INCIDENTS CAUGHT ON CCTV: THE CASE OF THE PROVINCE OF TARLAC

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Abstract: The research investigates incidents captured by CCTV cameras in Tarlac Province, encompassing incident identification, participant experiences, government support programs, proposed interventions in collaboration with the Police Department, and the study's implications for Public Administration. Focused on Tarlac City, the study gauges the effectiveness of CCTV cameras in addressing vehicular accidents, traffic violations, collisions, hit-and-run cases, and missing person reports. Employing a descriptive approach, data is collected from the Command Center Office and involves interviews, documentary analysis, and Sentiment Analysis.

I. INTRODUCTION

1.1 Background of the Study

In recent years, there has been a marked and sustained growth in the use of public CCTV surveillance cameras in the USA and other Western nations require evidence-based policies to address their efficacy and social costs. Brandon C. Welsh & David P. Farrington (2013) evaluations were included if CCTV was the primary intervention and the design was highly methodological. Forty-four evaluations met the inclusion criteria. The results suggest that CCTV caused a modest (16%) but significant decrease in crime in experimental areas compared with control areas.

CCTV, or Closed-Circuit Television, is a technology that has become increasingly popular in recent years for monitoring and surveillance purposes. It involves using video cameras to capture and transmit images to a designated location, where they can be viewed and recorded. This research explores the various aspects of CCTV, including its history, benefits, drawbacks, and potential future developments.

One of the main benefits of CCTV is its ability to deter crime. Studies have shown that CCTV cameras can significantly reduce the likelihood of criminal activity in an area. Additionally, CCTV footage can be used as evidence in criminal investigations, leading to more successful prosecutions. CCTV can also monitor public safety, such as traffic control, emergency response, and disaster management. Despite its benefits, CCTV also has several drawbacks. One of the main concerns is the issue of privacy. CCTV cameras can be intrusive, and people may feel uncomfortable with the idea of being constantly monitored. Additionally, there have been instances of misuse of CCTV footage, such as voyeurism, stalking, and harassment. Another drawback is that CCTV systems can be expensive to install and maintain, which can be a barrier for smaller businesses and individuals.

1.2 Statement of Objectives

. This study aims to have an idea and perspective on the police officers of the Province of Tarlac in response to cases caught in the CCTVs of the Command Center Office.

Specifically, the study sought to answer the following:

1. To determine the incidents caught on CCTV cameras of Tarlac in terms of:

   1.1 Self accidents
   1.2 Vehicular accidents
   1.3 Hit and run incidents
   1.4 Missing person reports
   1.5 Theft

2. To narrate the rescue and response conducted on these accidents.
3. To identify the problems encountered in the monitoring of accidents in the monitoring through the CCTVs of the Province of Tarlac

   3.1 Location of the accident
   3.2 Availability of CCTV in the area
   3.3 Expectations of citizens towards the result of the recording

4. To propose measures to address the problems.
5. To identify the implication to Public Administration

1.3 Delimitation of the Study

This study is only delimited to the closed-circuit television installed in the province of Tarlac, primarily cameras that the Command Center Office under the Management Information System (MIS) controls and operates. The analysis of this study is focused on how effective the cameras help the police officers in the Province of Tarlac in cases of traffic violations, vehicular accidents, missing person reports, and hit-and-run incidents. This current study was conducted in partnership with the police officers of the province of Tarlac, with CCTV cameras installed near their vicinity, as this study may determine the future with the planning of both police officers and the Command Center Office on what to improve on the cameras that are installed in the Province of Tarlac to only limit on what to capture or record on the meantime.

II. RESEARCH METHODOLOGY

This chapter presents the research method, the study's subjects, methods of gathering data procedures, and data analysis

2.1 Research Design

The researcher used a case study research design to achieve the study's primary goal. A case study is a comprehensive study of a specific circumstance within a real-world situation. Case studies are often employed in social, academic, commercial, and clinical studies. Case studies help explain, contrast, analyze, and comprehend various elements of a study subject (McCombes, 2022). This study determined the incidences of vehicular accidents caught on CCTV and narrate the experiences of people who have experienced them in the Province of Tarlac.

