Effective Employment of Army Personnel During the Pandemic Situations Based on Covid-19

LWAMCP Lansakara[1], PDVC Wickramarathne[2], Deepika S. Wehigaldeniya[3]

[1]The General Sir John Kotelawala Defense University, Sri Lanka
[2,3]University of Kelaniya, Sri Lanka

Abstract— The study aims to identify the effective employment of SLA personnel during pandemic situations concerning COVID 19. In this study, the primary research segment consists of a survey, and the secondary research segment focuses on a thorough examination of already published works on the subject. The population was military persons actively engaged in controlling the pandemic in evaluating the questionnaires, one hundred fifty respondents, including 50 from the medical corps, 75 ground troops, and 25 from the transport squadron—the sampling technique used closeted random sampling. Descriptive statistics and Pearson Correlation Test were used to analyze the data and test the hypothesis. The study results show a positive relationship between the effective employment of Army personnel with the four variables such as Special training, Loopholes in the existing process, Tactical planning, and Amalgamation with Civil health sectors. The literature and the survey of the data collected of the personnel that the employment of Army personnel during pandemic situations by avoiding these few loopholes during pandemics like COVID19 is very effective for a country like Sri Lanka. Lastly, the requirement of special training for the involving personnel continues to process for the smooth performance of future involvement.

Keywords— Effective Employment, Sri Lanka Army, COVID-19, Special Training, Loopholes process, Tactical Planning.

I. INTRODUCTION

Since the pandemic is a new experience for the world, the mitigations and preventive measures are seriously in doubt. As many countries have engaged their military forces to control the pandemic, the countries such as the United Kingdom, Taiwan, South Korea have attracted international attention for their successful suppression campaigns against COVID-19 also stand out as models for reinforcing civilian control (Tiron & Tritten, 2020). Compared to other countries, Sri Lanka has been prosperous in fighting against COVID 19 since Sri Lanka reacted rapidly to early warnings from World Health Organization (WHO) and China. The Sri Lankan Army (SLA) maintains national security while controlling the pandemic. Because of these engagements, SLA faces some practical issues to manage the existing situation as the first respondent to Sri Lanka. Therefore, the SLA has become one of the leading militaries.

As per the Starr 2020, even though there are enough means and ways available, how can military forces react to natural disasters to face a pandemic and operational readiness? There are several means and ways to respond by military forces during such a pandemic. The assisting civil authorities such as law enforcement, assisting by providing transportation, maintaining Quarantine Centres (QC), making civilians comfortable with government assistance, Etc. (Benavides, 2020; Megerian & Cloud, 2020; Rohmensen, 2020; Sabbagh & McKernan, 2020; "South Korea mobilizes army," 2020; Tiron & Tritten, 2020).

In addition, they may conduct activities that contribute to the health efforts but fall outside the scope of health organizations (e.g., enforcing a lockdown). There are many reasons why the Army personnel have been deployed instead of civil, administrative staff. The Army can manage and face any critical situation rise against the country at any time, and it is their part of the job in the peacetime operations. Further,

SLA is robust with the workforce with an initiative under a controlled set of disciplines. As the first respondent for the traditional or non-traditional security threats against the country, easy management and control being in one organization, Etc. According to the Walters. 2020, New York's Governor Cuomo, for instance, stated that this is a war; we must treat it like a war (Roemer-Mahler & Elbe, 2016).

As a result, the government has created a defensive strategy connected to military forces and the Sri Lanka Army as the majority among parties, managing the COVID 19 pandemic as an alternative employment strategy. As of now, Army is in the process of controlling the disaster. Hence, the different methods used within disaster recovery and pandemic management strata have been deployed to the Army by the government.

The use of the military intelligence line of operation has been one of the proactive and initiative steps by the government of SL. That was an exclusively intelligence-driven model. This program contributes largely to identifying the virus's origin, identifying the vulnerable communities' possible contaminations, and preventing the spreading through human mobility. The essence of the strategy is based on Detection (D), Isolation (I), and Tracing (T); DIT model. Each component in the model overlaps and complements each other. The general approach of each element, such as detection, is twofold, detecting positive cases and detecting vulnerable communities. Medical and Health Care are responsible for the former. Detection in this context is employed to identify susceptible communities; those who have come into the country from contaminated countries and areas have to the virus (Ranasinghe et al. 2020).

Detection process combined with big-data analysis, verification of records with various agencies like Immigration and Emigration, Registration of People, Voter Registration., Etc. Isolation. Based on the detection results, Isolation was to segregate different communities through several measures.

