



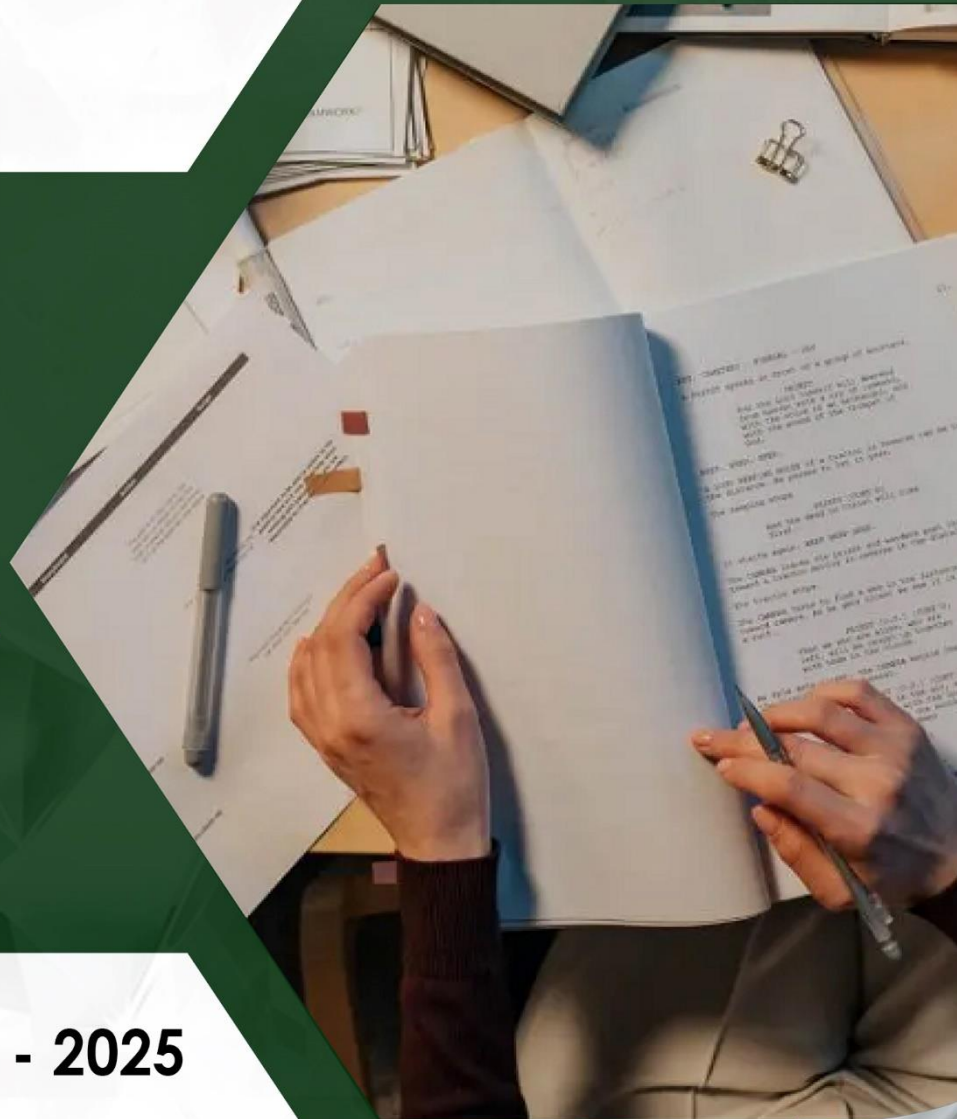
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FOREWORD



The **BS Criminology - *The Forum***, now on its **Volume 4, No. 2**, continues to serve as a platform for aspiring criminologists to explore pressing issues in the field of law enforcement, criminal investigation, and public safety. This volume exemplifies the growing research culture among BS Criminology students, who seek to contribute to the advancement of crime prevention, investigation efficiency, and community resilience.

The featured studies in this issue reflect the students' analytical depth, field engagement, and commitment to addressing both institutional and societal challenges. Opening with "*Assessing Firearm Proficiency among Female Personnel: Basis for Proposed Continuing Marksmanship Training Program*," the research underscores the importance of gender inclusivity and continuous skill enhancement in law enforcement. Subsequent articles, such as "*Significant Contribution of the Provincial Forensic Team to the Local Police Stations of Cavite toward Strengthened Investigative Process*" and "*Optimizing Investigation Strategies for Firearm-Related Incidents: A Qualitative Analysis of Crime Investigators' Approaches*," highlight the evolving methodologies and forensic collaborations that reinforce modern policing.

The succeeding works further delve into relevant community and operational concerns—from *public perceptions of civilian firearm possession and integrity of evidence handling* to *drug prevention measures in the workplace and student awareness of anti-illegal drug initiatives*. The final studies on *tourist safety and disaster resilience* in Tagaytay City illustrate the broader societal dimension of criminology research, recognizing the role of public safety in sustainable local governance. Through these scholarly endeavors, our students not only demonstrate research competence but also reaffirm their dedication to the pursuit of justice, safety, and social responsibility. This volume stands as a testament to their academic perseverance and to the institution's continuing mission of shaping competent, ethical, and service-oriented criminology professionals.

Congratulations to all researchers, mentors, and contributors who made this publication possible. May this forum continue to inspire innovation and integrity in criminological research.

Glenn Mhar R. Galang, PhD, RCRIM, MSCJ

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**Research, Survey, and Publication of the
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Assessing Firearm Proficiency among Female Personnel: Basis for Proposed Continuing Marksmanship Training Program

Yuan Nathaniel C. Benitez, Jhon Venrick M. Cavero, Hans M. Paguirigan, Marc Joseph P. Perlado, Jhan Arkhin B. Rementilla, Mark Anthony M. Rodriguez

I. ABSTRACT

Current firearm training programs are found inadequate, failing to address specific difficulties encountered by female personnel, such as physical variances and outdated equipment. Barriers like insufficient resources further hinder effective training outcomes. This research seeks to provide insights into the current level of firearm proficiency among female personnel in the Tagaytay City Component Police Station and identify potential areas for enhancement. In this study, the target population comprised the female members of the Tagaytay City Component Police Station, including all females with police ranks, regardless of where they are assigned. This research utilizes a descriptive qualitative research design with a purposive sampling technique. The researcher utilized a thematic analysis for the data collected. One of the factors affecting female personnel to pursue law enforcement is the stability of their career. Additionally, fostering a supportive environment is crucial for building trust and enhancing skills among female personnel. By addressing these recommendations, police departments can not only improve firearm proficiency but also contribute to greater gender equity within law enforcement. Ultimately, this study underscores the importance of recognizing and addressing the unique challenges faced by female officers to enhance their effectiveness and confidence in their roles.

Keywords: *Firearm, marksmanship, Female Personnel, Proficiency, Enhancement*

II. INTRODUCTION

Firearm proficiency refers to a person's ability to both accurately and consistently hit their intended target while using a firearm. A person with good marksmanship hits their target from a certain distance by using as few rounds as possible. Most simply, marksmanship is the foundation of all responsible, protected, and ethical firearm users. It is a skill that must be developed over time through training and maintained through refreshment or reinforcement practice. This research, therefore, seeks to provide insights into the current level of firearm proficiency among female personnel in the Tagaytay City Component Police Station and identify potential areas for enhancement. By understanding the unique challenges and strengths of female officers in marksmanship, tailored training programs can be developed to optimize their effectiveness in handling firearms. This research serves as a foundational basis for developing strategies to enhance firearm proficiency among female personnel, ultimately contributing to the overall operational readiness and safety of law enforcement officers in Tagaytay City.

For instance, a study by Maranan highlighted the need for continuous practice to prevent accidental firing, yet it did not specifically address the challenges faced by female officers. Similarly, a training conducted by BJMP Caraga focused on firearms proficiency and classification but did not address the gender-specific aspects of firearm handling. Furthermore, the PNP's order to frequently hold gun safety training did not address the unique needs of female officers (Villanueva, 2022). The effectiveness of marksmanship capabilities among female personnel of the Tagaytay City Component Police Station serves as a critical basis for enhancing firearm proficiency. Historically, law enforcement has been predominantly male. However, the increasing integration of female officers into police forces worldwide necessitates a closer evaluation of their marksmanship skills to ensure they meet the rigorous demands of the job. Practical marksmanship is crucial not only for the safety of the officers themselves but also for the safety of the public they serve. Studies have demonstrated that consistent training and tailored programs significantly improve shooting accuracy and response times among female officers, ensuring they can perform on par with their male counterparts (Cooper, 2024).

The Tagaytay City Component Police Station can identify both strengths and areas needing improvement. This approach ensures that training programs are not only comprehensive but also equitable, providing all officers with the tools they need to excel. Enhanced firearm proficiency among female officers can lead to a more balanced and effective

police force capable of responding adeptly to various scenarios. As law enforcement agencies continue to evolve, incorporating such focused training initiatives will be crucial in developing a competent and versatile workforce.

III. METHODS

This study used a descriptive qualitative design, employing semi-structured interviews with female police officers to explore their experiences and challenges related to firearm training. Through thematic analysis of purposively selected participants' narratives, the research highlighted gender-related factors affecting firearm proficiency and aimed to inform more inclusive training programs. The study focused on female police officers at the Tagaytay City Component Police Station, using purposive sampling to select participants with relevant firearm training experience while also considering a census approach due to the small population size. This combined sampling strategy aimed to capture detailed, meaningful insights into how gender influences firearm training and proficiency. The study gathered data through interviews with female police officers of the Tagaytay City Component Police Station during their off-duty hours, following proper approval procedures. The collected responses were analyzed using thematic analysis to identify key themes and ensure the findings accurately reflected the participants' experiences and perceptions. Using Yin's thematic analysis approach, the researchers examined the lived experiences of female police officers in firearm training, identifying recurring challenges such as grip strength limitations and limited exposure to firearms. The analysis highlighted the need for more inclusive, tailored training programs to bridge performance gaps and improve marksmanship among women in law enforcement.

IV. RESULTS

Problem No. 1:

What factors influence female personnel's decision to pursue a law enforcement career that necessitates firearm proficiency?

Theme 1: Career Motivation

This overarching theme of career motivation studies the reasons and factors that explain why an individual opts for a particular career. In the current context of law enforcement, scholars' career motivation is critical in determining the factors that routinely highlight women's recruitment into the police force in spite of the dangers and odds that characterize the

profession. This theme helps in understanding such psychological, social, and cultural aspects that shape active women's goals, aspirations, values, and choices about a career in law enforcement.

Subtheme 1.1: Factors influencing the choice of law enforcement careers among women.

This sub-theme explains more about the working factors that lead women to pursue careers within the feminine and masculine domains of law enforcement. These can be, among others, being passionate about community service, family background, economic resources, job opportunities, the feeling of being empowered, and the necessity to break gender norms. Moreover, it examines the role of the social construction of gender, recruiting, and working environments in reaching this decision.

Table 1

Subtheme 1.1: Factors influencing the choice of law enforcement careers among women

DATA SOURCE	EVIDENCE
Interview	<ul style="list-style-type: none"> -“To serve and protect at para ma-maintain ang peace and order at syempre stable job kasi itong pag pupulis e.” !- “Na inspire ako nung bata pa ako. Ang pagiging pulis ay isang stable job” - “Na inspire ako mag pulis dahil gusto ko ma protektahan ang aking community” - “Na inspire ako dahil ang pag pupulis ay isang stable job” - “To serve the community at isa din itong stable job.” <p>Participant 1 chose to be an officer because, since the respondent was a child, they had dreamed of becoming part of the PNP. Experiences and the desire to serve are common reasons why female officers decide to become law enforcement officers. Another reason for choosing to be an officer is that it provides a stable job. Regardless of circumstances, such as a pandemic, their work will not be suspended.</p>
Observation	<p>A primary motivation for individuals pursuing careers in law enforcement is the desire to serve and protect the community, particularly because government employment, such as in the Philippine National Police (PNP), offers job stability and a secure income regardless of societal circumstances. For some, the aspiration to become a female officer begins at a young age, driven by a desire to support their families. Family and societal expectations also play a significant role in influencing career decisions, with some women citing limited alternative job opportunities as a contributing factor.</p>

Data/Documentation

The choice of women to pursue careers as various influences shape police officers. Studies reveal that common motivations include the desire to help others, the security of government jobs, and financial benefits. According to Wiwitan (2020), gender equality is no longer a barrier for women pursuing professional careers. In fact, women’s participation in careers, such as the female police profession, continues to grow, reflecting progress in gender equality and the expanding opportunities available to women in traditionally male-dominated fields.

Theme 2: Training Experiences

The training experience's theme differs slightly from all other factors because it relates more closely with an individual's learning experience and professional development within their job service changing requirements, be it knowledge, skills, or even competencies. In particular, training experiences are indispensable for law enforcement officers since they guarantee the officer's ability, safety, and trust when performing their daily duties. Further, this theme expository emphasizes the need for appropriate and effective teaching techniques for particular police agents in order for them to have the necessary hands-on experience engaging in the courses of firearms.

Subtheme 2.1: Assessment of firearms training programs and their effectiveness.

This sub-theme's objective is to examine the procedures involved in developing, distributing, conducting, and assessing firearms training programs. The main goal is to determine whether or if these women, especially female law enforcement professionals, can overcome any challenges and improve their firearm skills. Some of the significant areas of concern include the need for improvement in the training material, establishment of adequate resources and infrastructural facilities, availability of skilled instructors, and the general effectiveness of such programs on their specific behavior of firearms performance.

Table 2

Subtheme 2.1: Assessment of firearms training programs and their effectiveness.

DATA SOURCE	EVIDENCE
Interview	t 1-“Yung gun safety rules, Proper gun handling at yung disiplina at confidence sa pag hawak ng baril.”

- t 2- “Mag karoon ng knowledge about disassemble and assemble ng baril. Training din sa pag gamit ng long and short firearm.”
- t 3- “Training about gun safety, sa physical needed skills doon ako nahihirapan”
- t 4- “Basic training lang kasi kailangan. Nahirapan ako doon sa 200m tapos ang gamit ay m16 rifle.”
- t 5- “Proper gun safety protocols at shooting. Nahihirapan ako sa physical aspects kagaya ng recoil management.”

The respondents indicated knowledge of the basic handling of firearms and their usage. During their college years, the participants acquired an understanding of proper gun safety practices. Upon joining the Philippine National Police (PNP) were required to undergo mandatory training. However, the resources provided for such training, such as bullets, were limited.

Observation

Female officers' experiences in firearm training reveal that many female recruits often lack prior experience with firearms, leading to initial disadvantages in grip strength and marksmanship compared to male counterparts. These challenges can affect confidence and performance during training. However, as a criminology student in college, the respondent is taught gun safety and provided with tips to enhance firearm skills. Participating in actual training sessions is identified as the best way to address weaknesses and improve proficiency.

Data/Documentation

Female officers frequently encounter instructors who may not fully understand their specific needs, resulting in a lack of hands-on training and, at times, condescending treatment. These factors can hinder skill development. The participant noted that male officers often display a greater interest in firearms, which can contribute to disparities in training experiences. Floresca (2024) stated that the respondent learned the value and importance of courtesy, discipline, and maximum tolerance when directing, controlling, and managing traffic, as well as how to engage with community members effectively. Additionally, police trainees recognize the significance of police visibility in relation to crime prevention.

Problem No. 2:

How do female officers perceive their firearms training experiences?

Theme 3: Training Needs

The theme of training needs is identifying and working on what the particular persons require to function correctly. In the field of law enforcement, understanding the requirements for training leads to the formulation of programs that improve the capabilities of the officers and prepare them for the demands of their duties. This theme, therefore, puts more emphasis

on the training to be implemented, especially taking into account the peculiar problems experienced by a particular group, like the female police.

Subtheme 3.1: Identification of specific training requirements for female officers.

It tries to go beneath the surface into unique training requirements of female police officers, specially identified areas where females might face exclusive challenges or hindrances. In these requirements, one may point out physical fitness, technical capabilities of handling firearms, building self-confidence, and combating gender stereotype issues. Besides this, how tailored training packages improve their performance with respect to the male-dominated operational fields where they might have to take on similar roles.

Table 3

Subtheme 3.1: Identification of specific training requirements for female officers.

