornell & Larcker, 1981). The construct is discriminatory if the square root of the mean extracted variance (AVE) of a construct is greater than its correlation (r) with other constructs (AVE> r). Based on Table 4, the diagonal bold data is the square root of the AVE for the lower order constructs in this study, while the

simple numbers show the correlation between the constructs. It is concluded that the constructs of the lower order fulfill the standard of discriminant validity. Hence, the employed constructs of this study are empirically different from one another.

Measurement Model Analysis for Higher-Order Formative Constructs (2nd Stage)

The latent variable values obtained from the previous step were used in the next stage of the analysis of the measurement model to create a higher-order construct. Building on the previous discussion, human resource management is demonstrated as a higher-order design construct.

Assessment of collinearity

In a formative construct, collinearity is proven to be problematic as it is referred to as the exaggerated connection between the formative construct items (Hair et al., 2016). As for collinearity, the researcher must eliminate the redundant indicators with a high level of correlation. To determine the collinearity of the construct elements, the variance inflation factor (VIF) is used, which is equal to the tolerance. Therefore, the VIF values for collinearity must be specified. In PLS-SEM, a potential collinearity threat is determined when the VIF value is 5 and above (Kim, 2019). In this study, the values of VIF for all human resource indicators are well below the threshold, as shown in Table 5. Therefore, the dimensions of human resources management are free from collinearity issues.

Table 5. Collinearity among the indicators of human resource management

Higher-Order Formative Construct	First-Order Constructs	Multicollinearity (VIF)
Human Resource Management	Communicative Management Style	2.543
	Recruitment and Employee Selection	2.258
	Training and Development	2.382

Assessment of factor loadings and outer weights of the dimensions of human resource management

In the measurement model analysis, the significance of the formative construct external weights must be assessed (Hair et al., 2016). In PLS-SEM the construct is developed based on the formative indicators and SMART PLS presents the standardized values of the external weights. These scores show that the items are important and contribute to the construct. Table 6 presents the scores for the outer weights of indicators of human resources. Additionally, these outer weights were examined for their significance.

Table 6. Significance of the outer weights and loadings of the indicators of human resource management

Higher-Order Construct	Lower-Order Construct (Dimensions)	Outer Weight	Significance of the Weights (p-value)	Factor Loading
Human Resource Management	Communicative Management Style	0.355	0.000	0.899
	Recruitment and Employee Selection	0.325	0.000	0.871
	Training and Development	0.435	0.000	0.913

Through the bootstrapping technique, the important values for the outer weights were attained. Generally, if the p-value > 0.05, it needs to be removed. However, if there is an issue related to the validity of the content, they should be maintained if only their outer loadings are > 0.5 (Hair et al., 2016).

Assessment of Structural Model

By analyzing three different test results, the structural model can be examined: (i) collinearity between the constructs, (ii) path coefficients, and (iii) R-square (R2) (Chin, 2010; Hair et al., 2016). Meanwhile, to determine the collinearity among the constructs, the statistics of the VIF in the model will be monitored. Hair et al. (2016) mentioned that the statistics of the VIF must be less than 5 to indicate that the structural model is free from multicollinearity issues. Table 7 presents the VIF values. Based on the table, the VIF statistics between human resources, its dimensions, and humanitarian operations performance in the model were lower than the threshold. Thus, the model is free from collinearity issues.

Table 7. Collinearity statistic (VIF) for the structural model

Variables	Humanitarian Operations Performance
Human Resource Management	3.788
Communicative Management Style	2.227
Recruitment and Employee Selection	1.814
Training and Development	2.237

Next, the path coefficients will be assessed. For instance, various connections in the research model are analyzed based on the beta (β) values. These β values are examined to respond to the proposed hypotheses. The ultimate aim of this study is to establish the importance of the relationship between human resource management and the performance of humanitarian operations. In this study, human resource management is demonstrated as a six-dimension higher-order formative construct. According to Hair et al. (2016), the value of the path coefficient in a model should be close to 1 and statistically significant. Based on the result, the path coefficient values were close to 1 and significant at a confidence interval of 0.05. Table 8 summarizes the results. The outcomes respond to the proposed hypothesis, which is that there is a positive connection to human resource management, the dimensions, and the humanitarian operations performance.

