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RESEARCH ARTICLE

THE ROLE OF THE SRI LANKAN ARMY IN POST-DISASTER SITUATIONS IN TERMS OF PROVIDING HUMANITARIAN ASSISTANCE

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Abstract

This study's primary purpose is to identify the factors affecting Sri Lankan military personnel's behavioural patterns while providing humanitarian assistance in post-disaster situations. The study has used both qualitative and quantitative approaches. Interviews were done with a few military personalities in a qualitative approach, and the answers were analysed using discourse analysis. The researcher has used a structured questionnaire in the quantitative method. A sample size of 308 military personalities has participated. Independent two-sample t-test, one-way analysis of variance, and structural equation modelling were used. The main factors of the research, which are attitude towards behaviour, social norms, self-efficacy, knowledge and practice, were identified using the discourse analysis method. Gender, training gained by the military personnel, difficulties encountered by them, and their work experience years failed to affect humanitarian assistance significantly. In structural equation modelling, social norms, knowledge, and practice significantly affected humanitarian aid. However, attitude towards behaviour and self-efficacy did not show any significant effect on humanitarian assistance. This study will provide the necessary information for policymakers and military institutions in Sri Lanka to develop military personnel skills in post-disaster situations. Moreover, this research's findings will help the individuals, especially the researchers, conduct studies in the same field.

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Introduction:-

In any country, the military's primary role is to establish and be prepared to safeguard national security and protect its sovereignty and territorial integrity. However, in the present-day context, other than its primary role, the armed forces are the best-organized entity to provide a full range of assistance in any disaster situation and their secondary role and such tasks could be described as public work, provision of water and electricity, temporary shelters, providing any essential transport need, etc. In Sri Lanka, these services are supplied both by the military and the civil, administrative bodies. Sri Lankan civil administration is a development-oriented body that handles low and moderate intensive emergencies depending upon the resources at their disposal and within their capabilities. For decades, SLA's involvement in disaster response and relief operations and providing humanitarian assistance to the victims are very prominent and pivotal in the country. The SLA has been involved in disaster situations in terms of hazards caused by flood inundations, landslides, droughts, Tsunami, and during most other epidemics. This involves several approaches, such as providing medical assistance excavations and debris removal to rescue humans and

unearth human bodies, providing basic needs, protection, and provision of power and energy requirements. Further, the SLA is always engaged with these activities as the first respondent, and therefore the efforts cannot afford to fail in these tasks. To provide such facilities, a specialized task force equipped and trained for multi tasks is needed. Against this backdrop of recurrent disasters happening in Sri Lanka, the Army personnel's role is pivotal. However, the army's quick response to disasters, flood, and landslides occurred in recent years (between 2015 and 2020), which cost 576,042 displacements, 213 deaths, and 77 reported missing the reports. These adversities could have been minimized if adequate coordination, evacuation, equipment handling, and communication channels had been provided. Given that, identifying the relevant factors affecting Sri Lankan military personnel's behavioural patterns providing humanitarian assistance arises. Therefore, this research paper explores opportunities and possibilities regarding measures that could be initiated to streamline the skill levels and military personnel's capacity to render efficient and accurate service during post-disaster situations to provide humanitarian assistance.

Literature Review:-

Humanitarian Assistance

In the report of "Good Humanitarian Donorship Principles" (2003), it was stated that the objectives of humanitarian action are to save lives, alleviate suffering and maintain human dignity during and in the aftermath of human-made crises and natural disasters, as well as to prevent and strengthen preparedness for the occurrence of such situations. Moreover, it explains that humanitarian action includes the protection of civilians and those no longer taking part in hostilities, and the provision of food, water and sanitation, shelter, health services and other assistance undertaken for the benefit of affected people and to facilitate the return to everyday lives and livelihoods. In response to natural catastrophes, disaster relief officers view humanitarian actions as an emergency service to promote a regional sharing of the humanitarian burden. The humanitarian community needs a large variety of information, such as disaster situations, availability and movement of relief supplies, population displacement, disease surveillance, relief expertise, and meteorological satellite images or maps (Zhan et al., 2002). In recent years, it has shown that most countries have paid much attention to humanitarian assistance in disaster situations. According to Schraeder et al. (2005), the challenges include a lack of information sharing and communication among the actors involved in relief operations.