DATA SOURCE	EVIDENCE
Interview	1-“ Para sa Firearm proficiency kailangan e ang regular tactical exercises .” Participant 2- “Kailangan ng quarterly firing proficiency.” 3- “Naniniwala ako na mahalaga ang tuloy-tuloy na firearm proficiency training at regular tactical exercises. Ito kasi yung makakatulong para manatiling handa at alerto sa mga totoong sitwasyon.” 4- “Kailangang masanay sa pag hawak ng baril para hindi kami matakot, regular practice ang kailangan.” 5- “Receive specialized training para sa both technical skills and psychological preparedness”
Observation	The respondents indicated the necessity of regular training to enhance familiarity with firearm usage. This training was identified as a means to improve proficiency and accuracy during practice sessions. Additionally, the respondents emphasized the importance of specialized training, such as scenario-based drills designed to simulate real-life situations for female officers. Such training prepares participants for actual scenarios and helps address psychological challenges encountered when using firearms in real-world situations.
Data/Documentation	Female officers often exhibit lower grip strength, which can impact marksmanship. Training programs should integrate specific exercises designed to enhance grip and shoulder strength, as these are critical for effective firearm handling. Law enforcement departments are encouraged to consider firearms tailored to the physical attributes of women, such as grip size, to mitigate the performance disparities observed in marksmanship scores between genders. Training programs should also focus on recognizing and

addressing the unique challenges faced by female officers, ensuring teaching methods are adaptable to diverse learning styles. Such training is essential for skill development and confidence building among female officers.

Cabilan et al. (2023) emphasized the importance of addressing the experiences of female officers and promoting gender equality within law enforcement. This is vital not only for the well-being of women officers but also for fostering safer and more just communities. The study examined the insights of female police officers regarding their workplace experiences and perspectives on gender equality.

Theme 4: Barriers to Training

The theme of Barriers to training explores the challenges and limitations that make it difficult for individuals to engage with or benefit from training programs fully. A similar situation can be found in law enforcement, where logistic barriers, organizational barriers, social barriers, and cultural barriers can effectively hinder the development of essential skills, such as shooting skills, which are integral assets for any police officer. It is essential to understand these barriers to generate methods that build more inclusive and practical training.

Subtheme 4.1: Challenges faced by female officers in accessing firearms training.

A sub theme where we consider the unique barriers facing female police officers trying to access/engage with firearms compulsory training. Such challenges include few training opportunities, no women-specific resources or equipment, physical demands, and work-life balance limitations. It also examines institutional factors, like a lack of resources or biases in the way training is designed, that can disproportionately impact female officers.

Table 4

Subtheme 4.1: Challenges faced by female officers in accessing firearms training

DATA SOURCE	EVIDENCE
Interview	Participant 1-“Oo, dahil sa physical capabilities in handling firearms dahil babae kami, kagaya sa laki ng kamay ganon.” Participant 2- “Siguro hindi naman siya barrier, kasi based sa aming mga babae, more on nasa office kaya hindi kamy masyado ma enhance sa pag hawak ng baril.” Participant 3- “Yes, naka-encounter ako ng challenges pagdating sa physical capabilities sa paggamit ng baril. Minsan kasi, hindi akma ang training environments, kaya nag kakaroon ng barriers, lalo na sa babaeng opisyal.”

Observation	<p>Participant 4- “Medyo, mas malakas kasi ang hand grip ng lalaki. Mas malaki ang kamay nila kesa smin. Kelangan kasi don steady lang.”</p> <p>Participant 5- “Oo naman, there were times when I felt that training opportunities were less accessible for women, lalo na sa mga advanced courses. Minsan akala nila na di namin kaya hawakan ng tama ang mga baril, kaya ang ending di kami nakakapag practice.”</p> <p>Most of the responses indicate agreement, emphasizing the physical build of men as a significant factor. The respondents stated that men typically possess better grip strength for holding a firearm, which enhances their ability to hit a target accurately. This grip strength is considered a key advantage that contributes to greater proficiency in firearm usage among men. Additionally, it was mentioned that men are often assigned to fieldwork, while women are typically engaged in administrative tasks. As a result, men regularly carry their firearms during duty, whereas women, being more involved in office-based responsibilities, have less need to carry firearms frequently.</p>
Data/Documentation	<p>According to Copay and Charles (2001), the grip strength and marksmanship scores of police recruits were measured. All recruits underwent identical basic firearms training, with approximately half provided a Grip Master to exercise with, aiming to enhance grip strength. The improvement in grip strength was found to be similar for recruits who used the Grip Master and those who did not. Both groups demonstrated significant improvement in marksmanship scores by the end of the training, with scores increasing from 97.46 to 113.48 for the Grip Master group and from 92.68 to 112.24 for the control group. The scores of female recruits were significantly lower than those of male recruits, both at the beginning and end of the training (102.6 versus 114.6, respectively, at the conclusion of the training). This disparity in scores was attributed to differences in grip strength. While the influence of grip strength on marksmanship scores was small, it remained consistent across the grip strength range of the police recruits.</p>

Problem No. 3:

What are the essential requisites recommended by the female officer to benefit their firearm proficiency?

Theme 5: Program Effectiveness

Theme Program Effectiveness Theme program effectiveness focuses on the evaluation of whether specific training initiatives are achieving their intended goals and effects. One must take into consideration the impact of training on an officer's knowledge, skill, and preparedness while discussing law enforcement. These problems show how important it is that police force

training be adequate, applicable, and pertinent to its operational requirements, particularly in areas like firearm handling.

Subtheme 5.1: Evaluation of current training programs and suggestions for improvements.

The subtheme includes an analysis of the effectiveness, benefits, and drawbacks of current firearms training programs. It looks into whether the training also takes into account the demands of female officers in terms of scenario readiness, skill development, and confidence growth. Moreover, it aims to offer practical suggestions for optimizing training material, methods of delivery, and how resources are allocated so that these programs can be as effective and inclusive as possible.

Table 5

Subtheme 5.1: Evaluation of current training programs and suggestions for improvements

DATA SOURCE	EVIDENCE
Interview	<p>t 1-“ Generally, appropriate naman siya. Mas ok lang kung sana regular yung mga trainings.”</p> <p>t 2- “Maganda naman ang training ng PNP, ang problema lang ay ang resources, hindi ganon kadami or kaya iprovide ng PNP. Kung gusto naming gumaling, gagastos talaga kami. Sana madagdagan talaga ung budget.”</p> <p>t 3- “Overall, tingin ko ay tama naman ang mga training programs ngayon. Pero, mas maganda siguro kung may tailored sessions na tututok sa unique challenges ng mga babaeng opisyal, tulad ng strength-building exercises at scenariobased training.”</p> <p>t 4- “Samin, di nawawala ung training sa firearms. Tuwing March, woman's month, may training din kami ng firearms, tapos quarterly, meron din kami lagi sa Tagaytay.”</p> <p>t 5- “The current programs are generally effective pero dapat may mga babae din na instructor para naiintindihan nila ang aming unique challenges and can provide mentorship and support.”</p>
Observation	<p>The researchers found that the majority of the female officers indicated that the current training for the Philippine National Police (PNP) could improve their performance in terms of firearm proficiency. Providing lectures and other informational programs about firearm proficiency could also contribute to enhancing their performance. The respondents expressed minor challenges, noting that frequent training could affect the effectiveness of proficiency. They also mentioned that the PNP's budget was insufficient to support regular training.</p>
Data/Documentation	<p>According to results from a 2015 survey, 61 percent of firearm owners in the United States had some formal training on firearm safety and use (Rowhani-Rahbar et al., 2018). Other owners reported receiving informal training from friends or family. Although no federal laws require private citizens to receive safety</p>

training, states sometimes require gun purchasers or individuals requesting concealed-carry permits to show proof of formal safety training, which typically covers safe storage, use, and maintenance of weapons. As of January 1, 2024, eight states and the District of Columbia had laws requiring individuals to undergo some form of safety training prior to purchasing or, in the case of Connecticut and New Mexico, carrying a firearm. Additionally, 26 states and the District of Columbia required applicants for concealed-carry permits to demonstrate that they had received some form of firearm training, either in a formal course or through another setting, such as military service. The components of safety training vary significantly across states (Hemenway et al., 2019b).

Theme 6: Gender Dynamics

Gender dynamics is the study of the ways in which gender affects how people interact, their roles, and their behavior in a given context. *Women in Law Enforcement: The significant impact of gender dynamics in shaping workplace culture, professional expectations, and opportunities for skill development.* In male-dominated domains such as firearm handling and proficiency, gender-related perception, bias, and stereotypes shape the professional experiences of female officers.

Subtheme 6.1: Impact of gender on firearm handling culture within the police force.

This sub-theme emphasizes the lens of gender in understanding the norms, attitudes, and practices of gun training and handling in the police. It takes into account elements like societal and institutional biases, variations in training opportunities, and views on female officers' ability to wield firearms. Moreover, such interactions can impact the confidence, effectiveness, and career advancement of female personnel.

Table 6

Subtheme 6.1: Impact of gender on firearm handling culture within the police force

DATA SOURCE	EVIDENCE
Interview	Participant 1-“As a police officer you should have confidence and discipline in handling firearms.”
	Participant 2- “Lalake o babae parehas lang may alam sa firearm handling pero mas na eenhance ng mga lalaki ang kanilang firearm proficiency dahil sila ang mas maraming training kesa sa amin na babae”
	Participant 3- “Malaki ang role ng gender sa police force dahil ang mga babaeng opisyal ay meron dapat disiplina sa pag gamit ng firearms.”

Participant 4- “Same lang naman pag dating sa babae at lalake, nag kakaiba lang sa grip strength.”

Participant 5- “Gender can influence perceptions about capability and authority para massert nila ang kanilang skills.”

Observation

The researchers found that both male and female officers shared similar thoughts on how to improve their proficiency. All of the participants emphasized the need for more knowledge of firearms in order to become more familiar with them. The officers also noted that discipline in using firearms could help improve their abilities and skills in proficiency. The participants expressed that no one could hinder their passion for enhancing their proficiency in order to protect better and serve the people.

Women represent approximately 5 percent of the police recruits training at the Police Training Institute (PTI) at the University of Illinois. These female recruits may face a disadvantage in terms of marksmanship skills. The majority of male recruits are already familiar with firearms due to previous training in the military, law enforcement, or corrections. At the same time, it is rare for a female recruit to have prior experience or training with firearms. PTI female recruits also exhibit lower grip and shoulder strength than their male counterparts. It is important to determine whether grip strength significantly affects the marksmanship ability of female officers and what steps could be taken to address this deficiency.

Data/Documentation

This study investigated whether the introductory firearms course enabled female recruits to compensate for their initial lack of firearms experience and weaker grip strength. Recruits with little or no handgun training were identified in all classes that started at PTI between October 1995 and September 1997. Grip strength and marksmanship were measured on the first day of the police academy, and marksmanship was measured again on the last day of the firearms course. Results indicated that, by the end of basic firearms training, female police recruits had overcome their lack of handgun training and familiarity. The firearms training significantly improved the marksmanship of both male and female recruits. However, women’s marksmanship scores remained slightly, but significantly, lower than those of their male counterparts. This slight difference in marksmanship appeared to be due to women’s lower grip strength. Recommendations include issuing female police officers firearms suited to their grip strength and hand size and increasing grip strength through training..

Problem No. 4:

What challenges do female officers face in accessing firearms and their affects on their overall proficiency?

Theme 7: Practical Applications

Practical applications are the significant things you do to make sure the company operates the way it should from day to day. Firearms competency in law enforcement is not only technical but a core component of operator readiness and capability. Training minds to do, and not just how to do.

Subtheme 7.1: Instances where firearm proficiency has influenced operational outcomes.

This sub-theme explores examples or incidents in which proficiency with firearms was necessary for successful outcomes in operations. It brings attention to the fact that highly trained officers can invoke their firearm training for self-defense, protection of civilians, high-risk arrests, or non-violent confrontations. It also examines how the ability of female officers in arms handling affects their confidence, decision making and contributions in such operations.

Table 7

Subtheme 7.1: Instances where firearm proficiency has influenced operational outcomes.

DATA SOURCE	EVIDENCE
Interview	Participant 1-“Wala pa naman, pero sa personal safety and safety of other during of my duty kelangan ready ako palagi.” Participant 2- “Dito wala pa naman akong karanasan kaya di ko masabe na nagamit ko na yung firearm proficiency ko, siguro nagagamit ko lang tuwing may shooting competition.” Participant 3- “May isang insidente na masasabi ko na ang pagiging proficient ko sa baril ang nakapag ligtas sakin pati narin sa iba, pagiging handa ang nagdala maayos na response.” Participant 4- “Sa ilang taon ko na sa serbisyo di pa ko nakakaranas ng actual shooting, pero kung sa tactical training masasabi ko na nagamit ko ang proficiency ko.” Participant 5- “Wala pa naman kase madalas naming ginagawa ay mga paper works lang.”
Observation	During the interview, researchers observed that the majority of the female officers had not experienced any shooting incidents, which is why the participants did not express significant experience in firearm proficiency. Most of them primarily performed paperwork, with their firearm proficiency being utilized mainly during target training or

competitions. Some female officers demonstrated weaker grip and shoulder strength compared to male officers. The participants reported minor challenges regarding firearm proficiency, indicating that proper training is essential for female officers to enhance their firearm skills.

Data/Documentation

Research on female police officers reveals several challenges they face in law enforcement. Female officers generally have lower grip strength compared to male officers, which can impact their shooting performance (Brown et al., 2021; Charles & Copay, 2001). This difference in grip strength may contribute to lower marksmanship scores for female recruits, although both male and female officers significantly improve their skills through basic firearms training (Charles & Copay, 2001). The underrepresentation of women in law enforcement remains a concern, with female officers comprising only 12.7% of sworn officers in large agencies as of 2001 (Seklecki & Paynich, 2007). Female officers report experiences of marginalization and institutional barriers in their careers, although these challenges do not necessarily impact their job satisfaction (Wilson, 2016). To address these issues, law enforcement agencies may need to consider grip strength training or adopting pistols with lighter trigger pull weights to improve shooting performance for all officers (Brown et al., 2021).

Theme 8: Support Systems

Building Strong Foundations Support systems can be critical to empower officers to hone their shooting skills (among others) and build their confidence and effectiveness within law enforcement. These systems could consist of mentorship, training courses, equipment access, and institutional regulations that are adapted to the needs that have been recognized.

Subtheme 8.1: Resources needed to enhance confidence and competence in firearm handling.

In order to facilitate and support female police officers to become more skilled and self-assured with firearms, it is essential to be aware of the resources and support systems that are available. Mentorship programs, mental health services, gender-neutral laws aimed at eradicating both ends of the male/female range, the availability of proper and modern firearms, specialized training programs, etc., are a few examples of such resources. It examines how leadership, peer encouragement, and the workplace culture ingratiate female officers to thrive in firearms handling.

Table 8

Subtheme 8.1: Resources needed to enhance confidence and competence in firearm handling.

DATA SOURCE	EVIDENCE
Interview	<p>Participant 1-“Issuance of more ammunition and regular practice or enhancement.”</p> <p>Participant 2- “Kung madadagdagan kami ng resources pag dating sa mga bala at sa baril kasi meron kaming mga PNP member na may mga luma pang gamit sana ma upgrade sa mga latest equipments. Sana nag ka traning din kami quarterly at mabigyan kami ng mga bullets.”</p> <p>Participant 3- “Naniniwala ako na kung magkakaroon ng mas maraming ammunition para sa practice at masigurong regular ang enhancement sessions, malaki ang maitutulong nito para mapataas ang kumpiyansaat kakayahan namin sa paggamit ng firearms.”</p> <p>Participant 4- “Kung bibigyan o kaya pag kakalooban kami ng pag kakataon na mag karoon ng mga latest model ng mga firearms pati na rin, budget para sa mga extra ammo. o di naman kaya mapadalas ang aming shooting trainings nang sa ganon masanay kami.”</p> <p>Participant 5- “Access to mentorship programs and peer support groups would be invaluable. Tska yung regular tranings focused sa advanced firearm techniques, Eto sure to ma boboost talaga confidence ng mga female officers sa pag hawak ng baril.”</p>
Observation	<p>During the interview, the researchers observed minor issues related to training programs for shootings. These included the lack of new guns and inadequate training programs. The budget allocated for female officers was deemed insufficient to afford new firearms and ammunition. The respondent expressed concerns and challenges, noting that consistent training and providing opportunities to use new firearms could enhance the proficiency of female officers.</p>
Data/Documentation	<p>Police firearms training is a critical aspect of law enforcement preparation. Studies have shown that basic firearms courses significantly improve marksmanship skills and gun handling abilities for both male and female recruits (Charles & Copay, 2003; Charles & Copay, 2001). However, female officers often enter training with less firearm familiarity and weaker grip strength, resulting in slightly lower performance compared to male counterparts (Charles & Copay, 2001). While training effectively enhances technical proficiency, there is a need for improvement in the decision-making aspects of firearms use. LaFrance (2021) suggests allocating more course time to the decision to use force rather than</p>

focusing solely on firearm proficiency. This approach could better integrate concepts of officer decision-making, community-police relations, and group dynamics into training programs. Overall, these studies highlight the importance of comprehensive firearms training that addresses both technical skills and critical decision-making processes for law enforcement officers.

Problem No. 5:

How do female personnel evaluate the effectiveness of existing training programs in improving their firearm skills, and what recommendations do they have for enhancements?