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These included community to oblige to self-quarantine, central quarantine in quarantine contes, enforcing curfews to restrict the mobility of communities and thereby prevent the spreading, Isolation of vulnerable areas, and complete lockdowns if necessary Ranasinghe et al. (2020). Security Forces Sri Lanka Army hold a massive responsibility of establishing and running quarantine centres, shifting people into quarantine contes as and when necessary, and managing people in quarantine canters to include their food and medical care. It cascades from His Excellency the President; "proactive intervention to prevent any outbreak of COVID-19 within Sri Lanka". The Sri Lankan model is an aggressive, strenuous, and continuous process. Still, a comparison of data related to COVID-19 in the world suggests that the Sri Lankan approach is a unique and dynamic model. Perera (2020).

In an inexperienced situation in the country, the operational readiness and the knowledge related to the case are in doubt. The research problem's ideology was on identifying the factors that can affect the effective employment of Sri Lanka Army personnel within the context of pandemic situations based on the COVID 19 pandemic. Therefore, this research tries to identify how the influential work of Sri Lanka Army personnel during pandemic situations with reference to the COVID 19.

II. LITRETURE REVIEW

Military forces trained to mobilize in crises. Military exercises often simulate public health crises and test Armies' ability to set up an operation in challenging conditions, with limited resources and short notice. Investments in military readiness and preparedness prove their worth through armed forces' contributions, such as building hospitals, transporting supplies, repatriation and evacuation, border management, and assisting law enforcement. The recently published articles have deduced that military forces actively engaged in the pandemic control were close to 60% of the armed forces' capacity involved in the pandemic management program. Ranasinghe et al. (2020). The military used a Disaster Management Centre (DMC) and a dedicated intelligence system to amalgamate national administrative intelligence systems. According to Perera (2020), the whole armed forces affairs during the pandemic gazette by the government providing public security ordinance and the related prerogative powers of the prime minister together with the delegated legislative powers vested on the military.

The United Nations International Strategy for Disaster Reduction (UNISDR) defines it as a severe disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses, which exceeds the ability of the affected community or society to cope by using its resources. (ICRC enhanced with characteristics of suddenness and calamitous of an event to the above definition). The Disaster Information Management System in Sri Lanka as "Water that overflows rivers or streams and runs slowly or quickly on small or large areas" flood.

Nick (2008) identifies managing these disasters as applied science. The United Nations defined it as "the organization,

planning, and application of measures preparing for, responding to and recovering from disasters," which is not to stop or eliminate the threats. Humanitarian Logistics is the primary supply chain discipline (Tabaklar. et al., 2015). Thomas (2004) identifies it as "the process of planning, implementing and controlling the efficient, cost-effective flow and storage of goods and materials, as well as related information, from the point of origin to the point of consumption to alleviate the suffering of vulnerable people," where Thomas and Izushima (2005) the 'vulnerable people' with 'beneficiaries.'

The DMC and its functioning in recent disasters were primarily not satisfactory. In this background, the present government had to decide and create a new structure and strategy to face the challenges posed by this new COVID-19 pandemic. The new president who came to power in January 2020 developed a new system and planned to meet this latest crisis. The president took action to form a National Operation Centre for Prevention of COVID-19 Outbreak (NOCPCO), co-chaired by the Honorable Minister of Health, Chief of Defense Staff and Commander of the Army, and the Director-General of Health Services (NOCPCO, 2020). As Vidanage (2020) highlights, Sri Lanka's initial response to this new COVID-19 pandemic situation has been robust. The president immediately adopted crucial new strategies coming to fruition. The social distancing and enforced lockdowns all over the country primarily mitigated primary infection levels. The state-level strategy to address the COVID-19 crisis had three segments.

Consequently, the researcher tested the following hypothesis.

H1: There is a relationship between special training and effective employment of Army personnel in the COVID 19 pandemic control.

Presently Sri Lanka Army has actively engaged to assist in natural disasters. Nevertheless, there is no such research or experience on how to act during the pandemic situations like COVID 19. However, Army, together with other forces and health authorities, have actively attended to overcome the crisis. In addition, the general impression of the Army is good. Since this became a new experience, there was no operational readiness to face such a situation.

Moreover, the existing knowledge is in doubt to tackle the problem. There are some loopholes in the Army related to this field, ex: Personal Protective Equipment (PPEs), specialized training requirements, Etc. Therefore, it should address how to effectively employ Sri Lanka Army personnel during pandemic situations and the response if sfuture.sudden problems arise in the future?

Consequently, Consequently, the researcher tested the following hypothesis.

