POLICE TRAINING FOR MANAGING CRIME: WITH SPECIAL REFERENCE TO THE CRIME DATA MANAGEMENT SYSTEM OF BANGLADESH POLICE

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Abstract

Initiations of the Crime Data Management System (CDMS) have led e-policing to a higher level of accuracy. The purpose of this study is to explore the existing training on CDMS, assess the training needed on CDMS, and recommend some ways forward. This study follows the mixed methodology where the primary data were collected by using surveys, key informant interviews (KIIs), and FGDs. This study reveals that since its initiation in 2005, CDMS has been working to depict case information, investigation reports, and crime analysis. In 2010, this system introduced online medium, and the Police Headquarters took over total control from the Crime Investigation Department (CID). Gradually in 2015, the Dhaka Metropolitan Police (DMP) introduced this system and in 2016, this system has been used at all police stations throughout the country. Moreover, this study also finds that from 2009 to 2020 more than half of the police officials did not receive any training on CDMS. The training receivers express their dissatisfaction with its short duration, and the aged and newly promoted officers remain vulnerable due to the partial training system. Additionally, police officials working in local thanas remain largely untrained and they also need to use this software on a regular basis.

Keywords: CDMS, Crime, Data Management, Training, Training Needs Assessment, Bangladesh Police

Introduction

Bangladesh Police is currently undergoing a sophisticated transformation into e-policing by adopting ICT to replace the manual system. In addition to maintaining a regular presence on the world wide web with a website and social media activities, the police department of Bangladesh has already implemented different data management software and interactive applications to enhance policing efficiency and effectiveness, leading to an improved quality of service. Today, it stands as

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a modern institution with a mission to detect and prevent crime, maintain public order, protect lives and properties of people, assist in prosecution, contribute to the criminal justice system, promote proactive policing, and adopt a multidisciplinary approach to solve social problems (*Strategic Plan 2018-2020*, n.d.). The Crime Data Management System (CDMS) is an ICT-based system that offered capacity enhancement in different aspects of policing whereas traditional policing used to face difficulty in dealing with massive amounts of data. Any advancement in data management systems is a big deal for policing where information is considered as the stock-in-trade (Chan et al., 2001).

Manual management of data in policing used to take a huge effort and time. Databases were segregated and data sharing was a complicated procedure. To address these challenges, Bangladesh Police has adopted information technology and rapidly replaced the manual policing system in the last couple of years. The use of the computer was extended and increased to record and process crime data efficiently, use those data for investigation, efficiently communicate with other government agencies, and initiate computer-aided dispatching. The adoption of information technology has brought about a paradigm shift, transforming traditional policing into e-policing. This new system is expected to enhance the ability of police in facing the new challenges of the information technology age, replace laborious manual filing and record management systems, outsmart criminals, and improve the quality of investigation (Matlala, 2016). Bangladesh Police has shown dynamism as an organization evolving as per the changing dynamics of policing across the world. It also acknowledged the need for ICT to automate certain functions and make the massive volume of information easy to handle and more accessible to a wider audience (ICT Master Plan 2015-2020, n.d.).

There are many other e-police services in Bangladesh, such as e-traffic prosecution and fine payment, online police clearance, and others. Among them, CDMS can be considered a revolutionary system in policing. While the rest of the services are related to various services the police provide to the public, CDMS is focused on the crime control apparatus, which is a fundamental aspect of any police organization. CDMS as a system connects all the police stations and links a complicated system of operations from First Information Report (FIR) filing to the trial, encompassing crucial parts like the apprehension of accused offenders, investigation, and more. Operating such a system requires adequate skill in general ICT operations as well as in CDMS operations. This study explores the existing training on CDMS, assesses the training needed on CDMS, and recommends some way forwards. This research is significant for identifying gaps in the use of CDMS within Bangladesh

Police and highlighting the areas that require further improvement for attaining the purpose of e-policing.