Theme 9: Self-Evaluation

Self-evaluation means that individuals work out their skills, efficiency, and scope of improvement. One of the few absolute necessities in law enforcement is self-assessment. This is a theme that suggests that self-awareness translating into skills can mitigate the mismatch between the goals of an individual and the goals of an institution.

Subtheme 9.1: Officers' assessments of their proficiency and areas for development.

This sub-theme relates to how female police officers assess their firearm competence, including their self-perceived strengths and weaknesses. It looks at confidence with firearms management, situational readiness, and peer or instructor feedback. This self-assessment also reflects the officers' commitment to professional growth and awareness of the attributes needed for effective policing, helping to elucidate this sub-theme.

Table 9

Subtheme 9.1: Officers' assessments of their proficiency and areas for development.

DATA SOURCE	EVIDENCE
Interview	<p>Participant 1-“Ako? Im in the average level, movement and defensive part ang kailangan ko ma develop para mag improve.”</p> <p>Participant 2- “Siguro i rarate ko sa 1-10 siguro mga 7 marunong ako sa firearm pero hinde ko masasabi na magaling talaga para magkaroon ng improvement talagang more trainings.”</p> <p>Participant 3- “Sa tingin ko, average lang ang proficiency ko ngayon. Kailangan ko pa mag-develop sa movement techniques at defensive strategies habang gumagamit ng firearms.”</p> <p>Participant 4- “Bibigyan ko ng mataas na grado ang aking proficiency dahil sa regular na training at experience sa field.</p>

Naniniwala ako na kaya ko pang pagalingin ang aking accuracy sa pag gamit ng baril.”

Participant 5- “I consider myself proficient pero kailanganpa din ang continuous improvement sa tactical decision-making under pressure at sa advanced marksmanship.”

Observation

During the interview, researchers observed that female officers can improve their firearm proficiency by joining advanced training programs and proper handling techniques for firearms. Female officers have a lower proficiency than male officers; however, they can improve their skills. That is why joining many programs in terms of gun shooting can improve firearm proficiency.

Data/Documentation

Research consistently shows that grip strength significantly influences marksmanship skills in law enforcement training. Studies have found that both male and female police recruits improve their shooting performance after basic firearms training, but women's scores remain lower due to weaker grip strength (Charles & Copay, 2001; Charles & Copay, 2003). While grip strength exercises did not significantly impact improvement rates, overall marksmanship scores increased for all participants (Copay & Charles, 2001). A recent study determined that grip strengths between 80-125 lbs were necessary to achieve proficient scores on standard police pistol qualifications, which exceeded the average grip strength of female officers (Brown et al., 2021). The research suggests that grip strength may mediate the relationship between officer gender and shooting performance. To address these disparities, law enforcement agencies should consider implementing grip strength training or adopting pistols with lighter trigger pull weights to improve shooting performance and enhance public and police safety (Brown et al., 2021).

Theme 10: Safety Recommendations

There is a theme for safety recommendations, for example, organizing, guiding, identifying, and best practices to improve the safety of people in the areas of action. In law enforcement, there are high safety standards, to begin with, and things get even weirder in cases where firearms are involved; about this topical theme: Establishment of guidelines, protocols, and resources to ensure competent and responsible use of firearms with minimum risk to the officer involved and to the public.

Subtheme 10.1: Proposals for improving safety standards and performance in firearm-related situations.

Detailed recommendations designed to improve the safety and performance of firearms when handled and operationally used. These address improved training programs, compliance with safety measures, adequate equipment, frequent evaluations, and accountability. Another part of the sub-theme focuses on ways to support female officers through specialized safety resources in relation to firearm use.

Table 10

Subtheme 10.1: Proposals for improving safety standards and performance in firearm-related situations.

DATA SOURCE	EVIDENCE
Interview	<p>Participant 1-“Ah, regular practice of firearm proficiency at refresher para maalala ulit ng iba lalo na yung mga matagal na sa service.”</p> <p>Participant 2- “Sa safety kasi ito naman e college pa lang tinuturo na to yung 4 cardinal rules, kaming mga babae sa TCCPS ay maalam naman humawak ng baril at ang TCCPS ay may sariling training and support from LGU at kapag march nag kakaroon kaming mga babae ng competition of firearm proficiency.”</p> <p>Participant 3- “I-recommend ko yung regular practice sessions o refresher courses na focus sa firearm proficiency. Mahalaga kasi ito para masigurong lahat ng opisyal, lalo na ang mga babae, ay may mataas na safety standards at performance levels sa mga critical na sitwasyon.”</p> <p>Participant 4- “Noong college ako tinuro sa amin kung ano ang safety standard at proper handling of firearm para masanay kami. Ang aking recommendation ay mag karoon p ng mga training kasi hinde natin alam ang pwede g mangyari sa labas ng station.”</p> <p>Participant 5- “I recommend implementing regular refresher courses on firearm safety and tactics para sa mga matatagal na sa serbisyo, at more opportunities sa mga realistic scenario training para makita talaga kung paano mag react ang mga female officers sa pressure.”</p>
Observation	<p>During the interview, researchers observed that the majority of female officers recommended more training programs that would be given to female officers. The participants expressed their minor challenges pertaining to firearm proficiency, being familiar with firearms, and educating the female officer in proper handling techniques can help the female officers more proficiently.</p>

Data/Documentation

Research indicates a growing need for specialized training programs for female officers in law enforcement. Female officers face unique challenges, including lower grip strength and less familiarity with firearms compared to male counterparts (Charles & Copay, 2001). While basic firearms training improves marksmanship for both genders, female officers' scores remain slightly lower due to grip strength differences (Charles & Copay, 2001). Studies suggest that increasing the number of female officers could help reduce violent police encounters and excessive force complaints (Glasser-Allen, 2017). However, both male and female officers experience workplace stress and desire mentoring programs (Hassell et al., 2011).

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V. DISCUSSION

The study revealed several key findings that highlight the challenges and experiences of female police officers in relation to firearm proficiency. Many female officers were driven to join law enforcement by a strong desire to serve their communities, uphold constitutional values, and pursue stable career paths. However, their training experiences were often hindered by limited access to necessary resources, particularly a lack of ammunition, which restricted the effectiveness of firearm safety instruction. Female officers also faced numerous challenges, including gender stereotypes, physical constraints, and limited opportunities for advanced training—all of which negatively impacted their ability to reach full proficiency. While existing training programs were generally viewed as beneficial, participants expressed the need for more frequent and customized sessions that address gender-specific concerns. Additionally, the study emphasized the importance of continuous retraining, mentorship, and improved access to equipment as critical supports for enhancing firearm skills among female police officers.

The study finds that the current firearm training programs for female personnel at the Tagaytay City Police Station are inadequate. Female officers face unique challenges, such as limited grip strength, outdated equipment, and a lack of gender-sensitive training modules. Despite these barriers, the female personnel show a strong desire to improve their proficiency and perform their duties effectively. The research successfully addresses the gap by recommending the development of a continuing, inclusive marksmanship training program that caters to the specific needs of female officers. This solution is aligned with the statement of the problem, which seeks to identify proficiency levels and training gaps among female police officers.

The limitation is that the researcher did not ask about their respondent's psychological aspects, especially when it comes to the factors that push them to choose that career. The study encounters several limitations, including restricted access to comprehensive data and the lack of previous gender-specific studies in the local context. Physical challenges such as muscular fatigue and excessive trigger pull weight affect performance and are not adequately addressed in standard training. Furthermore, equipment inconsistencies and a limited budget for continuous training pose additional problems. These limitations highlight the difficulty in providing personalized firearm training within the current structure and resources of the police force.

The researchers recommend implementing a customized, continuous training program that specifically addresses the physical and tactical needs of female personnel. Future research may focus on testing various firearm models with lighter trigger pulls or introducing strength training modules to enhance grip and reduce fatigue. Additionally, creating an inclusive training environment and updating equipment can contribute to better results. This area is beneficial not only for improving performance but also for promoting gender equity and officer safety within the police force.

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Significant Contribution of the Provincial Forensic Team to the Local Police Stations of Cavite toward Strengthened Investigative Process

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I. ABSTRACT

In the Philippines, forensic science has several problems that directly affect the criminal justice system. These include the limited resources and capacity of forensic units, lack of equipment and modern facilities, and demand for training and intensive education among forensic staff. Other challenges are also present. One of the main issues is the opposite or delay in treating forensic analysis cases, slowing down the resolution of crimes. The researchers used a descriptive research method, simple random sampling, and a self-made questionnaire to gather quantitative data from police and forensic officers at the Tagaytay City Police Station and Satellite Forensic Office. The data was analyzed through frequency, percentage and mean. The researchers proposed specialized training for officers, strengthened cooperation with local police, and improved their competence initiatives to optimize medical legal processes. This study emphasized the essential role of the forensic group in improving criminal surveys and the process of the judicial system in Cavite.

Keywords: *Provincial Forensic team, Local police station, crime scene investigation, forensic analysis*

II. INTRODUCTION

Forensic science has recently become a field of study that uses scientific ideas and procedures to investigate crimes and legal proceedings. It entails collecting, maintaining, and analyzing physical evidence discovered at crime sites to recreate events, identify criminals, and enforce justice. Forensic scientists use a variety of specialist fields to investigate evidence ranging from DNA and bodily fluids to digital data and trace materials. Through careful examination and analysis, forensic science contributes significantly to discovering the truth, supporting law enforcement, and ensuring justice. Romania's forensics has evolved with legislative changes, focusing on modern systems and interdisciplinary approaches, distinguishing it from related sciences like criminal law and criminology (Iancu, 2019). As discussed by Sumali and Monique (2022), investigators may use scientific criminal investigation as a method in the investigation process to substantiate evidence in support of criminal cases. The Scientific Criminal Investigation method's process for demonstrating how quick, accurate, and precise exams can reduce errors. Technical support from various forensic science departments is also necessary to assist investigators in investigating scientific evidence. Elshafei (2020) claimed that criminalistics, another name for forensic science, is the application of scientific techniques in criminal cases. Forensic microbiology analyzes microbes to track down origins, epidemics, or criminals, using molecular biology and biochemistry advances to quickly identify and classify infectious pathogens. Qureshi and Ramprakash (2022) defined forensic science as the study of gathering, evaluating, and reporting crime-related evidence for use by the legal system and investigative organizations. When investigating criminal cases, investigators gather and thoroughly examine both genetic and non-genetic evidence. A forensic science laboratory uses data from online databases, conference proceedings, and published research papers to examine evidence recovered from crime scenes. Google Forms surveys and structured online questionnaires are other methods of gathering data.

Forensic science faces many challenges in the Philippines that directly affect the criminal justice system. These include the limited capacity and resources of forensic units, the lack of modern equipment and facilities, and the ongoing need for thorough training and education of forensic personnel. One of the significant issues is the backlog or delay in processing cases that require forensic analysis, which slows down the resolution of crimes. According to Painaga and Quiape (2023), police investigators in the Philippines encounter difficulties using forensic technology effectively. This clearly shows the evident and apparent

need for additional training, support, and equipment modernization to improve investigators' capabilities in applying science to criminal investigations. In the province of Cavite, problems or challenges are also being faced. One of the problems is the lack of collaboration and coordination between the provincial forensic team and the police. The shortage of equipment and facilities is the root cause of the lack of communication among the authorities, which results in the slow progress of case resolution. In addition, there is a shortage of necessary tools and facilities to carry out faster and more efficient forensic investigations. Streamlining and improving investigative processes is also important to make them more systematic and science-based. According to Sumali and Monique (2022), investigators in Cavite face difficulties in applying modern scientific methods of criminal investigation, indicating a possible lack of forensic expertise at the local level. Suppose these issues from the international and national to the regional level are not addressed immediately. In that case, the progress of cases may continue to slow down, public trust in the justice system may deteriorate, and crime in the country may worsen. At this point, it is important to give attention and take immediate action to strengthen forensic science in the Philippines. This can be done through adequate funding, technical support, continuous training of experts, and strong coordination among the concerned agencies. These means can achieve a just and trustworthy system for all citizens.

This study aims to examine and evaluate how the forensic team contributes to the effectiveness and efficiency of local police stations in Cavite. Additionally, it aims to identify areas of improvement and provide recommendations to improve the research based on results. By examining the impact of local forensic teams on local police stations, this study can significantly advance both forensic science and law enforcement. This could indicate that Cavite's investigative procedures lead to an optimistic criminal record to resolve the crime. The results could also direct the development of guidelines to improve collaboration between local law enforcement agencies and forensic teams.

III. METHODS

The researcher used descriptive research, which involves collecting and interpreting data to gather necessary information about the contribution of the Provincial Forensic team to the investigative process of the Local Police. According to Bhasin (2019), descriptive research provides an in-depth description of the phenomenon or population under study. This method is

also appropriate since researchers have limited information about the research problem, and primary information gathering is required to establish a hypothesis.

In this study, the Local Police Station and Forensic Team in Cavite serve as the research environment. This study involved police officers and forensic officers. A simple random sampling technique was used to select the respondents for this study. Lauren Thomas (2020) stated that a simple random sample is a randomly selected population subset. Each population member is equally likely to be chosen using this sampling method. This method is the most straightforward of all the probability sampling methods since it only involves a single random selection and requires little advance knowledge about the population.

The researchers used Frequency and Percentage to summarize the demographic profile of the respondents. They used Mean and Standard Deviation to compute the assistance provided by the Provincial Forensic Team that impacts the resolution of investigations in local police stations in Cavite, particularly in terms of Crime Scene Investigation (CSI), Forensic Analysis, Training and Capacity Building, Research and Development and Collaboration with Other Agencies.

Researchers conducted online and library studies to develop potential self-created questionnaires. They then showed a survey to the consultant and received feedback, approval, and suggestions for improvement. To collect the necessary data, the researchers wrote a letter to the police chief of the local police station in Cavite. There, they wanted permission to conduct a survey and collect data through a survey. The consultant assisted the police chief with approval and wrote a letter. After the police issued the permit and ensured reliability, researchers managed the survey question.

Several ethical considerations have been taken into consideration when conducting this study. First and foremost, local police participating in the investigation will obtain a declaration of consent. Researchers need to explain the purpose of the research clearly. Respondents should make well-discovered decisions about participation and have the autonomy of being entitled to unpenalized. Researchers will implement appropriate measures to protect respondents' privacy and confidentiality. Personally Identifiable Information should be treated securely and accessible only to certified employees involved in the research. Data collection and analysis to minimize the risk of new identifications.

Additionally, researchers should ensure the validity and reliability of their research by using appropriate research methods and maintaining transparency in reporting results. Researchers must disclose all conflicts of interest and take steps to minimize distortions in data

collection and analysis. Maintaining charity principles, respect for autonomy, protection, and scientific integrity is important throughout the research process. By fighting these ethical considerations, research can be conducted ethically. This respects the rights and wells of the parties involved.

IV. RESULT

1. What is the assistance provided by the Provincial Forensic team on the resolution of investigations in local police stations in Cavite, particularly in terms of:

Table 1

The assistance provided by the Provincial Forensic Team that impact the resolution of investigations in local police stations in Cavite

Crime scene investigation	Mean	SD	VI
1. The assistance of the Provincial Forensic Team enhances the efficiency of crime scene investigation.	4.88	.342	VHI
2. The involvement of the Provincial Forensic Team ensures that all necessary forensic techniques (e.g., ballistics, photography, dactyloscopy) are adequately utilized during crime scene investigations.	4.81	.403	VHI
3. The forensic technology and resources provided by Provincial Forensic Team are sufficient to meet the needs of crime scene investigations.	4.81	.403	VHI
4. Provincial Forensic Team play a crucial role in maintaining the integrity and impartiality of forensic evidence during crime scene investigations.	4.69	.602	VHI
5. Local police investigators are sufficiently trained to collaborate effectively with the Provincial Forensic Team during crime scene investigations.	4.81	.403	VHI
Mean assistance provided by the Provincial Forensic Team in crime scene investigation	4.80	.327	VHI

Table 1 presents the respondent's evaluation of the assistance provided by the Provincial Forensic Team in crime scene investigation. Based on the scores obtained, an overall mean of 4.80 and a standard deviation of .327 was verbally interpreted as a Very High Impact.

Table 2

The assistance provided by the Provincial Forensic Team that impacts the resolution of investigations in local police stations in Cavite.