2.2 Selection Criteria and Participants

Thirty (30) videos sought to be considered Major accidents that occurred in the Province of Tarlac from 2022 to the Present was reviewed by the researcher and the police officers. The study's participants included the police officers of the Province of Tarlac to incorporate their thoughts on how the CCTV footage helped them in their investigation and if the Office of the Command Center was deemed reliable for the help. The information/data received from these videos are taken from the whole Province of Tarlac.

2.3 Data Gathering Procedure

The researcher gathered facts from the police officers of the Province of Tarlac in terms of the video footages' effectiveness in helping them thru their investigation, who really is at fault and the successes of their investigation with the help of the accidents caught in the CCTV from the Command Center Office. The difficulties and reasons of why other CCTV cameras was then addressed through this study. The issues the police officer is having into while carrying their duties came next. After that, a proposed plan of action to address these problems issues and challenge will be made.

2.4 Conceptual Framework

The conceptual framework comprises the connection of variables given attention in the study. As shown in Figure 1, having the indicators or interventions when it comes to traffic violations, accidents, hit-and-run incidents, collision incidents, and missing person reports, this structure serves as a standard and criterion of the researcher in his study to evaluate the response of the police officer of the Province of Tarlac City when it comes to the usefulness of the Command Center Office. In addition, this also identified the best practices of the Tarlac City Government in the mitigation of the accidents and proposed recommendations and suggestions to address and resolve the problem. This also discussed the proposed action plans to reintegrate the government approach in the current situation and its implication for Public Administration.

2.5 Research Instrument

An interview guide was use to gather primary data instrument. The study made use of a researcher-made questionnaire based from the helpfulness of the videos to the police officers of the Province of Tarlac. The researcher gathered facts regarding the accidents that occur from the past year to present. Then guided public perceptions was used to know the issues and cause of the problems that needs to be resolved to the videos of accidents that did not help the police officers in the province.

2.5.1 Interview guide.

The researcher conducted an interview with the Police Officers of the Province of Tarlac from every point where the cameras of the Command Center Office have to obtain accurate, thorough, and trustworthy data. Thirty (30) questions were asked based on their experiences on how the cameras helped them in those incidents in their covered location. While the interviews with each participant lasted between ten and fifteen minutes.

2.5.2 Data Analysis

Data analysis refers to the process of using data to uncover patterns and correlations, draw conclusions, and make judgments. It entails reviewing data from several perspectives and using analytical approaches to acquire understanding of the subject under consideration. Data analysis can involve descriptive statistics, predictive analytics, and 33 machine learning techniques. It is the method used to transform raw data into valuable insights. The researcher utilized Sentiment Analysis.

2.5.3 Sentiment Analysis.
A natural language processing (NLP) method is used to identify the participants' positive, neutral, and negative responses.

2.5.4 Interview

The researcher conducted an interview to identify the problems encountered by untenured employees and obtained comprehensive and trustworthy data. Furthermore, follow-up questions are also done by the researcher to confirm and check the consistency of the respondents' answers.

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2.5.6 Narration of people's experience on CCTV

The researcher reviewed thirty (30) incidents that were caught on the CCTVs of the Province of Tarlac and deemed to be a mixed of minor and major incidents. To ensure the participants privacy and confidentiality, each narration/case was given a fictional name.

Monitoring in public places increases public safety in the same way that monitoring on our own city increases home security. When you're out and about, a solar light combined with a CCTV camera can keep you safe. CCTV camera installation services are critical for guaranteeing public safety and security. This can prevent crimes such as rape, robbery, hit and run in the City of Tarlac.

2.5.7 Table 1

Incidents that were caught in the CCTV in Tarlac City based on Categories (2022)

Month	Category I (Self-Accidents)	Category II (Vehicular Accidents)	Category III (Hit and Run Incidents)	Category IV (Missing person's report)	Category V (Theft)	Total
January	7	22	0	0	0	29
February	1	28	4	3	1	37
March	3	31	0	1	0	35
April	1	30	1	0	0	32
May	2	24	0	0	0	26
June	4	17	0	1	0	22
July	7	22	1	0	0	30
August	4	23	1	1	0	29
September	2	27	0	0	0	29
October	5	29	2	0	0	36
November	1	23	1	0	0	25
December	0	25	0	0	0	25
Total	37	301	10	6	7	355

2.5.8 Table 2

Self-Accidents in the Province of Tarlac (2022)