Factors Affecting the Military in Providing Humanitarian Assistance

It is understood that the military shoulders a considerable service in any disaster situation. This is done not only in the duration of disasters but also during before and in post-disaster cases. Improving evacuation efficacy plays a significant role in post-disaster activities because many environmental and behavioural factors will reduce evacuation efficacy (Goerigk et al., 2015). Moreover, Hofmann and Hudson (2009) have stated that military involvement in disaster management is driven by the military's concern to improve its public image, use disaster response as a form of training, and diversify its military role austerity and the army budget cuts. Several factors affect the military role in providing humanitarian assistance. The researcher has focused on planned behaviour theory and the social cognitive theory to identify these factors. Both theories are explaining the factors that affect human behaviour. Hence, the factors were derived from both theories.

Attitude towards Behavior: This can be identified as a significant factor that affects the military's humanitarian assistance in a post-disaster situation. Behavioural intention is our subjective willingness to pursue or conduct any effort or incident (Ajzen, 1991a). McLachlin and Larson (2011) explained that the intrinsic desire and disciplined behaviour of all members involved in disaster management are the critical success factors of any emergency operation. Since natural disasters occur suddenly, the pre, during, and post-disaster management efforts indeed need well-organized and structured coordination (McLachlin and Larson, 2011). According to Cozzolino (2012), due to an established organizational structure's unavailability, members with prior experience of disaster management operations often form a negative attitude towards the following process's success.

Social Norms: This can be identified as another significant factor that affects humanitarian assistance. Individual judgments are based on the opinions of the surrounding social environment (Ajzen, 1991a). From the military role perspective, this can be identified as the stakeholders (colleagues, higher rankers, Red Cross members, government, victims, etc.) that impact the military's role when providing humanitarian assistance in a post-disaster situation. Beamon and Balcik (2008) identify that political parties' influence in the selection and distribution of relief severely undermines humanitarian assistance's objectives. Moreover, effective information sharing can help agencies manage a disaster to reduce or control the potential losses and risks of the disaster and ensure that resources reach the victims immediately to facilitate quick and effective recovery (Dahlan et al., 2013).

Self-Efficacy: This plays a significant role in the social cognitive theory related to behavioural factors. Schunk (1990) states that individuals with high self-efficacy will feel confident in doing a task than those with low self-efficacy. According to Bandura (1982), high self-percepts of efficacy may affect initial and performance effort differently, in that some self-doubt bestirs learning but hinders the adept execution of acquired capabilities. This explains the importance of self-efficacy in a pre, during, and post-disaster situation. Moreover, the military personnel should be confident with their process of providing humanitarian assistance. This elaborates on their readiness and confidence in both physical and psychological aspects. Benight *et al.* (1997) declare that self-efficacy is proposed to influence individuals' information-sharing behaviors within the disaster management context.

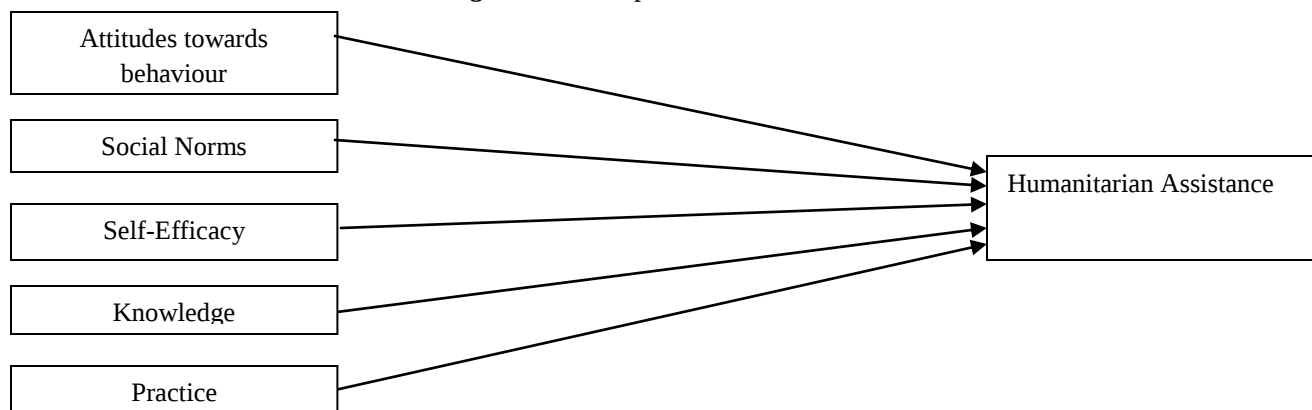
Knowledge: According to Zhang *et al.* (2002), before responding to a disaster emergency, decision-makers must obtain a good understanding of the current situation—the severity of the disaster, the number of people dead or injured, the urgent demands in the damaged area, and so on. Given that military personnel must possess sound knowledge regarding humanitarian assistance to be provided in a disaster situation. When it comes to a post-disaster situation, they should know unearthing dead bodies, handling appropriate equipment and providing medical, etc. According to Eldar (1992), Specific preparedness measures, such as delivering targeted education programs, ensuring facilities are barrier-free, and arranging emergency transportation, are required to ensure that the unique needs of elderly and disabled citizens are met emergency.