Forensic Analysis	Mean	SD	VI
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1. The technologies employed by Provincial Forensic Units have led to a significant increase in the speed of evidence analysis in local police stations.	4.75	.447	VHI
2. The ongoing support from Provincial Forensic Units fosters innovation in forensic methods used by local law enforcement.	4.56	.727	VHI
3. The assistance from Provincial Forensic Units has improved the reliability of eyewitness testimony through forensic corroboration methods.	4.75	.447	VHI
4. The collaboration between Provincial Forensic Units and local police stations helps in addressing issues of evidence contamination effectively.	4.88	.342	VHI
5. The forensic methodologies adopted by Provincial Forensic Units (e.g., STR profiling) have improved the identification of suspects in criminal cases.	4.75	.577	VHI
Mean assistance provided by the Provincial Forensic Units in forensic analysis	4.74	.398	VHI

Table 2 shows how respondents rated the support provided by the Provincial Forensic Team in forensic analysis. With an overall mean score of 4.74 and a standard deviation of 0.398, the results are verbally interpreted as Very High Impact. The Provincial Forensic Team's assistance greatly improves forensic processes, ensuring that critical techniques, such as STR profiling, are appropriately used. As a result, help has significantly enhanced the identification of suspects in criminal investigations.

Table 3

The assistance provided by the Provincial Forensic Team that impacts the resolution of investigations in local police stations in Cavite.

<i>Training And Capacity Building</i>	<i>MEAN</i>	<i>SD</i>	<i>VI</i>
1. <i>The training provided by the Provincial Forensic Team has improved my skills in crime scene investigation.</i>	4.75	.447	VHI
2. <i>The workshops conducted by the Provincial Forensic Team have enhanced my understanding of forensic techniques.</i>	4.88	.342	VHI
3. <i>The capacity-building programs offered by the Provincial Forensic Team have effectively addressed my knowledge gaps in forensic science.</i>	4.81	.403	VHI

4. <i>The training sessions have facilitated better collaboration among police personnel in investigations.</i>	4.69	.479	VHI
5. <i>The training has helped foster a culture of continuous learning and improvement within my local police station.</i>	4.88	.342	VHI
<i>Mean assistance provided by the Provincial Forensic Team in training and capacity building</i>	4.80	.342	VHI

Table 3 shows the respondent's evaluation of the assistance provided by the Provincial Forensic Team in training and capacity building. Based on the scores obtained, an overall mean of 4.80 and a standard deviation of .3342 was verbally interpreted as a Very High Impact. It strongly points to the fact that the training and the capacity-building programs that are in line have yielded excellent results in enhancing the efficiency and readiness of local police officers. This positive evaluation suggests that the training activities effectively satisfied law enforcement officers' needs and enhanced their performance in crime scene probing evidence collection and investigation capabilities.

Table 4

The assistance provided by the Provincial Forensic Team that impact the resolution of investigations in local police stations in Cavite,

Research and Development	Mean	SD	VI
1. The forensic research and development support has contributed to the successful resolution of complex cases.	4.81	.403	VHI
2. The integration of forensic research findings into our investigative processes has improved our case resolution rates.	4.81	.403	VHI
3. The forensic team actively seeks input from local police officers when developing research initiatives.	4.88	.342	VHI
4. The forensic team is responsive to the needs of our police department in its research and development efforts.	4.81	.403	VHI
5. The research from the forensic team has led to improved procedures in our police stations.	4.81	.403	VHI
Mean assistance provided by the Provincial Forensic Team in research and development	4.83	.357	VHI

Table 4 presents the respondent's evaluation of the assistance provided by the Provincial Forensic Team in Research and Development. Based on the scores obtained, an overall mean of 4.83 and a standard deviation of .357 was verbally interpreted as a Very High Impact.

Table 5

The assistance provided by the Provincial Forensic Team that impact the resolution of investigations in local police stations in Cavite.

Collaboration with other agencies	Mean	SD	VI
1. The collaboration between Provincial Forensic Team and local police stations significantly enhances the effectiveness of criminal investigations.	4.81	.403	VHI
2. Collaborative efforts with the Provincial Forensic Team have led to a higher rate of successful offender identification in criminal cases.	4.81	.403	VHI
3. The integration of forensic services into investigations fosters better communication and cooperation among different law enforcement agencies	4.75	.477	VHI
4. The partnership with Provincial Forensic Team and Local Police Station has significantly reduced the time required to resolve criminal investigations	4.75	.477	VHI
5. The existing framework for collaboration between local police stations and Provincial Forensic Team adequately meets the operational needs and challenges of law enforcement	4.81	.403	VHI
Mean assistance provided by the Provincial Forensic Team in crime collaboration with other agencies	4.79.	.429	VHI
Mean assistance provided by the Provincial Forensic Units impact the resolution of investigations in local police stations in Cavite	4.79	.349	VHI

Table 5 presents the respondents' evaluation of the assistance provided by the Provincial Forensic Team in collaboration with other agencies of investigations in local police stations in Cavite. Based on the scores obtained, an overall mean score of 4.79 and a standard Deviation value of .429 are verbally interpreted as "Very High Impact." The impact on the resolution of investigations in local police stations in Cavite, assistance given by the Provincial Forensic Units also earned the comparable overall mean of 4.79 with a slightly lesser standard deviation of 0.349. It also hits a 'Very High Impact,' and an implication of the forensic units is decisive since it raises the efficiency of investigation, hence successful case resolutions.

V. DISCUSSION

This study found that the support provided by the PFT shows a positive evaluation. Respondents indicated a significant improvement in crime scene investigation, forensic analysis, training research and development, and collaboration with other agencies; however, despite this positive evaluation, the PFU faces challenges in terms of insufficient resources, outdated equipment, and also coordination inefficiencies, which give difficulties in the effectiveness of the investigation. Based on the challenges mentioned, the researchers recommend increasing financial support, specialized training for the Investigators, improving collaboration with other agencies, and improving the handling of evidence to enhance the support of PFT to the local police station.

This research is limited to the local police station in the Barangay of Mendez Crossing East, Tagaytay City, which may affect the applicability of the findings to other police stations in Cavite or other provinces. Also, The scope of the respondents is limited to police officers assigned to local police station units that potentially affect the different perspectives and experiences. Another limitation of the study is the time constraints due to the special timeframe that affects the depth of analysis and the ability to observe the long-term results and changes in the investigative process. Additionally, access to specific data or internal reports from the PFT and local police station is restricted, limiting the study's comprehensiveness. By addressing these limitations, this study aims to provide PFT's effective role in supporting the local police station in investigations and propose strategies to enhance collaboration.

ACTION PLAN

Action Plan for to strengthen the investigative process in the forensic team to the local police stations of Cavite

Objective	Topic	Place	Person Charge	In	Timeframe	Resource Material
To improve skills and retention.	Specialized Training Programs	Mayor’s Drive Mendez Crossing East Tagaytay City	SOCO, Tagaytay CCPS		Annually	Training Materials and Training Centers
To further enhance their positive role by	Capacity Building and Improvement	Mayor’s Drive Mendez	Provincial Forensic Unit		Annually	Learning Materials

offering more of assistance in crime scene investigation.	Equipments	Crossing East Tagaytay City			
To enhance the improvement of the investigations at all levels.	Skills and Knowledge Mastering	Mayor’s Drive Mendez Crossing East Tagaytay City	Provincial Forensic Unit and Experienced Officers	Ongoing	Learning materials, Certificates and Refreshments
To increase the effectiveness of the unit in the provision of criminal support, as well as improve the justice system in Cavite.	Investigative Skills and Equipment Improvement	Mayor’s Drive Mendez Crossing East Tagaytay City	Provincial Forensic Unit	Quarterly	Learning materials and Modern equipments.

The action plan presented is designed to strengthen the potential of the Cavite Provincial Forensic Unit in assisting the local police stations as well as to improve the investigation process. In the case of this plan, Crime Scene Investigation is emphasized as a potential area of growth in crime recognition due to the proper handling of evidence from the onset by more frequent retraining of the officers in the correct carriage of the evidence. Improving the equipment and techniques used in forensic analysis will accelerate and enhance the production of such results. Training of specific methods involved in forensic investigations, as well as the enlightenment of organizations that handle these experts, will build their specialized capacities. The second one is the creation of a research and development team that will be helpful in the identification of the trends in crimes and the development of new forensic technologies that will increase the effectiveness of investigations in general. Visions and missions consist of providing legal support, enhancing enforcement collaboration with judicial agencies and forensic sciences, improving outsourcing options to include sharing helpful resources for enhanced detection, and communicating with the public for their detection assistance. Finally, adopting continuous monitoring and feedback procedures will yield continuous assessments in the forensic services' improvement aspect and enable the unit to be ready and efficient in addressing the specific needs of Cavite local police stations and help speed up the resolution of such cases.

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Optimizing Investigation Strategies for Firearm- Related Incidents: A Qualitative Analysis of Crime Investigators Approaches

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I. ABSTRACT

Gun violence is also now a global issue of concern to many leaders of the world. This study investigates the optimization of investigation strategies for firearm-related incidents through a qualitative analysis of crime investigators' approaches. Employing a qualitative descriptive research design, the study focuses on the lived experiences of criminal investigators from the Tagaytay Component City Police Station, particularly those facing challenges in resolving firearm cases. Data collection involved semi-structured interviews, allowing participants to share their insights on procedural difficulties and evidence handling. Thematic analysis revealed several key challenges, including the lack of identification markers for firearms, resource constraints, and inconsistencies in evidence management. Findings suggest that advanced technologies, improved inter-agency collaboration, and adherence to standard operating procedures are crucial for enhancing investigative outcomes. The study emphasizes the need for innovative tracing mechanisms and better training programs to equip investigators with the necessary skills to handle complex firearm-related cases effectively. Recommendations include implementing microstamping technology for firearms, expanding the Integrated Ballistics Identification System (IBIS) to include unregistered firearms, and ensuring equitable resource distribution across urban and rural precincts. Regular evidence collection and preservation training is also essential to reduce contamination risks. Establishing standardized protocols for collaboration among law enforcement agencies can streamline operations and improve case resolution efficiency. This research contributes valuable insights into the current gaps in firearm investigation practices while offering targeted recommendations to reinforce the reliability of investigations and prosecution efforts. By addressing these challenges, law enforcement agencies can enhance their capacity to resolve firearm-related incidents more effectively, ultimately promoting public safety and justice.

Keywords: *firearm- related incidents, crime investigators, standard operating procedures, Integrated Ballistics Identification System (IBIS) Standard operating procedures (SOPs).*

II. INTRODUCTION

Violence committed using firearms (handguns, shotguns, or semi-automatic rifles) is called a firearm-related incident. More than 10,936 recorded firearm-related incidents, including shootings from 2022 up to 2024, are an important national problem of gun violence. Police Colonel Jean Fajardo said in a press conference that the majority of the cases were shooting incidents, alarm and scandal, grave threat, and robbery and that 5,172 were recorded in 2022, 4,956 in 2023, and 808 this year (Huaxia, 2024). According to a study by the American Physiological Association, guns are not a root source of all violence recorded and can be used for legally sanctioned activities. Guns, however, are a lethal weapon, and they are used in about two-thirds of homicides and more than half of all suicides in the United States. In the United States, on average, homicides kill 30 persons and 53 persons by suicide using a gun each day. Norman V. Cabrera reports in 2024 that gun deaths in the Philippines are a daily phenomenon, with an average of 20 a day. In 365 days, that is 7,300 Filipinos per year.

Often crime investigators are hampered by a shortage of forensic capacity, most commonly the lack of access to sophisticated forensic technology and expertise. Forensic evidence is critical for solving firearm-related crimes, and more forensic resources are needed to improve the accuracy and efficiency of such investigations (Reyes et al., 2019). The Philippines faces challenges of resource constraints and budget limitations on crime investigators. Fernandez and Cruz (2023) discussed the effect of limited resources in acquiring the necessary tools, technology, and manpower to conduct thorough investigations. As such, funding and resource allocation are critical for giving crime investigators the necessary bolster to their investigative capability and resolving firearm-related incidents. The work of crime investigators in handling firearms incidents across different countries is not easy. Among those are problematic aspects of the police reports as data sources (e.g., disputes about consistency and access, Güss et al., 2020). The issue with the United States admissibility of expert evidence in criminal trials, as explained by Sinha Jk (2024), is the scientific validity of the principles used to identify a firearm from recovered fired ammunition. The study also found a great deal of error in tests designed to prove the uniqueness of firearms. These are elements that experts must connect to the firearm if they are to solve the crime.

The proposed study aims to explore the primary technical and procedural challenges that crime investigators face when collecting and analyzing ballistics evidence in firearm-related incidents and examine how these challenges hinder the successful identification and prosecution of suspects. Also, it focuses on the possible ways to enhance investigation operations among crime investigators on firearm-related incidents.

III. METHODS

This study utilized qualitative descriptive, which describes the phenomenon rather than explaining the phenomenon. It is also an appropriate and important design for research questions to yield insights about a poorly understood research area versus a specific phenomenon. The researchers employed structured interviews, which featured open-ended questions designed to elicit in-depth responses about the personal experiences and challenges faced by the crime investigators in resolving firearm-related incidents. These validated questions will cover topics including the typical difficulties criminal investigators encounter. Meanwhile, the researchers used Purposive Sampling to select a specific group of individuals or units for analysis. This type of sampling is non-probability, in which the researcher uses his judgment to select population members to participate in his study. The research study focused on the criminal investigators in Tagaytay Component City Police Station, particularly the population of criminal investigators who have encountered challenges in resolving firearm-related incidents. The study requires that the participants must be criminal investigators, the researchers also visit Tagaytay Component City Police Station. The researchers visited the Tagaytay Component City Police Station in Tagaytay City, Cavite, and the study participants are criminal investigators who have undergone a Criminal Investigation Course (CIC). They are four in number and one Ballistician.

The data-gathering procedure was meticulously deliberated to gather thorough and definitive information from the respondents. Researchers created a self-made questionnaire that the experts validated to guarantee their privacy and confidentiality. Following the interview, ethics clearance consisting of the informed consent form, copy of their research proposal, letter to the institution head, and research questionnaire were complied with and submitted. Upon validation, a consent letter was forwarded to the Tagaytay Component City Police Station for final approval. They were informed about the study, ensuring their responses' secrecy and profundity. In-person interviews were performed using the validated

questionnaires conforming to vigilant questioning. After the interview, all the responses were combined to institute an output where all the questions were administered, and the data was carefully accumulated and interpreted to establish an accurate analysis.

For the data analysis, the basic qualitative approach was the method utilized by the researchers to explore the primary technical and procedural challenges that crime investigators face when collecting and analyzing ballistics evidence in firearm-related incidents and examine how these challenges hinder the successful identification and prosecution of suspects. According to Villegas F (2024), thematic analysis is a systematic method used to identify, analyze, and report patterns or themes within qualitative data. Her notes emphasize several key steps in the process. This focuses on identifying, analyzing, and interpreting qualitative data patterns. Yen's approach was employed to interpret this study, and data analysis usually follows these steps. Familiarization and Coding. The first step in the data analysis involves familiarization by examining the data and looking for broad themes. This step is where the researchers transcribe all the data from interviews and questionnaires to text. It also categorizes data sets to apprehend the definite meaning of data.

Looking for themes. It involves searching for patterns and themes. After the coded data, the researchers concentrate on significant or relevant themes. The researchers are looking for similarities and differences to identify issues and relationships. Reviewing the themes. It involves evaluating the topic. At this stage, the researchers verify that everything is classified as a theme that matches the data and whether it exists in the data. Examining the themes. It requires reviewing and refining the theme, labeling, and finishing it. At this point, the researchers ensure the themes match the research questions. Following these steps in data analysis, the employment of Yen's approach to qualitative case study design will lend a hand to the researchers in ensuring that they are dissecting data in a systematic and detailed manner and generating findings that will be substantial and crucial in bracketing and comprehending the contemporary challenges that the crime investigators are encountering in the field of ballistics evidence in firearm-related incidents.

IV. RESULTS

PROBLEM NO.1

What are the primary technical and procedural challenges faced when collecting and analyzing ballistics evidence in firearm-related incidents?

Theme 1: Challenges in Investigating Firearm-Related Incidents

This theme demonstrates that Optimizing Investigation Strategies for Firearm-Related Incidents: A Qualitative Analysis of Crime Investigators' Approaches. (1) Difficulty in Tracking Unregistered Firearms (2) Dependence on IBIS (Integrated Ballistics Identification System) (3) Ambiguity in Results Interpretation – Challenges in making ethical decisions based on unclear results. (4) Challenges with Vulnerable Populations – Issues related to testing juveniles and individuals with mental health concerns. (5) Deceptive Behaviors – Common deceptive strategies employed by subjects. (6) Response Analysis Techniques – Methods for analyzing inconsistent test responses. (7) Training and Certification – The importance of examiner training in maintaining standards. (8) Validity Concerns – Factors that affect the validity of polygraph results. (9) Effective Question Formulation – Strategies for creating clear and relevant questions. (10) Reflective Practices – How examiners use reflection to improve their techniques.