Literature Review

There is a profusion of literature regarding various issues of e-policing and the use of information technology in modern policing. Some of the research work discussed the importance and benefit of information technology in crime prevention. However, some researchers have expressed deep concerns about the poor security management of the e-system.

Information Technology in Police Work

Koper, et al. (2015) investigate the effect of technology in policing for the National Institute of Justice in the USA. Using a multimethod approach in four large urban and suburban agencies, they find that the desired outcome of technology in crime prevention takes time. The technology is also found to have dual effects- improvement in one aspect and detraction in another. On the other hand, McDonald and Huberman (2004) shows positive outcomes from a study on the Chicago Police Department. The findings include substantial time savings due to the elimination of redundant data entry, increased ability to solve crimes, improved departmental communication, and real-time data sharing with 132 suburban law enforcement agencies. Based on the findings from the Chicago Police Department, they argued that the use of information technology can take community policing to the next level.

Some scholars addressed the security concerns and not developing a pro-people initiative of e-policing. Hasan (2015) evaluates one of the e-policing projects in Bangladesh, namely the Citizen Help Request (CHR). This study argues that web systems are poorly developed and vulnerable to cyber-attacks, lacking proper protection from a firewall. Moreover, manual procedures are still an integral part of the system. Concerned officials are found less skilled and less motivated. Many of the mentioned works make specific recommendations for e-policing.

IT Training of Police

White and Escobar (2008) examines critical insights into the policing system in the USA and some other countries. They argue that enrolment, selection, and training have become significant issues for police departments worldwide. This research identifies seven pressing issues that influence the enrolment, selection, and training of police, with five critical issues related to police training. The issues

include changing the instruction, fostering community and problem-oriented policing attitudes, promoting inclusive or multicultural training, implementing information technology, and addressing counter-terrorism concerns. On the other hand, Garicano and Heaton, P. (2010) explore the association between information technology (IT), its output, and organizational change. The author used a data set of police departments from 1987 to 2003. This study found that intensifications of IT capacity are not linked with decreases in crime rates or other productivity measures. They argue that the technology increases reported crime and breeds the presence of lower productivity. The authors test these results diagonally with numerous samples and IT measures. Finally, they conclude that IT investments are linked to better output when they are supplemented with particular organizational and management practices.

It is quite evident from the above-mentioned literature that the scholars in this particular field did not emphasize the crime data management system of Bangladesh police. There is no well-accepted literature regarding the training needed for CDMS software. There remains a huge research gap in this particular field of study and this study will contribute to fulfilling that research gap.

Methodology

This study incorporates both qualitative and quantitative methodologies. Under the cross-sectional design with a multi-stage sampling method, four divisions of Bangladesh have been selected in this research. Purposively, six Upazilas - Jessore Sadar Upazila, Rangpur Sadar Upazila, Sharsha Upazila, Gangachara Upazila, Hathazari Upazila, and Kraniganj Upazila from four districts Dhaka, Chittagong, Rangpur, and Jessore and two City Corporations (Chittagong City Corporation and Dhaka City Corporation) were identified as the field of this study. Here Sharsha Upazila, Gangachara Upazila, Hathazari Upazila, Kraniganj Upazila, Jessore Sadar Upazila, Rangpur Sadar Upazila, Chittagong City Corporation, Dhaka City Corporation were respectively identified as the rural and urban areas. In this research, a structured questionnaire was designed to conduct a survey. Specific questions with predetermined options were included to gather respondents' perceptions. The respondents of the survey were selected randomly. Among them few police officers were purposively selected to understand the discontinuity and satisfaction of the CDMS training. The survey results of this study are presented using SPSS 22.0 and Excel, as required.