Practice: Training will always provide a positive outcome for any behaviour. Given that, when it comes to the role of military personnel in delivering humanitarian assistance in a post-disaster situation, it needs to have better practice concerning the case. According to Holguín-Veras *et al.* (2012), current military and classic perspectives illustrate the influence of one's experience, education, and training in humanitarian operations, which is key to determining what is considered "effective". In addition to training, tools and techniques are essential for the conduct of effective relief operations. One of the most commonly used methods in military projects is the use of checklists. However, humanitarian missions are different from other military operations. Daines (1991) declared that exercises help detect and diagnose program weaknesses, such as inconsistencies in plans, equipment deficiencies, and inadequate training or communications.

Design/ Methodology/ Approach:-

To address the research problem of the study, a conceptual framework was constructed by considering two theories. The Theory of Planned Behavior (TPB), which was constructed by Ajzen (1991) and the Social Cognitive Theory (SCT), which was constructed by Bandura (1986) and these two theories were considered when developing the conceptual framework. The framework's independent variables are the attitude towards behaviour, social norms, self-efficacy, knowledge, and practice. Providing humanitarian assistance to victims has been considered as the dependent variable.

Figure 4:- Conceptual Framework.



Population and Sample

The study population was all the Sri Lankan military personnel involved in disaster management activities. SLA has deployed its units around the country, focusing the disaster proven areas. In the 24 SLA Units, nearly 2,500 soldiers were trained on disaster relief operations and employed under the command of its battalions. This study has

considered all the Sri Lankan military personnel who are involved in disaster management activities. The minimum sample size was derived from the Morgan table (Krejcie and Morgan, 1970). Since the population size is 2,500, the sample size can be derived as 330 according to the Morgan table. Hence, 15 soldiers were selected from 22 battalions deployed around disaster-prone areas of the country. A simple random sampling method was used as the primary sampling method to obtain data. The sampling unit can be identified as Sri Lankan military personnel who were involved in disaster management situations.

Data Collection Methods

The study was conducted using the primary data collection method. In this method, data was collected as first-hand information from the respondents. Primary data was collected through the self-enumeration procedure using a structured questionnaire as the statistical data collection tool. Due to the prevalent pandemic situation, some data was collected by emailing the relevant respondents' questionnaires. Moreover, a personal interview method was used to gather information to perform a discourse analysis. The selected officers were interviewed using an interview questionnaire. Two different questionnaires were designed to measure the variables in the conceptual framework and for discourse analysis.

Methods of Data Analysis

The methods of data analysis can be identified as a vital point in the study. Hence, data which was collected from the respondents were analyzed and summarized using Microsoft Excel. Moreover, the researcher has used IBM SPSS and Amos software packages. Since this study is a mixture of qualitative and quantitative analysis methods, the first part of the analysis consists of the discourse analysis results. After that, the results of the quantitative analysis were considered. A principal component analysis was carried out to make a composite index for the independent variables. Bivariate analysis can be used to explore the relationship between two variables, to check the association and the strength of associations or to check whether there are differences between two variables and the significance of those differences. Hence, an independent two-sample t-test and one-way analysis of variance have been used in the study. The structural Equation Model has been used as the advanced analysis method.