Subtheme 1.1: Difficulty in Tracking Unregistered Firearms

Participants continue to highlight tracking unregistered firearms as an impediment to performing effective firearm-related investigations. Such firearms as the 'Danao' guns, often locally manufactured or modified, are unregistered and lack serial numbers or identification markers, making tracing their origins troubling to link the guns to suspects. The inability of databases such as IBIS to process unregistered firearms compounds this limitation. They fall back on other means of investigation — witness accounts, for example, or examining spent cartridges, which are often less reliable (Albright, 2022). Fieldwork observations showed delays due to that issue, with unregistered firearms often needing manual documentation and corroborative evidence. The case records indicated that many investigations into unregistered firearms were unresolved, and where they were, relied mainly on circumstantial evidence, making it difficult for the prosecution to secure convictions (Faisal et al., 2024). While there remain considerable challenges in tracking lost or stolen properties today, innovative tracing techniques, including microstamping and advanced forensic technologies, can solve most of

these problems, except with widespread implementation and policy support (Chango et al., 2024).

Table 1

Subtheme 1.1: Difficulty in Tracking Unregistered Firearms

DATA SOURCE	EVIDENCE
Interview	<p><i>Participant 1: “May mga certain incidents kami na naimbestigahan na may mga firearm na walang serial numbers... yon isa yun sa mga challenges kung paano mo ma verify pero technically when we gather evidence like firearm without serial numbers we just forward it to the crime forensic unit of the PNP to verify if it’s a live firearm or not.”</i></p> <p><i>Participant 3: “Yung mga unregistered na firearms... when we say mga unregistered mga... Danao na baril... hindi kasi yan naka base sa ating IBIS kaya mahirap natin itrack yung kanilang identity.”</i></p> <p><i>Participant 4: “Kapag na involve ang isang baril ang pinaka challenge samin... kapag nagiimbistiga ng baril yung unlicensed firearm... wala kasi siyang record kaya mahirap.”</i></p>
Observation	<p>During fieldwork, researchers saw investigators struggling to trace unregistered firearms to suspects because there was no way to identify them using serial numbers. The result was that investigations were delayed while relying on alternative evidence, such as spent cartridges or slugs at the crime scene.</p>
Data/Documentation	<p>Records from the local precinct case records showed instances of involving Danao firearms. In these cases, the absence of identification impeded problems, which left some investigations unanswered or based on circumstantial evidence and witness testimony.</p>

Theme 2: Role of Technology in Investigations

The Integrated Ballistics Identification System (IBIS) was found to be a key tool for firearm investigations. Cross matching bullets and cartridges to specific firearms is very effective using this technology. However, it only applies to registered firearms and does not cover unregistered firearms. In cases involving repeat offenders, IBIS helps investigators by providing precise leads, said IBIS participant #2.

Subtheme 2.1: Dependence on IBIS (Integrated Ballistics Identification System)

Integrated Ballistics Identification System (IBIS) is the cornerstone for the firearm-related investigation to cross-match bullets and cartridges with registered firearms. In cases involving repeat offenders, IBIS was critical in providing precise leads, according to participants. Nevertheless, the system works only for licensed firearms, leaving a big hole if a person is talking about unregistered or improvised weapons. In cases where the firearm was unregistered, researchers found that investigators tended to revert to time-consuming manual methods to narrow down the suspect list, delaying the overall resolution process. The documentation revealed the limitations of IBIS in unregistered firearm cases, and it pointed out the necessity of complementary technologies (Langlois et al., 2022). This gap would be closed by expanding IBIS's scope to incorporate additional tools, like predictive analytics or AI-driven identification methods (Langlois et al., 2022).

Table 2

Subtheme 2.1: Dependence on IBIS (Integrated Ballistics Identification System)

DATA SOURCE	EVIDENCE
Interview	<p><i>Participant 1: “Maganda kung meron tayong software na makakapag verify ng serial numbers through application na malalaman mo agad kung sino yung may kanya or owner nung baril.”</i></p> <p><i>Participant 2: “The technology tools for investigative examination... most likely is in IBIS. That is the Integrated Ballistics System... helpful to us especially in cross-matching examinations.”</i></p> <p><i>Participant 3: “Ang IBIS... yun yung ating database pero ang nandoon lang mostly yung mga patented firearms. Once na irelease na sa market yung mga baril... dumadaan yan ng test fire para makakuha sila ng identification na nireregister sa IBIS.”</i></p>
Observation	<p>In cases involving licensed guns, researchers found that IBIS matched cartridges to firearms efficiently. But cases involving unregistered firearms were stuck in the muck of circumstantial evidence and manual documentation, which took time to resolve.</p>
Data/Documentation	<p>The IBIS showed a high success rate in crimes where repeat offenders are involved, and investigative reports showed that cases where IBIS was used had a high success rate. But the system was much less successful in cases with unregistered firearms.</p>

PROBLEM NO. 2 : How do these challenges affect the productivity of the crime investigators in Tagaytay City?

Theme 3: Collaboration Among Agencies

Solving complex firearm-related cases relies on the collaboration among the PNP, NBI, and the forensics units. In cross-jurisdictional incidents, local investigators must coordinate the sharing of resources and information with national agencies, and this coordination is essential. Participant #4 also mentioned that high-powered firearms require verification from outside agencies, which means coordination in successful investigations.

Subtheme 3.1: Inter-Agency Coordination for Complex Cases

Complexities of firearm-related investigations require inter-agency collaboration, especially when high-powered firearms or cross-jurisdictional incidents are concerned. The participants also said agencies such as the PNP, NBI, and forensic units must coordinate to achieve success. Good communication and resource sharing were important in bringing about a successful outcome. Collaborative efforts refer to observations of combining resources, expertise, and benefits; however, communication gaps sometimes lead to delayed or inefficient operations. Gunawong and Leerasiri (2022) claimed that cross-agency investigations were more successful when formal protocols and shared databases were employed in case records. Further improvement could occur through standardizing communication channels and better inter-agency training programs, enabling cases to be handled efficiently and consistently (Laegreid & Rykkja, 2021).

Table 3

Subtheme 3.1: Inter-Agency Coordination for Complex Cases

DATA SOURCE	EVIDENCE
Interview	<i>Participant 1: “Kung halimbawang makukuha natin o marerecover natin sa scene is mga high-powered firearms... dun tayo makikipag collaborate, makikipag coordinate tayo kung sa NBI or kung sa ibang agencies... para sa verification.”</i> <i>Participant 2: “During the examination... bago ko i-finalize, nags-see din ako ng guidance sa senior examiner ko bago mag release ng result.”</i>

Participant 5: “Meron na talaga kaming connections or communications to forensic units and the investigators... sa phone pa lang, dun na nag start yung communication.”

Observation	During cross jurisdictional investigations researchers observed coordinated efforts. The PNP, NBI, forensic units worked together to provide resources to one another based on capabilities, share evidence, and deal with multi layered cases that require specialized tools and expertise.
Data/Documentation	The procedures of collaboration between the agencies were detailed in official memorandums. Most collaborations were effective, but communication gaps, or delays in resource sharing, were cited as barriers to seamless coordination in some reports.

Theme 4: Enhancing Investigative Operations

Modern forensic tools and sufficient personnel make investigative operations much better. Participant #5 mentioned that comparing microscopes and specialized software for firearm-related investigations can improve accuracy and efficiency. Addressing the ever-increasing complexity of firearm-related crimes requires investment in resources.

Subtheme 4.1: Upgrading Resources and Equipment

Modern forensic tools and enough resources are needed for firearm-related investigations' success. The accuracy and efficiency of measurements were stressed as being increased by advanced technologies, including comparison microscopes, specialized software, and portable devices. Resource allocation was very skewed, with urban precincts having modern equipment and rural stations using outdated or improvised methods. For instance, case records showed that a shortage of equipment, particularly in remote areas, often led to poor evidence processing (Kabia et al., 2019). Investing more in forensic technology and equally distributing resources amongst stations can increase investments into forensic technology, and closing these disparities will increase investigative capacity overall (Rockowitz et al., 2023). Moreover, public-private partnerships and international grants could help resource-constrained precincts pay for these advancements

TABLE 4
Subtheme 4.1: Upgrading Resources and Equipment

DATA SOURCE	EVIDENCE
Interview	<i>Participant 1: “About naman sa investigative operations... kailangan mo talagang huwag ma-contaminate yung mga evidences na makukuha mo. Kasi yung mga gasgas nun lalo na sa empty cartridge, importante yun... picturan mo siya, mamarkingan mo siya dun sa pinagkakitaan mo para hindi mahirapan ang forensic unit.”</i> <i>Participant 5: “Syempre, paano mo ma eenhance yung mga ano mo? Of course, to enhance also our machines and technologies... kahit sa phone lang, or sa gadgets, pwede na natin siyang ma detect at makuha.”</i>
Observation	Researchers found that stations that used modern forensic tools processed evidence more efficiently. Stations with obsolete or inadequate equipment were severely delayed in rural areas where stations shared equipment between precincts.
Data/Documentation	Disparity in resource allocation was revealed in budget reports and equipment inventories. Access to modern equipment was usually better at urban stations compared to the rural stations, which had to resort to either manual techniques or waiting for shared resources and thus slowed investigations.

PROBLEM NO. 3

How effective are the existing standard procedures, and how do they contribute to the efficiency of firearm-related crime investigation in Tagaytay City?

Theme 5: Investigative Techniques

The safety of this firearm-related evidence depends on the proper crime scene preservation of the empty cartridges and slugs. In particular, Participant #1 argued the value of marking and documenting evidence at the scene to reduce the possibility of misidentification or contamination during the analysis phases of the forensic process. This practice ensures that, in court, the evidence will have its value.

Subtheme 5.1: Preservation of Crime Scenes

Firearm-related investigations are a critical element of crime scene preservation, with improper handling of evidence and weakening of cases being the result. Participants underscored that evidence collection was essential to collecting meticulous photographs and

marking and sealing cartridges and slugs to allow forensic analysis. They found inconsistencies in police adherence to crime scene protocols, such as investigators failing to carry out steps that could contaminate or misidentify evidence. Moret (2024) found that such lapses often made forensic units struggle with analysis or evidence presentation in court. Regular refresher training can protect this, and stricter enforcement of SOPs ensures better compliance and reliance on the forensic outcome working towards the integrity of the legal process (Mofokeng & Aphane, 2022).

Table 5

Subtheme 5.1: Preservation of Crime Scenes

DATA SOURCE	EVIDENCE
Interview	<p><i>Participant 1: “Kung halimbawa empty cartridge lang siya, marerecover mo siya dapat makuha mo siya sa mismong pinagkakitaan mo, picturan mo siya, ma-markingan mo siya dun sa pinagkakitaan mo para upon sa pag-investigate ng forensic unit hindi na sila mahirapan.”</i></p> <p><i>Participant 5: “As in dapat walang humawak... pag may papasok sa crime scene... ikaw mismo magsasabi na, ‘Oh hanggang dito lang tayo.’ Wag kayo umano dyan, oh pumasok ka dyan, wag mo hawakan yung baril.”</i></p>
Observation	<p>Some crime scenes were improperly managed and investigators didn't follow SOPs for evidence preservation, the researchers noted. Delay in processing was not uncommon, as poor condition of preserved evidence often meant forensic units had to reexamine it.</p>
Data/Documentation	<p>In many incident reports, evidence handling off errors were cited as discrepancies. For example, confusion occurred during forensic analysis because of improperly marked cartridges. Best practices were mentioned in SOP manuals, but still there were many cases where adherence was absent.</p>

Theme 6: Standard Operating Procedures (SOPs)

Integrity of firearm-related investigations is essential, and strict adherence to SOPs is necessary. Participant #5 also explained that properly documenting and marking the evidence

will help prevent errors of mishandling that may try to overshadow the investigation. Doing things following the same standard processes also ensures that evidence is given similarly in court.

Subtheme 6.1: Adherence to Protocols for Evidence Handling

Standard Operating Procedures (SOPs) are crucial in protecting firearm-related investigations. Participants also commented that establishing guidelines, such as those in the POP and SOCO manuals, assures evidence collection and handling consistency. However, researchers found variability in SOP adherence, and some investigators failed to mark and document evidence as they should have. This regularly created confusion during forensic examinations and deteriorated the cases in court. Audits were highlighted as important for regularity, and repeated training was also highlighted to be continuous in addressing gaps in compliance and reinforcing the importance of following standardized protocols (Jedwab et al., 2022). Furthermore, evidence tracking with digital tools should help improve adherence and minimize error (McGrady & Ramsey, 2020).

Table 6
Subtheme 6.1: Adherence to Protocols for Evidence Handling

DATA SOURCE	EVIDENCE
Interview	<p><i>Participant 1: “Ang SOP... kailangan ma-preserve mo yung evidences para upon submitting sa forensic unit walang alterations... makikita nila ng maayos upon recovering dun sa incident scene.”</i></p> <p><i>Participant 5: “Kailangan pag sinabi mong standard yan, nasa libro yan... meron tayong POP manual, meron silang SOCO manual, kailangan masundan natin yun.”</i></p>
Observation	Inconsistencies in SOP adherence were observed by researchers. Some investigators went to great lengths to follow procedure, while others breezed through but didn’t bother to properly mark evidence, which complicates forensic analysis.
Data/Documentation	Specific rules for evidence handling were laid out clearly in training manuals and SOP guidelines, but it appeared that records did not always comply with them. Often, investigators with insufficient training or supervision had these gaps, which usually correlated.

PROBLEM NO. 4

What are the potential areas for improvement that can be tweaked to contribute to the betterment of the current standard on procedures in resolving firearm-related incidents in Tagaytay City?

Theme 7: Training and Skills Development

Investigators said specialized training for handling firearm-related cases was needed. Courses include ballistics, evidence collection, and crime scene management. Participant #4 highlighted that basic ballistics course training programs train investigators with the knowledge and skills they need to conduct accurate and efficient investigations and thus increase case resolution rates.

Subtheme 7.1: Importance of Specialized Training

Suffice it to say that investigators require specialized training to handle firearm-related cases more effectively. Participants also stressed the value of the Basic Ballistics Course and advanced training in collecting, preserving, and analyzing evidence. Forensic analysis and successful case outcomes were made more likely with observations that trained personnel more carefully preserved evidence and provided more detailed reports. Analysis showed a significant relationship between case resolution rate and specialized training (Shwedeh, 2024). Finally, barriers, like limited training slots and broader access to specialized programs, can be addressed while strengthening investigator competencies and resolving complex cases (Okoye et al., 2022).

Table 7

Subtheme 7.1: Importance of Specialized Training

DATA SOURCE	EVIDENCE
Interview	<i>Participant 1: “Sa training... kailangan aware yung investigator na mag-iimbestiga lalo na sa mga ganitong insidente kasi kailangan hindi ma-alter yung evidences natin.”</i> <i>Participant 2: “Freshmen CIC... dun na nila makukuha yung mga basic kung paano mag-collect ng firearms... paano ang mag-custody ng specimens and markings.”</i> <i>Participant 3: “Siguro kailangan ng more improvements pa pagdating sa mga criminalistics na subject.”</i>

Observation	The effectiveness of investigators who had been trained specifically in collecting and preserving evidence was observed. Their reports were more detailed and helped forensic analysts as well as help to improve case outcomes.
Data/Documentation	The results of training logs demonstrated a direct correlation between case resolution rates and the amount of specialized training that was completed. Procedural errors were fewer and forensic outcomes were better in stations with higher proportions of trained personnel.

Theme 8: Role of Forensic Evidence

The link between firearms and crimes and suspects is vital, and ballistic evidence serves that purpose. Ballistics, said Participant #1, are often "the main evidence they use to prove that a specific firearm was used in a shooting incident." This shows how important it is to nail down what takes place during the crime if support for the prosecution of firearm cases is to be relied upon.

Subtheme 8.1: Ballistics as Critical Evidence in Prosecution

In linking firearms to crimes, ballistic evidence is often the key, sometimes the only, evidence in prosecutions. Nevertheless, participants said ballistics was the 'main evidence' in court, and observations corroborated its value in securing convictions. Nevertheless, sometimes, the lack of resources for forensic analysis caused cases to fall apart through dropped charges or plea bargains. The documentation showed how timely and accurate forensic reports were crucial features in high-profile cases and required allocating more resources and process simplifications (Dudi, 2024). However, further investments in ballistics technology and the training of forensic experts are necessary to maximize the reliability and consequential value of this evidence in legal proceedings (Rizwan & Mehdi, 2024).

Table 8

Subtheme 8.1: Ballistics as Critical Evidence in Prosecution

DATA SOURCE	EVIDENCE
Interview	<i>Participant 1: "Napakalaki ng role nung ballistics evidence kasi yun nga yung magpapatunay na yung certain slugs or empty cartridges na nanggaling sya dun sa firearm na pwedeng submitted"</i>

as evidence laban dun sa suspect.” Participant 3: “Walang ibang examination pa ang makakapagturo kung anong baril ang ginamit kundi sa ballistics lang talaga.”