H2: There is a relationship between Loopholes in the existing process and the effective employment of Army personnel in the COVID 19 pandemic control.

Different academics have developed various theories and models for military involvement in pandemic management, including pandemic management. Roy et al. (2012) have developed a last Mile Relief Distribution Logistics Framework

that comprises decisions on facility location, inventory, transportation, and distribution, which are the core for military involvement in pandemic management. Apart from these logistical decisions, decisions on funding, coordination, assessment on needs, information and communication, cultural food habits, traditional dresses, Etc., are also recognized as factors for effective last-mile relief distribution. Military involvement in pandemic management planning during a disaster relief operation is an intrinsically multi-criteria problem (Ferrer et al., 2018).

Maghfiroh and Hanaoka (2018) recognize system description, demand characterization: demand location, vehicles; route network availability; information and decision support; planning horizon goals as the factors of military involvement in pandemic management. According to Prado et al. (2015), despite the effectiveness of systems implemented at the headquarters, the delivery of supplies and services at the bop (base of the pyramid) would not be complete without human resources. Hence, human resources become a significant military involvement in pandemic management. Apart from this, the economist intelligence unit (2005) came out with a few fundamentals in military involvement in pandemic management; getting the correct type of donations, gaining access, distributing supplies, collecting people, and private-sector involvement/logistics providers.

Consequently, the researcher tested the following hypothesis.

H3: There is a relationship between tactical plan and effective employment of Army personnel in the COVID 19 pandemic control.

Sri Lanka is one of the few countries with a well-developed public health sector among the world's developing countries. After finding the first few Sri Lankans with the virus in early March, the medical professionals urged the government to implement lockdown measures immediately. The Government Medical Officers Association (GMOA), the leading trade union of government medical doctors in the country, issued a letter addressed to the president asking to shut down all ports of entry (Airports and Harbours). Further, the GMOA suggested extending the already prevailing local New Year public holidays to cover the entire week and prevent unnecessary traveling and gathering of people (GMOA 2020). The medical professional's strong suggestion had an enormous impact on the country's political leadership to close the port of entry to the country and implement lockdown measures, as necessary. The GMOA asked the government to resort to China-type lockdowns of certain parts of Sri Lanka to curb the spread of COVID-19 (Kuruwita 2020). The ministry of health and its medical professionals continuously conducted a media campaign to educate the public on the nature of the COVID-19. It focused on taking preventive measures to contain the spread of the virus. The military establishment in the country represented the third segment of the COVID-19 response from Sri Lanka. The current Sri Lankan acting Chief of Staff of the military and army commander had a co-chair position at the NOCPCO in the national strategy implementation level of facing the pandemic.

Consequently, the researcher tested the following hypothesis.

H4: There is a relationship between Amalgamation with Civil health sectors and effective employment of Army personnel.

The research mainly aimed to identify the conceptual framework for using SLA using effective employment procedures during pandemic situations based on the COVID 19 pandemic. Including those into the conceptual frame, work it as seen in Figure 1 below.
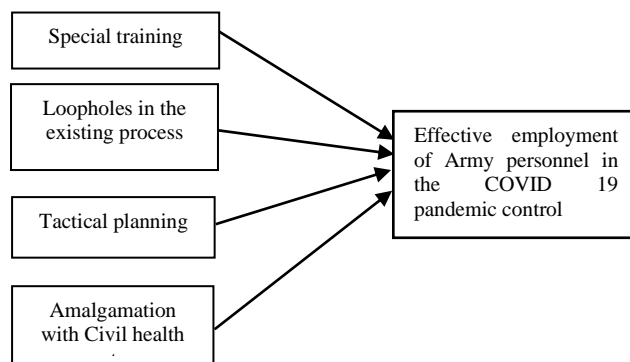

Fig. 1. Conceptual Framework.

III. METHOD

Research methodology alludes to the general method, strategies and structure received to complete the Research (Saharan & Boogie, 2012). The research framework illustrates how the research process would flow from defining the concept. The critical aspects of the research onion model used for the current research are follows. Accordingly, the research paradigm consists of the following components: The primary research segment consists of a survey. The secondary research segment focuses on thoroughly examining already published works on the subject. The critical approach of the study is exploratory. There are deductive methods used—the investigation as a quantitative analysis of the military involvements in pandemic management.

Participants

The population used from the different personnel in different fields who actively engaged in controlling the pandemic, such as medical core personnel, ground troops, etc.150 respondents were directly used by been using 50 from medical corps, 75 ground troops, and 25 from transport squadron for evaluation of the questionnaires. The sampling technique used closeted random sampling. The sampling technique used is the most suitable based on similar studies on the subject area.