Research Findings:-

A discourse analysis was carried out to identify the important factors that affect military personnel's humanitarian assistance in a post-disaster situation. From the interviews, some of the main points were also categorized under the theme of humanitarian assistance. In the report of "Good Humanitarian Donorship Principles" (2003), it was stated that the objectives of humanitarian action are to save lives, alleviate suffering and maintain human dignity during and in the aftermath of human-made crises and natural disasters, as well as to prevent and strengthen preparedness for the occurrence of such situations. In the golden hour concept, if someone recovered within 24 hours, it can secure up to 85% of the victims. Within 48 hours, the possibility is 25%. Within 72 hours, the possibility is reduced down to 5 %. Sometimes this depends on their medical capacity and condition of the victims. Major JAMC Gunaratne explained this, the Chief Instructor - Light Disaster Management Training Wing of the Disaster Management Training School and Newgard *et al.* (2010).

Moreover, it was found that some of the military individuals are not willing to join the DMC and gain knowledge and practice. According to Rietjens *et al.* (2007), the military's primary mission in disaster response is to establish a secure environment and make it possible for relief organizations to operate through providing transportation and communication. Hence it has to be realized that the military should be willing to partner up with the DMC to achieve better results. These points were categorized under the sub-theme of quick assistance. Moreover, it was highlighted by the respondents and researchers that the military should understand the culture of victims and adapt to the situation. It was categorized under the sub-theme of adaptability. Both these sub-themes are representing the attitude the military is having towards providing humanitarian assistance. Social norm was identified as another main theme from the discourse analysis.

Instructions and coordination, flexibility, and support were sub-themes. According to Bigley and Roberts (2001), the formal system assumes that responding organizations are known ahead of time, have trained together, and are available when needed. People respecting the military and the USA appreciated the military's sending to Nepal in 2015 was categorized under admiration. Following that, it implies stakeholders' admiration is a valuable aspect (Hülssiep *et al.*, 2020). As stated by Bandura (2005), self-efficacy plays a vital role in any behaviour. Hence, it was identified as the main theme by using the answers provided by the interviewees. A sub-theme was identified as having confidence in preparedness.

Furthermore, self-confidence was identified as another sub-theme. Knowledge was identified as another main theme by exploring the answers provided by the respondents. It was developed under two sub-themes that are willing to gain knowledge and share and check the knowledge. This was highly stressed by the interviewees stating that these are vital facts that affect humanitarian assistance. According to Zhang et al. (2002), before responding to a disaster emergency, decision-makers must obtain a good understanding of the current situation: the severity of the disaster, the number of people dead or injured, the urgent demands of the damaged area, and so on.

Furthermore, the derived facts support the idea of Davenport and Prusak (1997), which is knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. Daines (1991) declared that exercises help detect and diagnose program weaknesses, such as inconsistencies in plans, equipment deficiencies, and inadequate training or communications. Hence, the practice was identified as another main theme in the discourse analysis. The ideas shared by the interviewees proved this. Capability, special training and lack of training were identified as sub-themes. In summary, attitude towards behaviour, social norms, self-efficacy, knowledge, and practice were identified as main factors from the interviewees' answers, and the past literature also supported the derived facts. A quantitative analysis was carried out to determine the effects of each of those factors on the SLA's humanitarian assistance in a post disaster situation.

A sample size of 330 military personnel was selected for the study, and however, the researcher was able to collect data only from 308 individuals, and therefore the respondent rate was 93.33%. Validity and reliability analysis was carried out using Cronbach's alpha and KMO value. All the variables were able to satisfy the reliability and validity of the sample.

Table 1:- Validity and Reliability Chart.

Variable	Cronbach's alpha (Reliability) >0.7	KMO (Validity) >0.6
Humanitarian Assistance	0.913	0.760
Attitude Towards Behavior	0.786	0.685
Social Norms	0.965	0.839
Self-Efficacy	0.921	0.849
Knowledge	0.935	0.829
Practice	0.957	0.857