Table 1: Sampling distribution of the study

Districts	Police Stations	Survey Respondents	KIIs	FGDs
Dhaka	New Market	7		
	Keraniganj	8	1	
Chottogram	Chottogram Kotwali	9		
	Hatajari Model	6		1
Rangpur	Kotwali Model	9	3	
	Gangachara	6	2	1
Jashore	Kotwali Model	9	2	1
	Sharsha	6	1	
	Police HQ		1	
Total		**60**	**10**	**3**

Focus group discussions (FGDs) and Key Informant Interviews (KIIs) are the sources of qualitative data of the study. In this study, the researcher interviewed ten mid and high rank police officers as KIIs and also conducted three FGDs, with nine to ten police officers in each group. The KIIs data are intuitively analysed with the perceptions of the respondents. Rational information is gathered and tabulated in a merged format for the study.

Operational Definition

Training

The term training refers to the process of providing required skills to officials and employees to perform their jobs effectively and skilfully. Training for the officers and employees is not continuous but is conducted periodically at specified times. Usually, it is given by an expert or professional from the related field. Training is the teaching and learning processes carried on for helping a group of people in an organisation to acquire and apply the knowledge, skills, abilities, and attitudes needed by a particular job in an organization. According to Dale S. Beach (1985), training is the planned procedure through which officials learn knowledge and improve their skills for a certain purpose. Jucius & Schlender (1965) defined it as a process by which the abilities and skills of employees to perform precise jobs are increased. According to Flippo (1971), training is important for increasing the knowledge and skill of an official for doing a particular job. In general, training is the process of providing knowledge and skills to meet specific job requirements. In this study, training refers to the institutionalized training programs and courses provided by Bangladesh Police to investigation officers (IO) regarding the CDMS.

Crime Data Management System

The crime data management system is a new initiative taken by Bangladesh police for the digital management of crime data. One of the objectives of this system is to easily access or process the data related to any crime or criminal (Mannan, 2017). CDMS is perhaps the biggest leap of Bangladesh Police in its transformation into e-policing. It has developed the system over the years and tested it in different police stations before countrywide application. The government planned to digitize the data recording system and took several initiatives, with CDMS being one of them (Islam, 2009). Strategic Plan 2018-20 of Bangladesh Police mentions the objective of CDMS as digitizing and automating police investigation and other functions pertaining to the investigation. CDMS connects all the police stations and makes a massive database gathering all crime and criminal-related data from across the country.

However, in 2005 CDMS started its journey in Bangladesh under the supervision of Inspector General of Police (IG) of that time Khoda Box Chowdhury and led by the then Additional SP Md. Shah Alam. Initially, International Organization for Migration (IOM) proposed a project to the Police Headquarters (HQ) to develop a software and create a Human Trafficking Database to keep human trafficking information. The idea of CDMS software was generated from this project. IBCS-Primax was involved with Software Development. Asim Kumar Sikder was involved as the project's consultant and as the Supporting Officer on behalf of the police the then Assistant Inspector General (AIG), ICT Mr. Md. Shah Alam and Md. Jewel Rana, Assistant Sub Inspector (ASI), and Criminal Investigation Department (CID) were also involved.

CDMS is introduced primarily for taking case information, investigation reports, and crime analysis. Although almost all members of Bangladesh Police were indirectly involved in this process especially, ASI, Sub Inspector (SI), Inspector, and Assistant Superintendent of Police (ASP). In Bangladesh, work on the development of Desk based CDMS Software started from 2005 to 2007. In 2009, the CDMS process started with three computers in every district. This included a Computer Server PC and two Computer Client PCs. Then, on Compact Disc (CD), the information from each district's server was stored and transferred to the main server of CID. From April 2010, the Internet-based CDMS, the Data Entry, and the protection process were launched. Then the CID transferred the CDMS system (the main server and the activities) to the Police HQ, Dhaka. Currently, it is managed by the Police HQ, Dhaka. Dhaka Metropolitan Police (DMP) started

to use CDMS in 2015. After piloting the system in one police station from each district, finally, it was mandatory to use for all police stations from October 2016 (Daily Janakantha, August 10, 2016).