Instrument Development

The research questionnaire is designed as a structured technique for data collection that consists of a series of questions, written or verbal, to which a respondent provides their honest opinion (Malhotra & Dash, 2011). The researchers used a five-point 'Likert scale' to measure the independent variables' impact on the dependent variable.

Data Collection

Primary data for the research will be collected using questionnaires distributed to the military regiments involved in the pandemic strike management. The researcher used a quantitative approach by using a questionnaire for the military personals and known as a "survey method," to collect the necessary information for the study. Depending on the study, the researcher developed questions referring to the conceptual framework in the questionnaire.

Data Analysis

The tools must use the incorrect form to understand the collected statistical data clearly. SPSS is software used for data administration and investigation. The researcher used the Percentage, mean analysis for descriptive analysis, and correlation analysis for data variance and factor analysis.

IV. RESULTS

Demography Information

150 participants completed the survey from the spectators that participated in this study. Demographic information, namely gender age, is shown in figure 2.
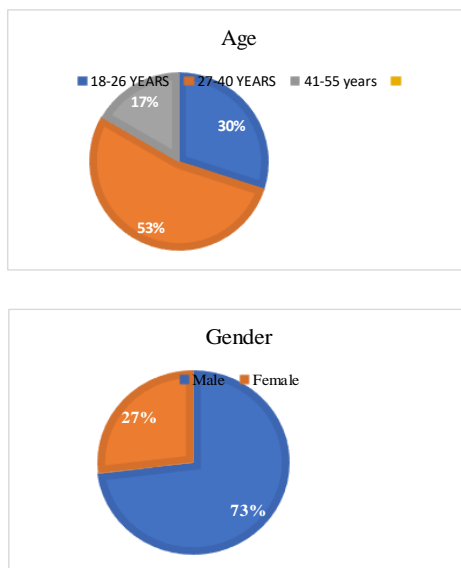

Fig. 2. Demography Information of Gender and Age

Accordingly, out of 150 respondents, 73% were male, and 27% were female. Thus, most respondents are males. The ages of the sample participants ranged from below 18-26 years (30%) to 41-55 years (17%), but the majority started when they were 27 to 40 years old (53%).

Descriptive Statistics

The below descriptive statistics show a high degree of positive polarization in terms of the two variables considered about the Likert scale question results. In the overall positive count, the agreeing segment is relatively large in value compared to the general crowd, whereas the number was to be 49. The agreeing count is slightly similar and close in terms of the value ranging to an updated figure of 19. The neutral count has also been in the middle range with 16 respondents,

whereas the disagreeing and highly disagreeing party count is at the values of 14 and 2, respectively.

TABLE 1: Mean and Standard Deviation of Indicators

Sub Indicators	M	SD
1	23	1.96
2	22	1.85
3	24	1.5
4	21	2.1
5	23	1.75
6	22	1.35
7	24	1.35
8	22	1.35
09	26	1.36
10	23	1.96
11	22	1.85
12	22	1.42
13	24	1.30
14	22	1.55
15	26	1.63

Note: N= 100; M= Mean; SD= Stranded Deviation

Reliability Statistics

The Reliability was via an internal consistency technique computed using Cronbach's Alpha (). The excellent value of Cronbach's Alpha is 0.7 or higher (Cronbach, 1951; Nunnally, 1978). Four variables as independent variables, namely Special training, Loopholes in the existing process, Tactical planning, and Amalgamation with Civil health sectors. The following table depicts the outcome of reliability measurement. It indicates that all dimensions meet the requirements of internal consistency.

TABLE 2: Reliability Measurement

Variable Name	α	N
Special training	0.78	04
Loopholes in the existing process	0.81	02
Tactical planning	0.79	05
Amalgamation with civil health sectors	0.84	04

Note: N= Number of Item; α= Cronbach's Alpha (>0.7)

Correlation Analysis

Pearson Correlation was to explore the relationship between four factors and the effective employment of Army personnel in the COVID 19 pandemic control. Table 3 shows the result of four different constructs which has evolved due to practical jobs.

TABLE 3: Pearson Correlation Indicators

Pearson Correlations	
Effective employment of Army personnel during pandemic situations based on COVID 19	
Special training	0.82
Loopholes in the existing system	0.86
Tactical planning	0.79
Amalgamation with civil health sectors	0.86

Note: Correlation is significant at the 0.05 level (2-tailed)
Source: Survey data 2021.

A rule of thumb says that the minimum factor loading should be greater than 0.5 (Gronemus et al., 2010). All items can be kept in terms of all factor loadings in the study to achieve the accepted values. However, the covariance matrix indicates higher correlations with some errors.