Month	Wet	Dry
January	5	2
February	1	0
March	1	2
April	1	0
May	1	1
June	3	1
July	5	2
August	4	0
September	2	0
October	3	2
November	1	0
December	0	0
Total	**27**	**10**

2.5.9 Table 3

Vehicular Accidents in the Province of Tarlac (2022)

Month	Reported Cases	Recorded in CCTV
January	23	22
February	91	28
March	64	31
April	178	30
May	153	24
June	12	17
July	63	22
August	158	23
September	75	27
October	131	29
November	28	23
December	25	25
Total	**1001**	**301**

2.5.10 Table 4

Hit and Run Incidents in the Province of Tarlac (2022)

Month	Night	Day
January	0	0
February	3	1
March	0	0
April	1	0
May	0	0
June	0	0
July	1	0
August	1	0
September	0	0
October	1	1
November	1	0
December	0	0
Total	**8**	**2**

III. RESULTS AND DISCUSSION

3.1 Incidents that were caught in the CCTV in Tarlac City

Incidents	f	%	R
Self-Accidents	9	30	2
Vehicular Accidents	14	46.67	1
Hit-and-Run	4	13.33	3
Missing person's	1	3.33	5
Theft	3	10	4
Total	**30**	**100**	

Table 3.1 shows the 30 videos that were reviewed by the researcher and corresponding police officers who handled these incidents. In this regard, the use of CCTVs in spaces where people have a high expectation of privacy is forbidden. CCTV systems must record pictures of sufficient quality to satisfy the reasons for which they were established or intended. PICs shall thus put in place reasonable and sufficient procedures to protect and preserve the confidentiality, integrity, and availability of the video collected and stored, as well as any associated meta data (such as time, date, and location), and to permit access requests for CCTV footage. CCTV footage that has been recorded must be encrypted.

3.2 Sentiment Analysis Result

Sentiment Analysis Results

Response	f	%	R
Positive	23	76.67	1
Negative	6	20	2
Neutral	1	3.33	3
Total	**30**	**100**	

Table 3.2 shows the sentiment analysis result from the police officers' responses is shown in table VI. It displays the findings on an analysis of the text's positivity, neutrality and negativity. According to the table with the analyzed responses, out of thirty (30) participants, 23 or 76.67% had positive response, 6 or 20% had negative responses and 1 or 3.33% of neutral response.

Security cameras dissuade burglars, but they have little impact on those who are committed to commit a crime. A security camera system should thus be considered as both a component of a larger security system designed to prevent criminal conduct and a kind of deterrence in and of itself. They are, nonetheless, capable of assisting in the gathering of evidence around crimes that may occur under their supervision. While they may not be able to completely stop everything, they can catch all that occurs. Furthermore, security cameras can send notifications when incidents occur, allowing you to notify authorities if you are made aware of a crime committed against you.

IV. ACKONOWLEDGEMENT

REFERENCES

A. Matthew (2017)
The Value of CCTV Surveillance Cameras as an Investigative Tool: An Empirical Analysis
B. Welsh & D. Farrington (2013)
Crime prevention effects of closed-circuit television: a systematic review
C. Corechea (2017)
Effectiveness of the installation of CCTV Cameras Security Measures: Effectiveness of the Installation of CCTV Cameras in relation to Crime Prevention as Perceived by the Community
D. Weisburd, M. Majmundar & A. Shariati (2018)
Crime Prevention and Community Safety Place managers for crime prevention: the theoretical and empirical status of a neglected situational crime prevention technique
E. Ijjina & D. Chand (2019)
Computer Vision-based Accident Detection in Traffic Surveillance
PNA GOV PH
https://www.pna.gov.ph/articles/1198709 April 2023
Privacy Commissioner for Personal Data, Hong Kong, (2017)
Guidance on CCTV Surveillance and the use of drones
Q. Cuevas (2017)
College of Criminology Research Journal, Vol. 7, 2016
Effectiveness of CCTV Cameras Installation in Crime Prevention
Uknown Vlogger (2017)
Viral video of car accident posted by Taga 'Tarlac Ka Kung' in Capas, Tarlac
https://trendingpedia.blogspot.com/2017/01/viral-video-of-car-accident-posted-by.html
Unknown Vlogger (2017)
CCTV Footage of a thief in Tarlac City Stole bike in just a minute
https://trendingpedia.blogspot.com/2017/02/watch-cctv-footage-of-thief-in-tarlac.html