CDMS has integrated a web-based application that stores and retrieves crime & criminal information by Bangladesh Police. The data entry or operation point is located in the police stations and courts, and it is currently being used in all stations. The system generates a criminal's crime-related profile indicating all previous conviction and previous record (PCPR). The system generates statistical reports for decision-makers so that they can take necessary crime protection initiatives. It is a highly secured Oracle technology solution that connects all units via a secured internet connection using VPN (Company Portfolio, 2018). This CDMS software has various functions, for instance, FIR filing, accused registration, documenting seized items, maintaining case diaries, forwarding to court, and documenting investigation reports.

The functions of CDMS

The CDMS is an online-based application that links police stations and courts in a single data network. Any kind of information regarding any person or case or any other information such as warrants and others can be processed and transferred from one point to another instantly. The interface is easy to use. It includes four initial menus, each having several categories inside them. The interface is in Bangla so that the user can easily understand and use the application. Each option includes a variety of sub-options that serve the purpose of the user. This software has the statistics of the cases, missing personnel, and violence against women; all such cases and their current conditions are preserved. The report of cases in the police stations or courts or any other special criminal reports, issuing warrants or sending the warrant from one police station to another police station, license of firearms, community policing, and crime against children issues.

Table 2: Functions of CDMS

General Information	Executive Information
● Information on Crime Incidents ● Information Related to Persons of Interest ● Information on Criminal History	● List of Seized Property ● List of Evidence Collected ● Outline of Court Brief ● Warrant Notice ● Notice of Wanted Persons ● Morning Brief Statistics

Source: ICT Master Plan 2015-2020, Bangladesh Police, 2015

The CDMS, as mentioned in Table 1, contains two types of functions: the general information function and the executive information function. Here, the general information function contains activities of reported crime incidents, persons of interest, criminal history, and related information. The executive information function of CDMS includes the list of property seized and evidence collected, generating court briefs, warrants and wanted person notices, and executive information such as the morning briefing statistics (ICT Master Plan 2015-2020, Bangladesh Police, 2015).

Police officials can access CDMS with their accounts, register an FIR, enlist complaints and accused individuals, and input information about arrested people and seized items. The IOs with their personal Identity document (ID) can update the investigation report and document the case diary. Additionally, an officer can easily get information requests (inquiry slips) as well as send them to other stations as per the request. The senior officials can now monitor the investigation and other procedures of a case thus, this system reduces the hassle and enables many benefits to the IOs.

Training on CDMS

Table 3: Training on CDMS		
Year	**No. of Participants**	**Designation of the Participant**
2009-2010	700	ASI, SI, and Constable
2011	5	Inspector (Pilot Basis)
2012	210	SI and Constable
2014	160	SI, ASI and Constable
2016	60	ASI
2009-2019	6352	SI
2009-2019	1302	Inspector

Source: Police HQ, June 15, 2022

From 2009-2010 in CDMS training, there were 700 (seven hundred) participants including constable, ASI, and SI. Every district and metropolitan unit of police participated in this training. Though it's mainly SIs who are responsible to operate CDMS, the number of constables and ASIs was higher in the participants of CDMS training (M. J. Rana, personal communication, May 13, 2020). IBCS-Primax (Directly), Spectrum Software (indirectly), and Business Automation (indirectly) are the three companies that provided training to the 700 police personnel mentioned above. At that time only, relevant information of court cases (i.e. Daily Under Registration and Final Memorandum Registration) was filed,.

In June 2010, the project on human trafficking related to the Police HQ ended. In 2010, Additional ASP Mr. Shah Alam was transferred to Thakurgaon as *Superintendent of Police* (SP). Then with the help of Police HQ Ashim Kumar Sikder and Md. Jewel Rana, ASI, CID started the work on CDMS at Thakurgaon. The then Additional IG AKM Shahidul Haque and the Police HQ administration allowed Md. Jewel Rana, ASI, CID to go to Thakurgaon. In Thakurgaon, Mr. Sikdar along with Mr. Rana trained five inspectors in January 2011.

Then the Police HQ fine-tuned the CDMS from February 2011 to February 2012. Various types of errors were fixed based on this process. Later, in 2012, a total of 210 (70X3) people were trained at the Detective Training School (DTS), including one SI and two constables from each unit. A training was held for three days with the funding of the IOM. Here the participants understood how to give input of the basic information to the CDMS, in detail.