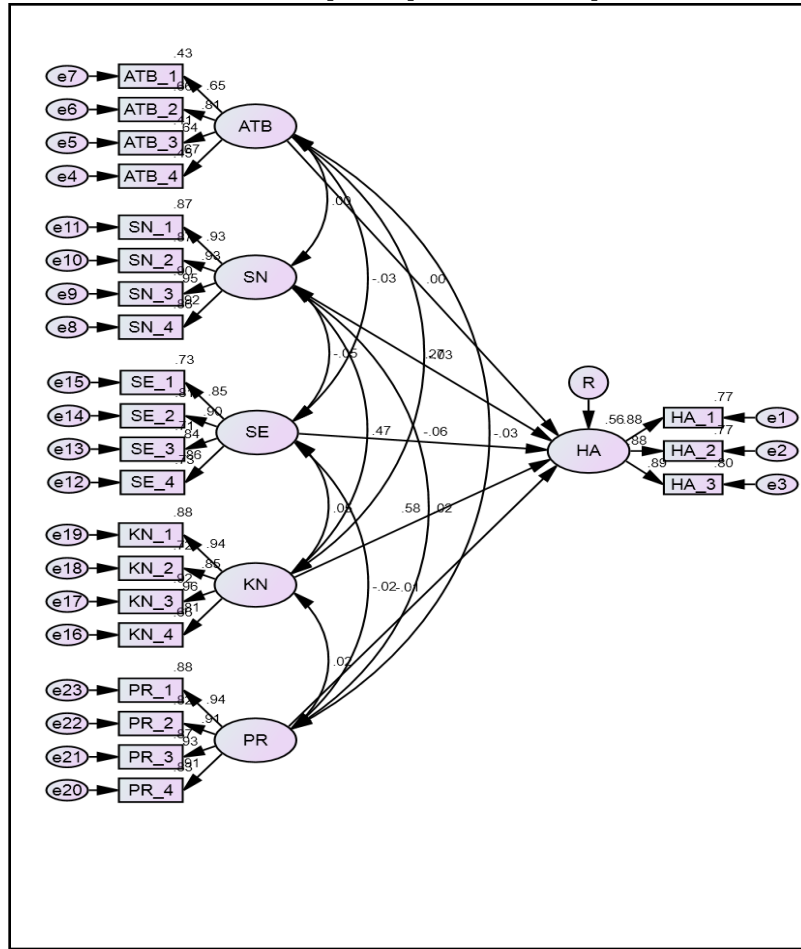
As per the principal component analysis results, the humanitarian assistance index was derived as $2.627*HA_1 + 2.692*HA_2 + 2.535*HA_3$. Since PCA's general objectives are data reduction and interpretation (Johnson and Wichern, 2002), the three indicators used in humanitarian assistance can be explained by using one indicator.

However, the demographic and socio-economic factors used in the study did not show any significant effect on the humanitarian assistance provided by the military personnel, and the table shows the derived results of the t-tests and the ANOVA tests carried out.

Table 2:- Results of t-test and ANOVA test.

Variable	P-Value (<0.05)	Decision
Gender	0.879	Not Significant
Training Gained	0.195	Not Significant
Difficulties Encountered	0.349	Not Significant
Work Experience Years	0.148	Not Significant

The effect of each independent factor on the humanitarian assistance provided by the military personnel was tested using structural equation modelling.

Figure 5:- Structural Model for Direct Relationship of Dependent and Independent Variables**Table 3:-** Results of SEM analysis.

Variable	P Value (<0.05)	Decision
Attitude Towards Behavior	0.964	Not Significant
Social Norms	0.000	Significant
Self-Efficacy	0.163	Not Significant
Knowledge	0.001	Significant
Practice	0.000	Significant

Even though McLachlin and Larson (2011) explained that intrinsic willingness and disciplined behaviour, which refers to the attitude towards all members involved in disaster management, are the key success factors of any emergency operation, it did not affect the current study. Hence, the first hypothesis, which is an effect of attitude towards behaviour for humanitarian assistance, was rejected. Schunk (1990) stated that an individual with high self-efficacy will feel confident in doing a task than those with low self-efficacy. Moreover, Benight *et al.* (1997) declare that self-efficacy is proposed to influence individuals' information-sharing behaviours within the disaster management context. Hence, it plays a significant role in behaviour. However, the study did not show a positive effect of self-efficacy on humanitarian assistance. In light of that, the third hypothesis indicated an impact of self-efficacy for providing humanitarian assistance was rejected. Even though the literature has supported that behaviour has a significant effect on the attitude towards behaviour and self-efficacy, the study was in contrast with that. Thus, it implies attitude towards behaviour and self-efficacy does not support the humanitarian assistance provided by the military personnel in Sri Lanka.