Table 8. Structural model assessment

Hypothesis	β	p-Value	T Statistic	Decision
H_1 : Human Resource Management → Humanitarian Operations Performance	0.531	0.000	10.859	Supported
H_{1a} : Communicative Management Style → Humanitarian Operations Performance	0.199	0.000	4.670	Supported
H_{1b} : Recruitment and Employee Selection → Humanitarian Operations Performance	0.291	0.000	6.409	Supported
H_{1c} : Training and Employee Development → Humanitarian Operations Performance	0.453	0.000	8.526	Supported

Lastly, it is important to observe the score of R-square (R^2) to evaluate the structural model was evaluated to confirm the predictive power of the model (Hair et al., 2016). In this study, the R2 value was 0.757, indicating that about 75.7% of the variance in humanitarian performance (R2 = 0.757) was due to human resources and their dimensions. Furthermore, the findings revealed that the dimensions of human resources had a large impact on the performance of humanitarian operations. Meanwhile, the other two dimensions showed fewer impacts. The overall findings of the structural model assessment are displayed in Figure 3. In this study, the impact of the human resource dimensions is also estimated individually.

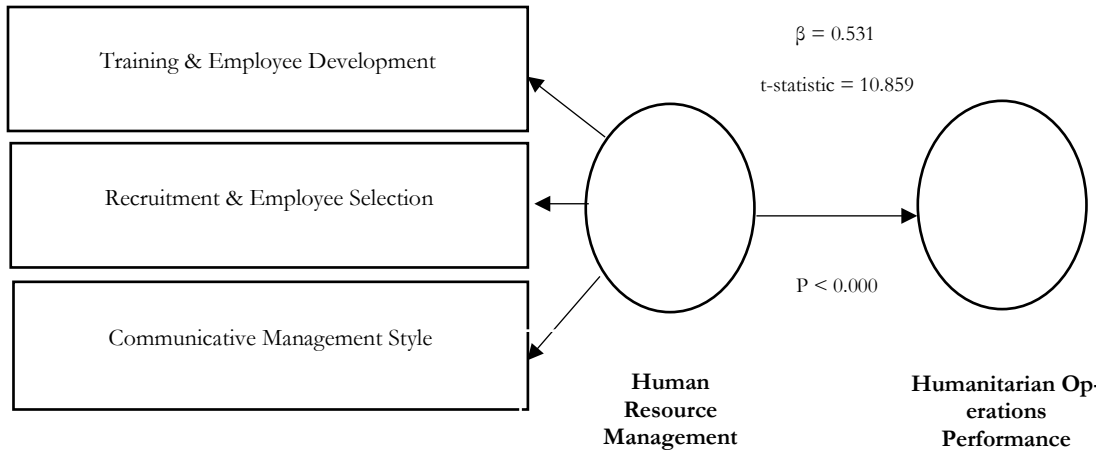

Figure 3. Structural model exhibiting the relationship between human resource and humanitarian operations performance

DISCUSSION

In this research, human resource management was examined for its connection to humanitarian operation performance. It was discovered that human resource management was significant to the performance of the humanitarian operation with 75.7% of the variation in humanitarian operation performance. It was justified by the human resources management that a β-value of 0.531 ($p < 0.000$) unit rises in human resources associated with the improvement in the performance of humanitarian operations in an organization. The outcomes of this study are similar to the outcomes attained by Hohenstein et al. (2014). They elaborated that the improvement in humanitarian operation performance can be attained if organizations have human resource management. Similarly, the result also supports the evidence reported by Meduri (2014), who asserted that performance varies in each country. The difference depends on the intensity of the disaster, the variation in the number of actors involved in the relief operation, including military and paramilitary forces, donors, logistics organizations, governmental and non-governmental organizations, etc. from different cultures, ethnic groups, and sometimes nations with different stages of the Logistic experience (Cozzolino, 2012; Meduri et al., 2016). Individual performance in Malaysian humanitarian organizations has been discussed in detail in research conducted by Mat Jusoh et al. (2021). The authors emphasize creativity, knowledge of individuals involved, and individual involvement satisfaction are the most important dimensions to achieving overall organizational excellence. Therefore, this scenario can help to reduce the suffering of disaster victims by enabling humanitarian organizations to employ and train individuals who are involved directly in disaster to be more effective and efficient.

Based on the statistics published in this study, research has shown that human resource management in Malaysia has a positive impact on the performance of humanitarian operations in humanitarian organizations. It has become a major challenge, especially for existing HR management, to create an effective and coherent work environment between the three generations (boomers, generation X, and Y) who make up 15.7% of the total workforce in Malaysia (Sakdiyakorn & Wattanacharoensil, 2017). Additionally, this study also presents adequate quantitative data which highlights the three dimensions of human resource management, as specified by Smith-Doerflein et al. (2011): training and employee development ($\beta = 0.453$, $p < 0.000$), recruitment and employee selection ($\beta = 0.291$, $p < 0.000$), and the employment of communicative management style ($\beta = 0.199$, $p < 0.000$). These dimensions have proven to be important in humanitarian operations performance in humanitarian organizations. Thus, the findings correspond to the reasoning mentioned in studies published by Mat Jusoh et al.