In March 2012, information about human trafficking in the CDMS was introduced. Later in May 2012, information about the cases related to Dacoit, Robbery, Burglary, and Theft (DRBT) was included in CDMS. The Crime-1 section of the Police HQ directed all police stations of the country to include the DRBT-related information within six months. Later, in December 2012, the Police HQ was directed that all the cases from 2005-2012 would be filed in the next one year. However, the process was extended to December 2014.

In the middle of 2014, about 160 people were trained based on Training of Trainers (TOT), comprising one sub-inspector and one ASI or constable from each unit. This training was held for ten days. The purpose of this TOT program was to enable the participants to give train at their respective units. The training program was conducted by Mr. Md. Jewel Rana, ASI, CID, and Ashim Kumar Sikder. There was a ten days training including ICT-related training and three days CDMS training. This training was arranged at the district level by the In-service Training Schools.

Later, in May 2015, it was instructed to include information related to the investigation of the case in the CDMS. At the same time, the CDMS generated information related to assault, remand application, inquiry slip, and FIR. In 2016, the project was undertaken to include information related to violence against women under UNFPA funding. As part of this project, sixty ASIs from eleven police stations of Patuakhali, Sylhet, Jamalpur, Cox's Bazar, and DMP were trained.

Training Need Assessment of CDMS in Bangladesh

Training refers to the methods used for giving employees the skills and expertise that they need to perform their jobs. The goal of a needs assessment from a strategic perspective is to link training initiatives with the overall goals of the organization. It has been argued that needs assessment is critical because it helps to evaluate whether training is a viable option for the organization based on its resources and strategy. This determines the type of trainings that should be provided and identifies the outcomes or metrics for subsequent evaluation (Lepak & Snell, 2002).

The discrepancy between Skills and Training

Rossett (1987), Kaufmann et al. (1993), and Holton et al. (2000) in their respective studies mentioned that the gap between the present status and desired status may indicate problems that in turn can be translated into a training need.
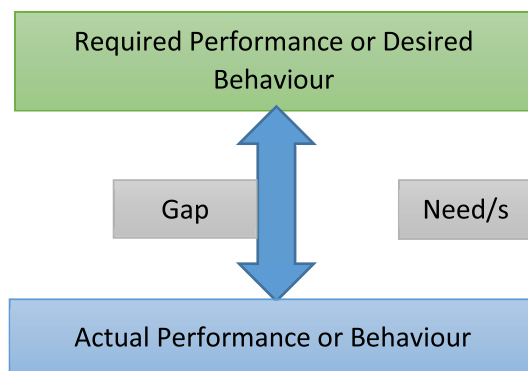

Figure 1: Training Needs= Desired Capability- Current Capability of the Participants

In this study, we have found a similar kind of discrepancy. All respondents expressed that the CDMS software requires skills and it establishes the general need for training. Of the police officials who opined operating the CDMS software requires skills (see Table 1), 54.4% of them also identified that they did not receive any training on this particular software. It reflects the existence of a training gap regarding this software.

Table 4: CDMS Training Gap

Received Training	45.6%
Didn't receive Training	54.4%
Total	**100%**

The Officials who believe that operating CDMS software requires specialised skills, 54.4% of them did not receive any training yet.

The Absence of Quality Training

This study reveals the absence of quality training. Some officials claimed that the training on this software often ended with some slides on how to open, register, and give input in CDMS. There were no practical lab facilities, and as a result, soon after the training they often forgot most of the features they had shown at these trainings (FGD-1 conducted with 10 police officers at Gangachara Model Thana, Rangpur). Survey results (see Figure 1) of this study reveals the same reality.