Hypothesis Testing

The researchers made four hypotheses according to the research questions. Data analysis was to test the four hypotheses and check the results according to the Previous studies and theory results.

H1: There is a relationship between special training and Effective employment of Army personnel in the COVID 19 pandemic control.

In par with hypothesis one, it can state that nearly .82 degree of correlation positive expressed from the correspondent's data results obtained. As a result, it can be that the correspondents confirmed a strong positive relationship between the independent and dependent variables. With a significance level of .046, the respondents confirmed that the two variables connected significantly in the independent variable of the dependent variable. Since the correlation is .82, the researcher rejected the null hypothesis. There is a positive relationship between the effective employment of Army personnel during pandemic situations based on COVID 19.

H2: There is a relationship between Loopholes in the existing process and the effective employment of Army personnel in the COVID 19 pandemic control.

In par with hypothesis two, it can state that nearly .86 degree of correlation positive expressed from the correspondent's data results obtained. As a result, it can be that the correspondents confirmed the fact that there is a strong positive relationship between Loopholes in the existing process and Effective employment of Army personnel during the pandemic situations based on COVID 19. With a significance level of .032, the respondents confirmed that the two variables connected with the development of where the correlation is .86. The researcher rejected the null hypothesis, and the Alternative Hypothesis is accepted as there is a positive relationship between the two variables subjected to the test.

H3: There is a relationship between tactical plan and effective employment of Army personnel in the COVID 19 pandemic control.

In par with hypothesis three, it can state that nearly .79 degree of correlation positive expressed from the correspondent's data results obtained. As a result, it can be that the correspondents confirmed the fact that there is a strong positive relationship between the tactical plan and the Effective employment of Army personnel during pandemic situations based on COVID 19. With a significance level of .039, the respondents confirmed that t the two variables relate to the development. Since the correlation is .79, the researcher rejected the null hypothesis. The Alternative Hypothesis is accepted as there is a positive relationship between the two variables subjected to the test.

H4: There is a relationship between Amalgamation with Civil health sectors and effective employment of Army personnel.

In par with hypothesis four, it can state that nearly .86 degree of correlation positive expressed from the correspondent's data results obtained. As a result, it can be that the correspondents confirmed the fact that there is a relatively strong positive relationship between Amalgamation with Civil health sectors and effective employment of Army personnel

during pandemic situations based on COVID 19. With a significance level of .032, the respondents confirmed that the two variables connected to the development of the correlation .86. The researcher rejected the null hypothesis, and the Alternative Hypothesis is accepted as there is a positive relationship between the two variables.

V. DISCUSSION

The researchers took literature analysis towards the independent variables identified for the study. Therefore, the first consideration was under the Army's operational readiness at the very beginning of the issue. This area was under four central regions to conduct the engaging personnel. Respondents highly accepted that the Army's operational readiness in very out was not high. Many of the respondents highly agreed to have special training relevant to the field and the requirement of knowledge in this field. Furthermore, they faced some difficulties during the people's quarantine.

Further, they are not satisfied with the resources and the additional preventive measures. Hence, here overall involvement of the Sri Lanka Army personnel in the prevention of the COVID 19 pandemic is very successful. This involvement of the military of other countries also has proven the success of the process by employing Army as well: Ranasinghe et al. (2020).

The next move was towards the existing loopholes and the improvements to be discussed. Most respondents were not satisfied with their health and safety during their initial engagement, including the PPEs. Further, they agreed the Army has succeeded in this process, and however it revealed that some scarcity of resources still exists. Additionally, J Med Syst (2020) has proven the requirement of personal protection and the effectiveness of PPEs during the pandemic. Then the consideration moved towards dealing with civil sectors and quarantine procedures adopted by the Army. Most of the respondents agreed that there are some issues when dealing with civil sectors while controlling the pandemic, especially with PHIs, Doctors, and other government sectors. Most of the respondents highly agreed that the active person should prioritize their vaccination of all doses as a priority base. Overall, the majority accepted that the Army had effectively engaged the personnel during the COVID 19 pandemic.

VI. CONCLUSION

According to the study conducted, the findings were that involvement of the Army to control the pandemic situation is very successful. Once the primary data was, the researcher identified. However, it identified with the literature and the survey of the data collected of the personnel that the employment of Army personnel during pandemic situations by avoiding these few loopholes during pandemics like COVID 19 is very effective for a country like Sri Lanka. Moreover, it identified that the requirement of special training for the involved personnel is a continuous process for the smooth performance of the future involvement.

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