(2021) and Abidi et al. (2020). Among the significant factors being highlighted are training and employee development, recruitment and employee selection, and communicative management style in humanitarian organizations and culture. Researchers found that country culture influences collaborative behavior in humanitarian supply chains (HSCs) (Prasanna & Haavisto, 2018), besides cultural differences between victims and those delivering humanitarian relief (Azmat et al., 2019) gave an impact on humanitarian performance. These factors are crucial for humanitarian operations performance. Therefore, it can be concluded the proposed research model has presented adequate statistical data related to the connection between human resources management, its dimensions, and humanitarian operations performance.

CONCLUSIONS

The quality of human resources management in the humanitarian organization can be improved with excellent performance in the humanitarian operation. This research has presented theoretical implications to prove the connection between human resources management and the performance of humanitarian operations. This research concluded that there is a reasonable and robust association between organizational performance and consideration of performance management and employee appraisal. It is found that three dimensions of the HRM influenced humanitarian performance in contrast to individual performance as reported earlier by Mat Jusoh et al. (2021), which had an impact on humanitarian organizations' performance.

This research also presents the managerial contribution of human resource management to the process of value creation such as judgment, decision-making process, and resource allocation to further improve operational efficiency as similarly found by Abidi (2019) among humanitarian staff. The importance of training and employee development, recruitment and employee selection, and communicative management found in this study concurred with Caligiuri et al. (2020). Thus, this research confirmed that these factors also influence the performance of humanitarian operations in humanitarian organizations in Malaysia.

The implications of this research demonstrate that the performance of humanitarian operations in Malaysian humanitarian organizations can be enhanced if they have effective and efficient human resource management through training and employee development, recruitment and employee selection, and communicative management style. These may affect the identity and image of humanitarian organizations. Employees have more trust in human resources which motivates them to perform better for their organization.

Generally, all findings were applicable in any country as human resource management supported service quality management universally. However, the limitation of this study is that it only focused on the human resource management context's impact on the humanitarian organization. Further research of this model is suggested to identify the relationships between human resource management and humanitarian operations performance in different contexts and other countries.

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APPENDIX: MEANING OF VARIABLES

The variables Xb.1 to Xb.10 correspond to the 10 questionnaires below.

No.	Variable	Variable ID	Constructs	Questionnaires
1	Independent Variables (Human Resource Management)	Xb.1	Training & Employee Development	Regularly scheduled training based on job responsibilities.
2		Xb.2		Provides training based on employees' needs.
3		Xb.3		Information used in training is readily available.
4		Xb.4	Recruitment & Employee Selection	Seen primarily as a source of value for the organisation (vs. a cost to be minimised).
5		Xb.5		Highly integrated with our organisation's overall strategy.
6		Xb.6		Selects and evaluates applicants effectively.
7		Xb.7	Communicative Management Style	Manager provides feedback on job performance promptly.
8		Xb.8		Communication with employees is effective and timely.
9		Xb.9		Manager give feedback and evaluate performance in a manner that positively encourages improvement.
10		Xb.10		Information is shared effectively within the organisation or division.

The variables Zb.1 to Zb.14 correspond to the 14 questionnaires below.

No.	Variable	Variable ID	Questionnaires
1	Dependent Variables (Humanitarian Operations Performance)	Zb.1	Performs very well in quickly delivering relief during disaster.
2		Zb.2	Common and agreed to policies and procedures to standardise logistics processes during an operation.
3		Zb.3	Ensures that complaints and problems are resolved promptly and effectively.
4		Zb.4	Service standards that define reliability, responsiveness and effectiveness of employees' interaction with people affected by the disaster.
5		Zb.5	Meets service provided schedules.
6		Zb.6	Effective and accurate service scheduling to meet operations relief.
7		Zb.7	The timeliness of my organisation's aid delivery was outstanding.
8		Zb.8	Spent aid received from donors/suppliers efficiently.
9		Zb.9	Speed of getting an item from donor to recipient.
10		Zb.10	Speed of getting an item from supplier to recipient.
11		Zb.11	Making on-time deliveries.
12		Zb.12	Flexibility during the relief effort was outstanding.
13		Zb.13	Ability to respond to changing needs in aid delivery was outstanding.
14		Zb.14	Able to effectively adjust our delivery of products and services according in the changing requirement of the operations.

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