Figure 2: Officers' Satisfaction Over Training on CDMS
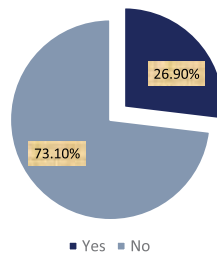
73% of the police officials who received training on CDMS think that the training they received is not enough for them. The subsequent findings of this study revealed that there were a few limitations of CDMS training including its short duration, limited practical instruction, and limited lab facilities. Many officials in this regard expressed the importance of including an expert as a trainer. They also emphasised on the engagement of the best officers as trainers (Officer in-charge S. M. Zubayer, personal communication, January 30, 2020). They also pointed out the necessity of making this posting lucrative with additional training allowances, opportunities for higher training abroad, and special recognition of training numbers with added value for promotion.
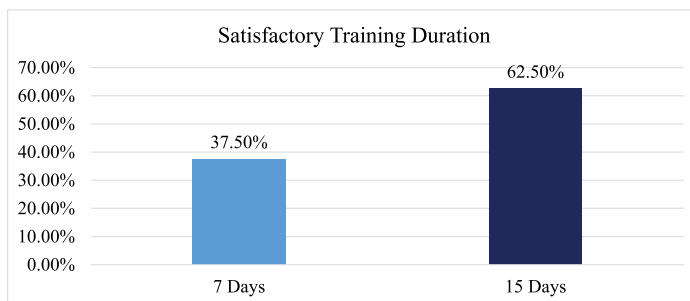

Figure 3: Training Duration

Moreover, the duration of the training is another key factor in determining quality training. The officials including inspectors and sub-inspectors claimed that they received one or two sessions on CDMS as part of other trainings. So, specialized training on this valuable software is required where only CDMS will be discussed and demonstrated from a 360-degree angle (FGD- long training on CDMS will be the appropriate duration of training.

Discontinuity of Training

The police officials from the ground level opined that a continued training process for CDMS is necessary (Second Officer M. Rashid, personal communication, January 26, 2020). They added this training must start from the basic level i.e. computer operating and internet browsing (Inspector J. Abedin, personal communication, January 22, 2020). Moreover, according to their view, the officials who already have basic knowledge about computers and the internet do not need to participate in basic training. These processes should not be included in one training. There must be a three to six months gap between one stage to another so that they can practise in their respective working sector (Anonymous sub-inspector, personal communication, January 25). In this regard, an official recommended organising the batches of trainees based on the similarity in the level of their ICT skills. The Police HQ need to carry out a comprehensive training need assessment of officers to prepare different training modules for officers with different levels of ICT skills. He further clarified these issues, as the knowledge of the Inspector and Sub-inspector is not the same as the officials who had been promoted from ASI to SI and who had been directly appointed. There must be some differences in terms of experience and skills (Additional Police Super M. S. Shikdar, personal communication, January 25, 2020). The proposed training procedure should look as follows-
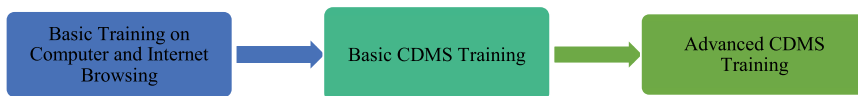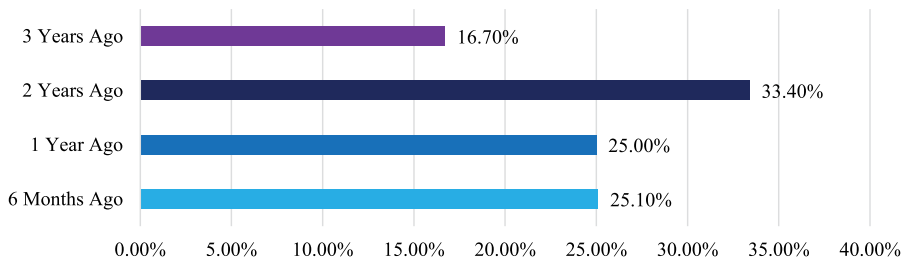

Figure 4: Proposed training procedure

However, in FGDs the participant inspectors and sub-inspectors also claimed training gaps. Some of them received a one-day training two or two and a half year ago, they even forget what they learn from the training. The following table depicts this reality.