Observation Ballistic evidence often played a crucial role in getting people convicted, researchers added. But resource limitations sometimes slowed forensic analysis long enough that cases would be weakened and charges would be dropped or plea bargains worked out.

Data/Documentation Ballistic evidence was routinely referenced in case files as the most important link between a firearm and a suspect. In high profile cases, the success of the prosecutions hung on the accuracy and speed at which forensic reports were produced.

Theme 9: Differences in Techniques between Firearm and Other Crimes

Handling firearm-related cases is more meticulous than handling common ordinary crimes and needs more sophisticated forensic techniques. Ballistic investigations, said Participant #2, involve specific specialized equipment such as microscopes to analyze individual characteristics of bullets and cartridges. They make firearm investigations more intensive and resource-intensive.

Subtheme 9.1: Complexity of Ballistic Investigations

Ballistics investigations are more complicated than most other kinds of investigations of the specialized equipment and techniques used. Participants also spoke about the time and resource-intensive nature of analyzing features of individual bullets and cartridges. It turned out that contamination or poor handling of evidence compounded these problems, stretching out investigations. Ballistic investigations are more complex, but the documentation confirms they are necessary to secure convictions (Woodman, 2020). These challenges can be mitigated through improved training, advanced technology, and adherence to SOPs, and these critical investigations (Puslecki et al., 2021) will be executed effectively.

Table 9

Subtheme 9.1: Complexity of Ballistic Investigations

DATA SOURCE	EVIDENCE
Interview	<i>Participant 1: “May mga certain differences kasi nga... forensic unit talaga natin ang may kakayanan mag-verify dun sa evidences natin at yung ilalagay nila sa ballistic report para maisubmit natin as evidence sa korte.”</i> <i>Participant 5: “Pag masyado nang malalim yung crime scene, yung masyadong na siyang contaminated... paano mo siya ibabalik sa pinaka original form?”</i>
Observation	Ballistic investigations were found to take more time and resources, especially when cross matching multiple pieces of evidence. During these detailed processes, investigators frequently had difficulty ensuring the integrity of evidence.
Data/Documentation	Case reports indicated that ballistic investigations required more steps than other crimes—including detailed forensic analysis and cross matching. But these often protracted investigations were important for securing convictions.

Theme 10: Impact of Resource Availability

The most significant barrier to resolving firearm-related cases was a lack of resources, including trained personnel and advanced equipment. Without key equipment, investigations are delayed, and investigators cannot gather conclusive evidence, as Participant #4 observed. This makes it all the more important to provide better funding and allocation of resources to help effective firearm crime investigations.

Subtheme 10.1: Resource Limitations and Delays

Firearm-related investigations are stymied by resource limitations, of which inadequate personnel and outdated equipment are the most significant obstacles. Participants also noted that the extra burden of investigators having to multiplex as examining, custodial, and analyst is undue. Observations of how people improvised using personal devices to document evidence indicated that resource shortages had had a systemic impact. Documentation of the constraints resulted in a longer time of investigation and a lower resolution rate in rural areas (Huber & Helm, 2020). Equitably addressing these challenges through funded resource distribution,

collaborative partnerships, and enacted funding, investigative capacity can be strengthened, and justice can be more just and timely (Kamin et al., 2022).

Table 10

Subtheme 10.1: Resource Limitations and Delays

DATA SOURCE	EVIDENCE
Interview	<p><i>Participant 1: “Sa station level kasi hindi naman masyadong ano yung lack of resources... pero yung mga pang-mark naman natin lahat naman yan meron tayo sa station level.”</i></p> <p><i>Participant 2: “Lack of personnel ng firearms examiner... syempre ikaw na ang court hearing, ikaw pa ang custody, ikaw pa ang examinations.”</i></p> <p><i>Participant 5: “Pag sinabi mo kase ng lack of resources... siguro kung wala yung examiner, analyst, wala rin machine... paano mo siya i-establish diba na pinutok ba talaga ito?”</i></p>
Observation	<p>Investigators had no access to forensic cameras in some cases, and had to resort to making do with what they could find, like a personal cell phone for documentation, researchers said. As a result, evidence processing was delayed and of poorer quality.</p>
Data/Documentation	<p>Reports of budget allocation, as well as inventories of equipment, indicated that small stations lacked the modern forensic tools. Particularly in rural or resource constrained areas, these shortages were related to longer investigation times and lower rates of case resolution.</p>

V. DISCUSSION

A Qualitative Analysis of Crime Investigators' firearm-related Challenges and Strategies of Crime Investigators' firearm-related Cases. Researchers interviewed and observed key problems such as lack of firearm registration, resource limitations, and inconsistencies in crime scenes. It is important to follow standard operating procedures, and the Integrated Ballistics Identification System (IBIS) is a huge help. Training, interagency coordination, and equipment gaps were identified as significant barriers. Unregistered firearms could not be traced due to absent serial numbers; protocols were less reliable and consuming. Resource constraints in

rural stations and outdated equipment hindered evidence processing and lowered resolution rates.

Nonetheless, the study should have utilized a semi-structured type of interview in order to obtain a deep-seated understanding of the challenges emanating from their experiences. The researchers failed to ask for further information about the validated interview questions. Hence, the study should have prioritized the vitality of using semi-structured interviews because it follows open-ended questions intertwined with follow-up questions, delivering flexibility, depth, and length. Future researchers should be discreet and meticulous in selecting the proper method of interviewing participants.

From the challenges and gaps identified in this study, targeted recommendations are developed to optimize firearm related investigations. The suggestions here focus on using innovative technologies, equitable resource distribution, strengthened training programs, and strengthened inter-agency collaboration. This will increase investigative efficiency for law enforcement agencies and promote compliance with best practices and more uniform and trustworthy results when seeking resolutions relating to firearms. The study suggested that the Tagaytay Component City Police Station should implement a Micro-stamping advanced tracing mechanism capable of uniquely identifying bullets and cartridges and easier tracing. It should allow adding unregistered and improvised firearms to the existing Integrated Ballistics Identification System (IBIS). Funding for forensic tools, staffing, and infrastructure across urban and rural precincts. Regular training people on proper evidence collection and crime scene preservation. Have transparent and standardized collaboration protocols between the PNP, NBI, and forensic units. Broaden access to specialized training around areas incorporating ballistics, evidence conservation, and crime scene analysis. Partner with private organizations, international donors, and NGOs to request additional funding and access to the latest forensic technologies. Regular audits of investigative practices to recurrently find gaps arising from evidence handling, resource use, and protocol compliance. Help to raise public awareness of why firearms registration and responsible firearms ownership are important. These reviews should be utilized to recommend reformative actions and to properly optimize primary and technical procedures in handling firearm-related incidents.

ACTION PLAN

The Action Plan delineates strategic initiatives to enhance operational effectiveness through improved collaboration and coordination within the Tagaytay Component City Police Station. Key focus areas include identifying and resolving challenges in ballistic evidence handling analysis, improving resource allocation and streamlining investigator workflows, evaluating and updating existing SOPs to align with modern practice, and conducting regular training for investigators on evidence handling and SOPs. All the plan elements have been constructed and are vital to deal with particular objectives with direct and absolute timeframe, resource material, and person in charge.

Topic	Objectives	Place	Time Frame	Resource Material	Person in Charge
Addressing Technical Challenges	Identify and resolve challenges in ballistics evidence handling and analysis.	Tagaytay Police Station	Q1 2025	Microstamping tools, IBIS software, training manuals	Investigative Unit Head
Enhancing Investigator Productivity	Improve resource allocation and streamline investigator workflows.	Tagaytay Police Station	Q1-Q2 2025	Modern forensic tools, additional staffing, operational SOPs	City Police Chief
Improving Standard Procedures	Evaluate and update existing SOPs to align with modern practices.	PNP Headquarters, Tagaytay	Q2-Q3 2025	SOP guidelines, forensic standards, training kits	Regional Forensic Oversight Committee
Capacity Building and Training	Conduct regular training for investigators on evidence handling and SOPs.	Police Training Academy, Tagaytay	Quarterly (2025)	Ballistics labs, scenario-based training modules	Training Division Coordinator

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Examining Public Opinion on Civilian Possession of High-Powered Firearms in Tagaytay City

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I. ABSTRACT

The Philippines has been grappling with issues related to gun violence and illegal firearms circulation. This research aims to determine the public opinion on civilian possession of high-powered firearms and assess its impacts on public safety and community feelings. This study utilized a self-made questionnaire. This study utilized quantitative descriptive data analysis, stratified sampling technique, and structured survey questionnaires to gather quantitative data from different sectors, including Law Enforcement officers, Local Government Officials, Business owners, and civilians in Tagaytay City. The data was analyzed through frequency, percentage, and mean. The study shows that many respondents disagree that civilians should possess a high-powered firearm to measure public safety. The findings indicated that most of the Tagaytay City respondents disagree that civilians should have the right to carry high-powered firearms. This study disagrees with the notion that civilians should have the right to carry high-powered firearms. The results show a high discrepancy between the advantages and disadvantages of civilians possessing high-powered firearms in Tagaytay City. Researchers encouraged the promotion of public safety education and the launch of community workshops that educate citizens on the risks of high-powered firearms, emphasizing the correlation between civilian ownership and increased violence. There is confidential data regarding the gun-related incident of owning a high-powered firearm in Tagaytay City.

Keywords: *high powered firearms, public opinion, civilian possession, public safety, tagaytay city*

II. INTRODUCTION

In many countries, the issue of civilian possession of high-powered firearms is a topic of debate due to concerns about public safety, gun violence, and the potential misuse of such weapons. In Asia, countries like Japan, a country with a population of over 125 million, have a much lower rate of violent crime overall, including crimes involving firearms. In Japan, the yearly death rate from firearms usually remains around a single figure. In 2019, the World Health Organization reported that there were just nine firearm-related deaths. In the same year, the U.S. According to Census Bureau estimates, 0.16 of every 100 individuals in Japan own a licensed firearm (Kohli, 2022). However, in other countries in the region, such as the Philippines, changes to the country's weapons laws would soon allow civilians to possess high-powered firearms like semi-automatic. Some worry that this could worsen the gun violence culture in this country (Beltran, 2024).

While specific data on civilian possession of high-powered firearms in Tagaytay City may not be readily available, national statistics in the Philippines can provide insights into the broader context of gun ownership and violence. According to PNP Spokesperson Col. Jean Fajardo, 10,936 gun-related incidents have been reported to the Philippine National Police between 2022 and this year. During a press conference on Monday, Fajardo stated that 808 cases had been reported this year, 4,956 cases in 2023, and 5,172 cases in 2022. The majority of which are shooting incidents, alarm and scandal, grave threats, and robbery. Three thousand seven hundred ninety-two cases had previously been filed with the court, 3,774 had been forwarded to the prosecutor's office, and 1,136 were being looked at (Argosino, 2024).

This research examines the Public Opinion on Civilian Possession of High-Powered Firearms in Tagaytay City. Since Tagaytay City is popular among tourists because of its beautiful tourist attractions and cool climate, it was chosen as the study's location. Many tourists are unaware of the policies implemented by the City Government, especially about civilian ownership of high-powered firearms, regardless of the area's attraction.

III. METHODS

This study used a descriptive quantitative research design, employing a structured survey questionnaire with different sectors, including Law Enforcement Officers, Local Government Officials, Business owners, and civilians, to examine their opinion on civilian possession of high-powered firearms in Tagaytay City. Frequency and percentage were utilized to provide an overview of the respondent's demographic profile. The study focused on

examining public opinion, including Law Enforcement Officer, Local Government Officials, Businesses owners, and Civilian in Tagaytay City, using stratified sampling to ensure that the views of key stakeholder groups, including Law Enforcement Officers, Government Officials, and Business owners, were adequately represented in the data collection process and to minimize potential biases. Also, to obtain a more comprehensive understanding of public opinion in allowing the civilian to possess a high-powered firearm. The study gathered data through survey questionnaires with Law Enforcement Officers, Local Government officials, Business owners, and civilians during their duty hours following proper approval procedures. The collected responses were analyzed using percentages and mean to identify the data gathered; the findings accurately reflected the participant's perceptions.

Using percentage and mean, the researchers examined the public opinion of the different sectors, including Law Enforcement Officers, Local Government officials, Business owners, and civilians. They focused on their attitudes about the implications of firearm possession on public safety and security. The researchers aimed to gain a comprehensive understanding of the local perspectives and concerns surrounding the civilian possession of high-powered firearms in Tagaytay City.

IV. RESULT

1.2 Personal Experience and Observation on the following aspect

- 1.2.2 Community discussion about firearms
- 1.2.3 Personal experience with firearms

Table 1
Personal Experiences and Observations

Indicators	Mean	Interpretation
1. How often do you encounter discussions about firearms in your community?	3.08	NAD
2. How would you rate your personal experience with firearms (e.g., usage, exposure)?	2.83	NAD
GWA	2.956	NAD

The table summarizes the mean perceptions regarding the personal experiences and observations related to firearms. Overall, respondents reported moderate levels of engagement and exposure, with a grand mean of 2.956 (SD = 0.851), which is interpreted as ‘Moderately Agree’ (MA). The statement with the highest level of agreement was: “How often do you encounter discussions about firearms in your community?” ($\bar{x} = 3.08$, SD = 1.113). This means that such conversations happen frequently in the respondents’ communities, which means that the social issues that surround them are in some respect relevant or at least of some concern.

Variables of slightly lower levels of agreement included: “How would you rate your personal experience with firearms (e.g., usage, exposure)? ($\bar{x} = 2.83$, $SD = 0.869$). This means that the respondents do have moderate exposure to firearms. However, their engagement with or experiences of those firearms tends to be less rather than more than the community discussion about them. The moderation in the encounters about firearms and the experiences also leads to the findings suggesting that the exposures are limited. The interplay is suggestive that the community discourse surrounding firearms may contribute to shaping the perception of it, rather than an individual self-experience. Such results create an evidence base for participation in the community.

The previous research highlights that the frequency of firearm-related discussions in communities can significantly influence public attitudes and perceptions about gun ownership (Buchanan et al., 2019). A study by Lee and Zhao (2020) found that public discourse and local media play an integral role in shaping perceptions of firearm safety, with many individuals forming opinions based on their social environments rather than personal interactions with firearms.

2. What is the respondent’s attitude toward civilian firearm possession?

Table 2
Respondent Attitude
Attitude Towards Civilian Firearm Possession

Indicators	Mean	Interpretation
1. Civilians should have the right to carry high-powered firearms.	1.63	DA
2. Allowing civilians to carry firearms increases public safety.	1.74	DA
3. High-powered firearms pose a significant risk to community safety.	4.07	A
4. I believe that responsible gun ownership can be achieved in my community.	2.19	DA
GWA	2.407	DA

The table describes the perception of attitudes toward civilian firearm possession. At an average score of 2.407, ($SD = 0.804$), the respondents displayed Disagree (DA) on the issue of possession of firearms by civilians. In other words, the participants' attitudes toward possessing firearms were either mixed or slightly negative. The highest disagreement was reported for the view "High-powered firearms pose a significant risk to community safety" ($\bar{x} = 4.07$, $SD = 1.150$), whereby the respondents have admitted that using such guns carries certain risks. This is in line with a significant interest in the safety of the community and an existing

picture of the risk of the use of high-power guns by civilians. Responses concerning the statement "I believe that responsible gun ownership can be achieved in my community" (\bar{x} = 2.19, SD = 1.101) were somewhat neutral, with a small quantity of disagreement. This implies that there may be a level of doubt in the community, especially regarding initiatives that contain the goals of responsible and suitable firearms support within the community.

On the other hand, "Allowing civilians to carry firearms increases public safety" (\bar{x} = 1.74, SD = 0.946), followed very closely by "Civilians should have the right to carry high-powered firearms" (\bar{x} = 1.63, SD = 0.896). In both cases, it is evident that there is considerable disagreement about the view that possessing firearms by civilians has a positive contribution to society regarding safety and the exercise of individual liberties. When the data is assessed, there appears to be an overarching problem regarding civilian ownership of firearms, mighty ones, as they also seem to disagree with the statement that civilian ownership of firearms increases the safety, or the social fabric, of the community. The data substantiates the lack of firearm policies and the community dialogue over the fact that access to firearms does pose a danger.

The prevailing literature underscores a general public concern about the risks associated with civilian firearm ownership. Research by Hemenway (2019) suggests that communities with higher levels of civilian gun ownership often report greater fears regarding gun violence, with high-powered firearms specifically posing a greater risk to public safety. Additionally, studies by Lott (2021) and Kleck (2020) emphasize that while some believe civilian firearm possession may reduce crime, public opinion remains divided due to safety and security concerns.