However, the second hypothesis, which indicated an effect of social norms for providing humanitarian assistance, was not rejected. This supports the statement made by Ajzen (1991), which is individual judgments are based on the

opinions of the surrounding social environment. It can be understood the relationship having with different stakeholders are playing a vital part in providing humanitarian assistance by the military personnel. The fourth hypothesis, which indicated there is an effect of knowledge for humanitarian assistance, was not rejected. As indicated by Zhang et al. (2002), decision-makers must understand the current situation before responding to a disaster emergency. Hence, supporting the previous literature, this implied there is an effect of knowledge on military personnel's humanitarian assistance.

Given that it can understand, knowledge on providing humanitarian assistance plays a significant role. Military personnel should indeed know about special activities in a post-disaster situation. The final hypothesis indicated there is an effect of practice for providing humanitarian assistance. It was not rejected in the study, which implied there is an effect of practice for providing humanitarian assistance. Hence this supported the literature supplied by Holguín-Veras *et al.* (2012), which indicated current military and classic perspectives illustrate the influence of one's experience, education, and training in humanitarian operations.

Moreover, this indicates exercises help detect and diagnose program weaknesses, such as inconsistencies in plans, equipment deficiencies, and inadequate training or communications Daines (, 1991). This explains that participating in special training, activities, and other relevant exercises will enhance the effectiveness of humanitarian assistance provided by the military personnel. Hence, special attention should be paid in order to improve the trainings gained by the military personnel.

Conclusion:-

The researcher has used planned behaviour theories (Ajzen, 2012) and social cognitive theory (Bandura, 2005) to identify the factors affecting the provision of humanitarian assistance in post-disaster situations. Hence, the role of the Sri Lankan military personnel was discussed against these theories. Both qualitative and quantitative analysis methods were used in the study. A discourse analysis was carried out to derive the factors affecting humanitarian assistance, supporting the theories mentioned above in the literature. Four individuals were interviewed, and their opinions were gathered. Attitude towards behaviour, social norms, self-efficacy, knowledge and practice were identified as important factors by the researcher. A composite index was created to determine the level of humanitarian assistance.

Moreover, t-tests and ANOVA tests were carried out to identify the demographic and socioeconomic factors affecting humanitarian assistance. Accordingly, all the variables that were gender, the impact of training, encountered difficulties, and the number of work experience years did not significantly affect the military personnel's humanitarian assistance. A structured equation model was used in the advanced analysis. Hence, the selected factors, which were attitude towards behaviour, social norms, self-efficacy, knowledge and practice, were tested. Results showed a significant effect of the social standards, expertise and training on providing humanitarian assistance by the military personnel in a post-disaster situation. Both attitudes towards behaviour and self-efficacy did now show a significant effect on humanitarian assistance in a post-disaster case.

Moreover, insightful recommendations can be provided to improve the Sri Lankan military personnel's humanitarian assistance level. Most of the disaster management training schools' teachings focus on disaster relief and search and rescue operations in the present-day context. Therefore, it is highly necessary to include the subject of humanitarian assistance in these school curriculums. Provision of humanitarian assistance to the affected victims should be carefully coordinated from the initial movement until the victims' prevalence of everyday life is established. This is an essential aspect during any disaster calamity. Therefore, it is required to conduct separate training programs for the stakeholders, especially for military personnel, to provide comprehensive humanitarian assistance. The military alone cannot handle some of the complicated humanitarian assistance tasks without the other involved civilian stakeholders' expertise, skills, and knowledge. Therefore, a comprehensive mechanism should be worked out with experts from different agencies to share their expert knowledge and experience with the military and work out SOPs and work schedules to implement amalgamated tasks to negotiate disaster situations.

Further, the military should also develop and practice psych-socio skill packages to suit different disaster scenarios in liaison with the other civilian stakeholders' experts. When engaging with humanitarian assistance operations, the military should develop the capacities to handle new technologies such as Drone, UAV, and GIS systems, which could become essential to provide very rapid service. Further research could be developed to explore the pre-disaster situation phase and the disaster mitigation phase. Further research studies could be extended to identify and specify

training programs and training syllabuses used at the battalion level. The SLA could achieve more success in post-disaster engagements.

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