The above figure shows that 74.9% of the police officials received training more than six months ago. In the meantime, many features of the CDMS software have been updated, so the officials remain unknown about the newly added features of the CDMS (Sub-Inspector A. Amin, personal communication, January 21, 2020).

Case Study: An Elderly Officers Urge for Comprehensive Training
Mohammad Ershadul Haque Sardar is an elderly police officer at the Gangachara Police Station. He has been working in Bangladesh Police for the last 26 years. The introduction of the current CDMS system is a burden for older and promoted officers like him. He is not used to modern technological devices such as computers, laptops, and other e-services. The CDMS system is a phobia for him. He thought that there are some advantages in the present system compared to the previous method, but due to a lack of technical knowledge, he does not feel very comfortable with this method. It seems it takes more time than the previous method. Apart from this as he did not have a computer of his own, he could not work when required. Additionally, he used to take help from many other trained persons. He expressed to have proper arrangements for the training of the senior officers who were like him. There was a provision of training on computer management in the initial stage and then full training needed on advanced E-services like CDMS. Because those who had no idea how to operate computers could not be benefitted from CDMS training. He also added receiving training on this software is nothing but a waste of time and money.

Training of Urban Level Officials Remain Marginal

This study found that officials from rural police stations received a smaller number of training on CDMS. They viewed, the authority gave less importance for arranging training of the officials from rural areas. Moreover, the officials of

rural police stations were not motivated enough to join such kind of training. In this regard, proper allowance, *Transport* Allowance (TA) and Dearness Allowance (DA) need to be provided (Tarek, personal communication, January 22, 2020).
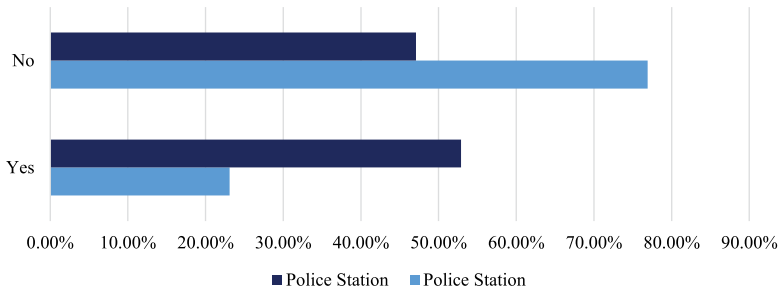
This figure shows 76.9 % of the rural police officials did not receive any training on CDMS. In this regard, it is worth mentioning that six out of six randomly selected survey respondents from a rural police station did not receive any training on CDMS.

Conclusion

This study has conducted a thorough empirical investigation regarding CDMS. It is not just about particular measures of a police department; it is about a major systematic shift of police from an old base to a new base. The study reveals that CDMS has been in operation since 2005, initially used for portraying case information, investigation reports, and crime analysis. From 2009 CID was in control of this system and every district had to submit reports on it. In 2010, the system introduced on online, and Police HQ took total control of it. In the year of 2015, DMP, the most populated area of the country, came under the supervision of CDMS. Since 2016, this system has been used in all police stations throughout the country with greater functionalities than before. The general and executive functions of this method takes the system to a revolutionary level in the e-policing system for a developing countries like Bangladesh.

However, this study also reveals that from 2009 to 2020 a limited number of police officials received training compared to its necessity and overarching demands. In most of the cases, the sub-inspectors or inspectors were not adequately trained. On the other hand, the survey results of this study reveal that more than half of the officials did not receive any training. Moreover, those who received training opined that the training they received was unsatisfactory due to its short duration

and discontinuity. Additionally, the aged, and promoted officials remain vulnerable due to the partial training system without adequate training need assessment. Thus, the rural police officials remain largely untrained and they also need to use this software on a regular basis. These disorganized training systems need to be resolved as early as possible, with a focus on the exact training module and curriculum.

Notes

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