3. What are the influences on the respondents' attitudes toward civilian firearm possession?

Table 3
Influences on attitude
Influences on Attitudes

Indicators	Mean	Interpretation
1. Media portrayal of firearms and gun violence.	1.77	SDA
2. Conversations with friends and family about firearms.	1.79	SDA
3. Personal experiences with crime or violence.	1.82	DA
4. Observations of firearm use in your community.	1.76	SDA
GWA	1.787	SDA

The table summarizes mean perceptions regarding influences on attitudes toward firearms. In general, the findings indicate that the respondents Strongly Disagree (SD), as illustrated with a grand mean of 1.787 (SD = 0.858). This implies that respondents are unaware of and, thus, do not recognize or consider many factors affecting their attitudes toward firearms. For one, "Personal experiences with crime or violence" received the highest influence rating (\bar{x} = 1.82, SD = 0.984), which was interpreted as Disagree (DA). This means that such experiences might exist, but they might be in a complex relationship with attitudes to such experiences. The same is shown by "Conversations with friends and family about firearms" (\bar{x} = 1.79, SD = 0.978), which also disagreed, suggesting that social conversations do not significantly shape respondents' attitudes towards firearms. The statement "Media portrayal of firearms and gun violence" (\bar{x} = 1.77, SD = 1.029) followed by The lowest mean agreement scores were with the statements "Observations of firearm use in your community" (\bar{x} = 1.76, SD = .979) means implies that the respondents disagree with the assertion that such factors had any bearing on their attitudes, meaning there was some concern towards the impact of the portrayals of gun issues in the media and the use of guns in their community on their attitudes. In general, the results point out that external influences, especially people's attitudes or views about guns, are believed to be slight among the respondents. These results highlight the possibility that such attitudes may be developed directly by the individual or through other internal aspects and underline the importance of conducting further studies on other factors that may be connected to the attitudes towards guns.

Numerous studies have explored how media, personal experiences, and community influences shape attitudes toward firearms. According to Azrael et al. (2019), media portrayal of gun violence and firearm use significantly affects public attitudes, often inflating fears of gun-related incidents. However, research by Lanza-Kaduce and Riedel (2021) found that personal experiences with crime and violence have a more substantial influence on attitudes, as individuals who have encountered violent incidents are more likely to support firearm regulation.

4. What is the perception of the respondents toward civilian firearm possession in terms of:

4.1 Belief in the potential benefits of allowing civilians to carry firearms

4.2 Belief in the potential risks of allowing civilians to carry a firearm

Table 4.1
Perception on benefits of civilian with high powered firearms Influences on Attitudes

Indicators	Mean	Interpretation
1. The primary benefit is the ability for individuals to protect themselves and their families from threats, including violent crime and home invasions.	2.44	DA
2. The presence of armed civilians may deter potential criminals from committing offenses, as they may fear encountering an armed victim.	2.28	DA
3. Allowing civilians to carry firearms can empower individuals, giving them a sense of control over their safety and security.	2.27	DA
4. Civilians who are trained and armed can provide immediate assistance in emergencies, such as active shooter incidents, before law enforcement arrives.	2.43	DA
5. Civilians who are trained and armed can provide immediate assistance in emergencies, such as active shooter incidents, before law enforcement arrives.	2.30	DA
GWA	2.345	DA

The table illustrates the discussion about perceptions of the benefits of civilians possessing high-powered firearms. The respondents, on average, showed Disagree (DA) per these benefits; this is captured by the grand mean of 2.345 (SD = 0.937). Therefore, this means that the respondents do not view the holding of high-powered firearms by civilians as a benefit. Throughout the statements, "The primary benefit is the ability for individuals to protect themselves and their families from threats, including violent crime and home invasions," ranked highest in perceived benefit of civilians being able to possess firearms ($\bar{x} = 2.44$, SD = 1.130). This implies that respondents are slightly more apt to view personal protection as a benefit, though they do not tend to agree much. Identically, "Civilians who are trained and armed can provide immediate assistance in emergencies, such as active shooter incidents, before law enforcement arrives" ($\bar{x} = 2.43$, SD = 1.188) received moderate support. This suggests that armed civilians could play a role in such situations, although there was no strong support.

Additionally, "The presence of armed civilians may deter potential criminals from committing offenses, as they may fear encountering an armed victim" ($\bar{x} = 2.30$, SD = 1.192) reflected limited agreement, indicating doubt about the broader societal benefits of civilian

firearm ownership. "The presence of armed civilians may deter potential criminals from committing offenses, as they may fear encountering an armed victim" ($\bar{x} = 2.28$, $SD = 1.061$), followed by the least levels of agreement were recorded for "Allowing civilians to carry firearms can empower individuals, giving them a sense of control over their safety and security" ($\bar{x} = 2.27$, $SD = 1.061$), These results suggest skepticism about the psychological and deterrent effects of civilian firearm possession. Overall, the findings highlight respondents' reservations about the perceived benefits of civilian possession of high-powered firearms. This suggests a need for further exploration of the societal implications and challenges of civilian firearm ownership and a focus on promoting informed and balanced discussions on this issue.

Several studies suggest that personal protection is the primary justification for civilian firearm ownership. For example, Kates and Mauser (2019) found that gun owners commonly cite self-defense as a benefit. However, empirical studies (Hemenway, 2019) often question the overall effectiveness of civilian firearm ownership in reducing crime or increasing personal safety, highlighting the potential risks and the need for proper training and regulation.

Table 4.2
The potential risks of allowing civilians to carry firearms
Influences on Attitudes

Indicators	Mean	Interpretation
1. Allowing civilians to carry firearms may lead to an increase in gun-related incidents, including homicides and accidental shootings.	2.76	NAD
2. The presence of firearms can escalate conflicts and alter the dynamics of confrontations, leading to more severe outcomes.	2.73	NAD
3. Increased civilian firearm possession raises the risk of accidental discharges, which can result in injuries or fatalities.	2.59	DA
4. There is a risk that firearms may be misused by individuals who are not adequately trained or responsible, leading to criminal activities.	2.67	NAD
5. The general public may feel less safe knowing that civilians are carrying firearms, potentially leading to increased anxiety and fear.	2..75	NAD
6. Law enforcement may face greater challenges in distinguishing between lawful gun owners and potential threats, complicating their response to incidents	2.70	NAD
GWA	2.70	NAD

The table summarizes perceptions of the potential risks of allowing civilians to carry firearms. Most respondents were in Moderately Agree (MA) with the risks mentioned, which is shown by a grand mean of 2.70 (SD = 1.018). This finding implies that such respondents point out various problems which are of great importance concerning the possession of guns by civilians. Out of the statements, the highest levels of agreement were associated with "Allowing civilians to carry firearms may lead to an increase in gun-related incidents, including homicides and accidental shootings" ($\bar{x} = 2.76$, SD = 1.187) and "The general public may feel less safe knowing that civilians are carrying firearms, potentially leading to increased anxiety and fear" ($\bar{x} = 2.75$, SD = 1.164). These results reflect issues on the order of public security and the psychological consequences of gun possession. Next in line were views like "The presence of firearms can escalate conflicts and alter the dynamics of confrontations, leading to more severe outcomes" ($\bar{x} = 2.73$, SD = 1.114) and "Law enforcement may face greater challenges in distinguishing between lawful gun owners and potential threats, complicating their response to incidents" ($\bar{x} = 2.70$, SD = 1.216). These answers show deep concern regarding the potential for violence and law enforcement issues within a civilian armed society. "There is a risk that firearms may be misused by individuals who are not adequately trained or responsible, leading to criminal activities" ($\bar{x} = 2.67$, SD = 1.159), and "Increased civilian firearm possession raises the risk of accidental discharges, which can result in injuries or fatalities" ($\bar{x} = 2.59$, SD = 1.115) echoed somewhat lower levels of agreement. Even though these concerns are absorbed when scanning other, more general risks to society, they are lower than average. The results suggest that survey participants consider the concept of carrying firearms by ordinary people to be of high risk, especially on issues of public safety, escalation of violence, and law enforcement. This highlights the need to adopt precise policies and training recommendations aimed at these risks to assist in creating a safer space.

Numerous studies highlight the potential risks of civilian firearm possession, particularly in terms of increased gun-related incidents and public safety concerns. Research by Siegel et al. (2019) suggests that more firearms in civilian hands are correlated with higher rates of gun deaths, including homicides and suicides. Additionally, Lott (2019) found that the presence of firearms in public settings often leads to escalated conflicts, while studies by Hemenway (2020) indicate that citizens' perception of safety may decrease as more civilians carry firearms.

5. Is there a significant relationship between the respondents' attitudes toward firearm possession and the influences on the respondents' attitudes?

Table 6

Person Correlation between respondents' attitude towards firearm possession and the influences on the respondent's attitude.

Influences on the attitude towards firearms possession	Decision
Attitude towards firearm possession	Pearson Correlation .707 Strong Positive
	Significance .000 Reject Null
	N 135

Pearson correlation was utilized to determine if there is a relationship between respondents' attitudes toward firearm possession and the influences on the respondent's attitudes. The data shows a strong positive correlation [(N = 135, r = .707), p = .000]; since the p-value is less than .05, the null hypothesis is rejected; there is a significant relationship between the respondent's attitude toward firearm possession and the influences on the respondent's attitude. This implied that as the attitude towards firearms possession increases, the influence on the respondent's attitude also increases and vice versa.

This finding supports **Bandura's (2019) Social Learning Theory**, which asserts that attitudes and behaviors are shaped through observation and reinforcement within one's social environment. Bandura emphasizes that individuals acquire attitudes not only through direct experience but also by observing the behavior of others and the consequences of those behaviors. For instance, in communities where certain practices, such as firearm ownership, are normalized and reinforced by influential role models or peer groups, these behaviors are likely to be adopted more widely. The theory also highlights the role of reinforcement, whether positive (e.g., a sense of safety) or negative (e.g., avoiding threats), in sustaining these behaviors over time. Similarly, **Ajzen's (2020) Theory of Planned Behavior** offers a comprehensive framework for understanding how attitudes toward firearm ownership are formed. The theory posits that perceived risks, benefits, and social norms significantly influence attitudes. Individuals who view firearms as critical for self-defense or community safety are more inclined to hold positive attitudes toward gun ownership. Ajzen also underscores the role of perceived behavioral control, wherein individuals assess their ability to engage in firearm ownership based on available resources, societal approval, and potential challenges. This theory provides a lens to evaluate how individuals balance personal beliefs and external influences when forming attitudes. These perspectives underscore the importance of understanding the dynamic interplay between social learning, cultural norms, and individual

perceptions. Recognizing these influences is crucial for developing interventions or policies that aim to promote a balanced perspective on firearm possession.

6. Based on the study's findings, what enhanced community information program can be proposed?

Based on the study's findings, an enhanced community information program can be proposed to provide balanced, evidence-based education about firearm possession while integrating social, cultural, and personal influences. The program would include educational workshops on firearm safety, local firearm laws, and the impact of firearms on community safety, aiming to correct misconceptions and promote informed decision-making. These workshops should address both the benefits and risks associated with firearm ownership, as highlighted by **Ajzen's Theory of Planned Behavior**, which suggests that perceived risks and benefits shape attitudes. Community dialogues and discussions can also be organized to allow individuals to share their views, experiences, and the factors influencing their attitudes. This would provide a space for promoting understanding and reducing polarization. The program can counter biased narratives by facilitating these discussions, offering a more balanced perspective. Cultural sensitivity is also critical, as communities with strong pro-gun cultures may have favorable views toward firearms. The program should incorporate local cultural values, as personal or community exposure to firearms often leads to more positive attitudes toward firearm ownership. Integrating these values while promoting safe practices and responsible ownership can ensure that the program resonates with the community. Lastly, a media campaign could further reinforce the program's goals by emphasizing the benefits of responsible gun ownership and safety. By addressing these diverse factors; the program would create a more informed, balanced perspective on firearms within the community, fostering both safety and responsibility.

V. DISCUSSION

Based on the research conducted in Tagaytay City, the findings reveal a predominantly negative public opinion regarding civilian possession of high-powered firearms. The study, which utilized structured survey questionnaires across various sectors, including Law Enforcement Officers, Local Government Officials, Business owners, and Civilians, found that most respondents do not support the idea that civilians should have the right to carry high-powered firearms. Specifically, the mean score for the statement "Civilians should have the right to carry high-powered firearms" was 1.63 (interpreted as "Disagree"), and for "Allowing civilians to carry firearms increases public safety," the mean was 1.74 ("Disagree"). Conversely, respondents strongly agreed that "High-powered firearms pose a significant risk to community safety," with a mean of 4.07, highlighting a prevailing concern for public safety over the perceived benefits of civilian gun ownership.

The data also indicate that while discussions about firearms are moderately common within the community (mean = 3.08), personal experience with firearms is less frequent (mean = 2.83). This suggests that community discourse, rather than direct experience, plays a more significant role in shaping attitudes toward firearms. Interestingly, when examining the influences on respondents' attitudes, the study found that external factors such as media portrayal, conversations with friends and family, and personal experiences with crime or violence had little reported impact, all scoring below 2.0 and interpreted as "Strongly Disagree" or "Disagree." This implies that respondents' broader societal values or internalized beliefs may shape respondents' attitudes rather than immediate personal or social influences.

Furthermore, the perception of potential benefits associated with civilian possession of high-powered firearms was generally negative. For example, the belief that armed civilians could protect themselves and deter crime received a mean score of 2.44 ("Disagree"), and the idea that trained civilians could assist in emergencies also scored low (mean = 2.43). These findings underscore a strong skepticism regarding the advantages of civilian gun ownership, with respondents prioritizing community safety and expressing doubt about the efficacy of firearms as a protective measure. The study concludes by recommending the promotion of public safety education and community workshops to address the risks of high-powered firearms, reflecting the community's preference for preventive measures over increased civilian armament.

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**PRESERVING EVIDENCE INTEGRITY: ASSESSING CHAIN OF CUSTODY
ISSUES IN TAGAYTAY CITY CRIMINAL CASES**

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I. ABSTRACT

This study explores the challenges criminal investigators face in Tagaytay City, Cavite, and maintaining evidence integrity through the chain of custody. This research, conducted this year, 2025, utilized a qualitative descriptive research design; the study employed structured interviews to gather insights from several investigators at the Tagaytay City Satellite Forensic Office, using purposive sampling for diverse perspectives from trained investigators. The data was analyzed through thematic analysis. The findings revealed challenges to evidence integrity, including inconsistencies in investigator training, inadequate resources, and deficiencies in documentation practices. Many investigators did not understand the proper chain of custody protocols, leading to procedural errors jeopardizing evidence reliability in court. Environmental factors such as extreme weather and insufficient storage further complicate the preservation of sensitive materials. The study identifies weaknesses in inter-agency collaboration, where unclear communication and undefined roles hinder joint investigations. Recommendations include implementing tailored training programs to enhance competency, adopting digital documentation systems to minimize human error, and establishing clear protocols for inter-agency cooperation. Upgrading storage facilities and securing additional funding through private partnerships are proposed to address resource constraints. Ultimately, this research underscores the need for systematic improvements in evidence-handling practices to bolster the integrity of criminal investigations in Tagaytay City. By addressing these challenges and implementing the recommended strategies, law enforcement agencies can enhance operational efficiency and ensure evidence is handled with utmost care throughout the investigation. This study contributes insights into the critical role of effective chain of custody management in safeguarding justice within the criminal justice system.

Keywords: *Chain of custody issues, criminal cases in Tagaytay city, evidence integrity, criminal investigators' perspectives*

II. INTRODUCTION

The dire and substantial process of documenting evidence is unequivocally the chain of custody. The word that refers to the order in which evidence is handled during a case investigation is a chain of custody in criminal and civil law (Longley, 2022). The chain of custody tracks how evidence is brought from the crime scene to the courts and goes through, stored, and transported. This is a crucial step in determining whether or not the evidence is honest and can be used in court. It has several steps from gathering evidence at the crime scene through safe packing, proper marking, and transport (D'Anna et al., 2023).

According to Salazar and Kelly Law Group (2019), the issues concerning the chain of custody in criminal investigations include Improper labeling of evidence bags can result in confusion and a misfit of crucial evidence. Improper Methods of Collecting Evidence: Proper procedures are followed when evidence is collected to preserve the investigation's integrity and should not be used if proper procedures do not collect evidence. Improper Storage of Evidence: Certain evidence can be contaminated, degraded, or lost, and evidence can be unreliable due to the failure to store evidence in proper conditions. Indications of Tampering: Evidence tampering can arise from any of these and cast doubts on the evidence's authenticity and chain of custody, making the investigation less trustworthy. Testing Errors: Errors in how the testing is conducted can result in wrong results, which can be misinterpreted and affect the case result. The same as the case of Collins Taghoy Remulta, who was charged with the illegal sale and illegal possession of shabu and was found guilty by the Regional Trial Court of violation of sections 5 and 11 of Republic Act No. 9165, otherwise known as the Comprehensive Dangerous Drugs Act of 2002. It absolved Remulta because the prosecution failed to record and maintain the integrity of the seized drugs, and the Supreme Court revoked the decision (Full Text and Summary of G.R. No. 218953 – People Vs. Remulta Case – April 26, 2021, n.d.). Moreover, on account of this unfortunate circumstance, the CA reminded the authorities responsible for the process of the chain of custody of evidence to have faithfully complied with the rules or guidelines to keep the integrity of the evidence intact for it to become admissible in court and not junk the cases.

Furthermore, the steps and problems can differ based on the country's laws, finances, and cultural and social situation (Damascena et al., 2022). For example, investigators may have access to advanced tools and well-established rules for how to handle data in rich countries with advanced forensic skills. In poor countries, on the other hand, inspectors may have trouble because they do not have enough tools, training, or facilities.

Thus, this study is not only to understand the current problems in the chain of custody of the criminal investigators in Tagaytay City Satellite Forensic Office but also to acquire a deep understanding of its enemies in the process of evidence documentation. Therefore, it is to explore the effect of these challenges on implementing ways to ensure the continuity of the intact chain of custody.

III. METHODS

This study used a qualitative descriptive research design to gather rich, detailed insights into the challenges faced by criminal investigators in maintaining the chain of custody. This method preserves flexibility and adaptability while enabling researchers to gather comprehensive data (Madhuri et al., 2022). The research instrument employed is the structured interview, which attributed open-ended questions formulated to obtain a profound and panoramic response regarding the challenges of criminal investigators in the observance of chain of custody. These validated questions featured topics such as the common challenges faced by the criminal investigators during the chain of custody, their specific measures taken, collaborative initiatives between the station and other law enforcement agencies, and any specific procedural obstacles present. Meanwhile, the researchers utilized Purposive Sampling, a judgmental, selective, or subjective sampling technique. It is a non-probability sampling method in which the researchers selected the population members to participate in their study, through their judgment fits the criteria. Several criminal investigators in Tagaytay City Satellite Forensic Office who underwent a Criminal Investigation Course (CIC) were selected. Their expertise upheld the specializations vital for crime scene investigations intertwining with the gathering, preserving, and evaluating evidence. The police entrust them to ensure the evidence is handled appropriately and adhere to the protocols maintaining the chain of custody.

Moreover, the data-gathering procedure was deliberately designed to establish a secure acquisition of definite and reliable information while strictly conforming to ethical standards. Researchers created self-made questionnaires that experts validated to ensure soundness and applicability. Before the deliberation of the interview, ethics clearance containing the informed consent form, copy of their research proposal, letter to the Institution's Head, and their research questionnaire were submitted. Upon approval, a consent letter was forwarded to the Tagaytay City Satellite Forensic Office for final authorization. They were apprised of the study, guaranteeing their anonymity and the privacy of their responses. The researchers then performed individual interviews utilizing the validated questionnaires, upholding a dutiful and careful course of action and questioning. Following the interviews, all of the gathered responses

were thoroughly put together, establishing an output where no questions were left unaddressed, and the data was meticulously accounted for and interpreted to generate viable matters.

For data analysis, the basic qualitative approach was the method employed by the researchers to construe the challenges of criminal investigators in maintaining the chain of custody and what is the underlying meaning ascribed to their encountered challenges. The interview data was 'probed' into using Thematic Analysis. Herzog et al.(2019) noted that Thematic analysis (TA) is a favored and primary method for studying qualitative policy data. It is an exploratory tool for identifying and analyzing patterns of meaning (themes). It is concerned with identifying and analyzing patterns of meaning (themes) and is widely applicable, cost-effective, and flexible. Yen's approach was used to interpret this study, and data analysis generally follows these steps. Coding. This step follows the systematic identification and categorizing of fractions of data about the research question. It is to capture explicit and implicit meanings within the bounds of the data.

Searching for themes. After the coded data, codes are clustered for the prospective themes that constitute issues, challenges, or experiences related to the research questions. Researchers are gaging for the underlying differences and similarities intertwined with interrelations, which draw patterns in the coded data to distinguish the precise patterns that can help the researchers fathom the challenges that the criminal investigators in Tagaytay City experience. Furthermore, Yen's approach fixates on apprehending the framework within the place where the challenges occurred. Examining of themes. Researchers check the coded data's accuracy and the established data set. Interpretation of results. In order to gather significant and indicative conclusions regarding the challenges encountered by criminal investigators, the researchers interpret the results through the research objectives and synthesis. The themes and patterns are linked to the issues to convene a comprehensive understanding of the conferred issues. After these steps in data analysis, using Yen's approach to qualitative case study design will help the researchers probe the collected data thoroughly and create findings vital in identifying and understanding the challenges of criminal investigators in Tagaytay City.

IV. RESULTS

PROBLEM NO. 1

What are the common challenges faced by criminal investigators in Tagaytay City Satellite Forensic Office when ensuring the proper handling and preservation of physical evidence?

Theme 1: Understanding of the Chain of Custody Process

This theme demonstrates that Preserving Evidence Integrity: Assessing Chain of Custody Issues in Tagaytay City Criminal Cases. (1) Variability in Investigator Knowledge (2) Effects of Environmental Conditions on Evidence Collection (3) Overcrowding and Insufficient Storage Facilities (4) Procedural Errors Leading to Evidence Exclusion (5) Influence of Case Type on Protocol Compliance (6) Common Documentation Errors in Evidence Logs (7) Establishing Dedicated Evidence Custodians (8) Importance of Resource Sharing Across Agencies (9) Improving Communication During Multi-Agency Operations (10) Transition from Theoretical to Practical Training Approaches (11) Impact of Resource Limitations on Evidence Integrity.

Subtheme 1.1: Variability in Investigator Knowledge

Investigators in Tagaytay City understand the chain of custody process differently depending on how much training they received or how they have come across criminal cases. Some officers, especially those with forensic specializations, appeared to understand how it could be practically applied, while others seemed to have missed the memo. This inconsistency is reflected in the different degrees of compliance with standard procedures, especially concerning minor offenses. The studies that have been highlighted show that clear and consistent training significantly increases the understanding and application of the chain of custody (D’Anna et al., 2023). The importance of the chain of custody cannot be overstated, as even minor lapses can lead to the dismissal of cases due to questions about evidence reliability (Spyropoulos et al., 2023). Documentation practices, though improving, lack case-specific examples and guidelines that address the unique challenges faced in Tagaytay City, such as resource limitations and varying crime scene scenarios. Tailored training and updated procedural manuals can bridge the knowledge gaps and ensure consistent practices (Obeagu & Obeagu, 2024).

Table 1
Subtheme 1.1: Variability in Investigator Knowledge

DATA SOURCE	EVIDENCE
Interview	Participant 1: "So yung chain of custody process, kasi yung chain of custody process namin dito sa Philippines, vital yan sa court. So, magkaroon ka lang ng kaunting pagkakamali or butas, yung sinampa mong kaso dun sa akusado, mapapawalang-bisa lahat yun."

Participant 2: "Actually wala pa ako experience sa criminal investigations kase di ganun hawak namin... pero galing na sa ano sa mga local police."

Participant 3: "Ang pagkakaintindi ko dito sa chain of custody ito yung proseso na parang pano malaman kung hanggang saan nakarating yung ebidensya."

Participant 4: "Simply to establish the chain of custody submitted by the requesting party with regards to the evidence submitted."

Observation

Observations showed that investigators know the chain of custody's importance but have varying levels of understanding. In training sessions, participants often ask about specific scenarios in crime scene procedures, indicating a need for more straightforward guidelines. This inconsistency is reflected in real-case operations where protocol adherence varies depending on the officer's background and experience. Those with forensic training were more confident in articulating the concept than those without.

Data/Documentation

Training manuals on evidence collection and chain custody processes were reviewed. These documents are a step-by-step guide, but the examples are not localized to Tagaytay City's criminal cases. Chain of custody logs for drug-related case records from the Tagaytay Police were transparent, but in other criminal cases, there were lapses such as timestamps and signatures missing.

Theme 2: Challenges in Evidence Collection

Respondents mentioned the most common challenges during evidence collection: the lack of proper tools for collecting evidence, time pressure at crime scenes, and the inability to maintain control of the evidence in a crowded or chaotic environment. These often made it very difficult to be certain the evidence remained untainted. Participants added that inadequate labeling or storage at this stage could cause significant headaches.

Subtheme 2.1: Effects of Environmental Conditions on Evidence Collection

Investigators in the Tagaytay City Satellite Forensic Office face problems in evidence collection, especially under challenging environmental conditions. Adverse weather often complicates Crime scene operations, resulting in delayed documentation and enhanced risk of evidence contamination. While officers do what they can to secure evidence, they cannot use equipment like waterproof evidence bags and mobile documentation kits. This is consistent with previous research on this problem, underscoring that lack of resources can lead to

mishandled evidence and loss of integrity (Ekuma & Fon, 2024). Furthermore, inconsistent labeling practices, delayed documentation at the scene, and all of the above increase the likelihood of procedural lapses (Esteves et al., 2020). Thus, for these gaps, there is a need for investment in tools and equipment and training officers in dealing with dynamic and unpredictable crime scenes (Albeedan et al., 2024).

Table 2

Subtheme 2.1: Effects of Environmental Conditions on Evidence Collection

DATA SOURCE	EVIDENCE
Interview	<p>Participant 1: "Pag bumabagyo... yung mga evidences na na c-collect namin sa crime scene, hindi siya ganun kadaling i-document. Lalo na pag sa open field."</p> <p>Participant 2: "Sa collection kase dapat yung type of collection bago ko yun icollect sinusulatan ko na yung paglalagyan ko na envelope..."</p> <p>Participant 4: "Syempre yung ano... yung halimbawa yung sa storage niya. Kasi hindi pa naman kami high-tech... minsan alternative lang."</p>
Observation	The researcher watched officers in crime scene simulations and discovered they struggled with outdoor situations, especially when the weather was bad. Sometimes, there were delays in resources such as protective gear or waterproof containers, evidence packaging, and labeling. Sometimes this delay would result in the documentation being incorrect or evidence being contaminated, a critical gap in practical tools and preparedness.
Data/Documentation	Field reports showed incidents where evidence from open fields or water bodies was poorly handled due to inadequate weatherproof containers. Crime scene photographs were reviewed for inconsistencies in labeling practices, including some evidence improperly tagged or documented after retrieval rather than at the collection site.

Theme 3: Issues in Evidence Storage

It was described as a critical but problematic evidence storage. Participants expressed concerns regarding lack of storage facilities, wrong environmental controls, and narrow areas of access to secure areas. Many respondents also commented on how the evidence was mishandled because there was too much and no resources, making it less credible.

Subtheme 3.1: Overcrowding and Insufficient Storage Facilities

The storage of evidence is important to ensure its integrity. However, resource constraints in Tagaytay City Satellite Forensic Office have resulted in serious problems in this area. Biological evidence like blood swabs and DNA samples is particularly vulnerable because improper storage conditions can degrade the evidence so that it can not be used in court. The overcrowding and inconsistent temperature monitoring in existing storage facilities observed were similar to what other studies on evidence storage inefficiencies in developing regions have found (Sultana et al., 2024). Officers make such practices work while they improvise to fill these gaps, but these are not sustainable in the long term and may introduce more risk of error. These challenges can be mitigated by investing in forensic-grade equipment for storage and running routine audits of storage conditions (Alketbi, 2024).

Table 3

Subtheme 3.1: Overcrowding and Insufficient Storage Facilities

DATA SOURCE	EVIDENCE
Interview	Participant 1: "Pagka yung evidence mo ay masilan, hindi mo siya agad-agad ma d-document... sa office na ginagawa." Participant 2: "Pag blood swab tsaka buccal swab need na ilagay sa proper storage... nagdedegrade kase pag mali ang storage." Participant 4: "Yung storage natin kasi minsan ano... alternative lang. Wala talaga siyang ano."
Observation	Evidence storage rooms were observed to be overcrowded, and environmental controls were not adequate. DNA and blood swabs were refrigerated for storage. However, biological evidence was limited to refrigerated storage for evidence, with some DNA and blood swabs stored in standard coolers rather than forensic refrigerators. If officers improvised storage solutions, the risk of degradation of evidence was increased.
Data/Documentation	The evidence logs documented delays in moving sensitive items to proper storage, if at all, on weekends or holidays. Internal memos highlighted the resource limitations but offered no action solutions, such as renovating the facilities. Refrigerated evidence temperature logs were inconsistent.

Theme 4: Compromised Chain of Custody

Some participants confessed that they have encountered cases of broken chain of custody. From the common scenarios, it was missing documents, unclear handover records, and poor record of evidence contamination. Sometimes, these breaches were caused by human error or lack of clear protocols, which created problems in court proceedings.

Subtheme 4.1: Procedural Errors Leading to Evidence Exclusion

A chain of custody still compromises the credibility of criminal investigations in the Tagaytay City Satellite Forensic Office. Missing signatures and incorrect timestamps often lead to evidence being disbelieved—or thrown out altogether—in court. Previous studies of evidence handling (Antkowiak et al., 2023) identify these lapses as usually occurring due to procedural inconsistencies and lack of oversight. Further observations showed that many officers do not have the confidence or preparation to explain procedural lapses in court, and their cases are weakened. It supports findings that highlight the importance of training in courtroom presentation to prepare investigators with the skills necessary to defend the integrity of the evidence (Daraojimba et al., 2023). Lapses in these processes can be minimized, and stricter accountability measures and digital tracking systems can improve the chain of custody processes' reliability (Ozioko, 2024).

Table 4

Subtheme 4.1: Procedural Errors Leading to Evidence Exclusion

DATA SOURCE	EVIDENCE
Interview	Participant 1: "Tinatanong ako ng court, bakit walang pirma yung arresting officer papunta sa investigator..." Participant 2: "Minsan mali yung sa time and date na nailalagay kaya nagkakaroon na siya ng issue." Participant 3: "Hindi macocompromise kase dapat alam mo na din yung gagawin..."
Observation	Observations of court hearings involving chain of custody issues revealed lapses such as unsigned handover forms or incomplete timestamps. Moreover, these lapses often meant evidence was questioned in court. During cross-examinations, officers often appeared unprepared to defend their practice of chain of custody.
Data/Documentation	A review of court case records highlighted instances where evidence was excluded due to procedural errors, such as missing signatures on the chain of custody forms. Audit reports from Tagaytay Police noted recurring issues in documentation accuracy despite repeated training sessions.

PROBLEM NO. 2

What specific measures can be taken to improve the documentation and record-keeping practices related to the chain of custody in Tagaytay City Satellite Forensic Office?

Theme 5: Adherence to Chain of Custody Protocols

Participants agreed that following chain of custody protocols was important but admitted that they did not always do so. Usually, workload, inadequate supervision, and lack of accountability all lead to deviations from standard procedures. This means that these protocols need to be better monitored and enforced.

Subtheme 5.1: Influence of Case Type on Protocol Compliance

However, adherence to the chain of custody protocols depends on the nature and visibility of the case in Tagaytay City Satellite Forensic Office. Because drug-related cases have a high-profile nature and standard operating procedures, they are subject to stricter compliance. While less serious crimes are less consistently documented and less routinely adhered to protocol. This discrepancy mirrors results from other studies, which show that investigators devote more effort to adherence in cases with more legal or public scrutiny (Antes et al., 2019). The observations confirmed that officers are more likely to follow protocols when supervisors are present or closely monitor cases. In order to address this, protocols need to be consistently enforced, no matter what type of case an individual is working on. Adherence can be improved across the board (Adeniyi et al., 2024) by training sessions highlighting the equal importance of all evidence and regular audits.

Table 5
Subtheme 5.1: Influence of Case Type on Protocol Compliance

DATA SOURCE	EVIDENCE
Interview	Participant 1: "Isang tao lang dapat yung humahawak ng ebidensiya... siya lang yung pwedeng magdala sa court." Participant 2: "Laging merong chain of custody yung mga ballistic namin na sinasubmit namin sa Imus." Participant 4: "Chain of custody is very important with regards to the specimen submitted for examination."
Observation	Lapses in court hearings where issues of chain of custody were involved were observed, such as unsigned handover forms or incomplete timestamps. Too often, these lapses led to questions about evidence in court. Officers were often unprepared to defend

their chain of custody practices and were often unable to do so during cross-examination.

Data/Documentation Court case record review showed how evidence was excluded because of procedural errors, including unsigned chain of custody forms. Tagaytay Police audit reports also stated that documentation accuracy is recurring despite repeated training sessions.

Theme 6: Documentation and Record-Keeping

A weak point in the chain of custody process was identified as documentation. Examples of incomplete or missing records were relayed by respondents, which could raise doubts as to the reliability of the evidence. They perceived proper documentation practices as essential but not practiced often because of time constraints or because people were not trained.

Subtheme 6.1: Common Documentation Errors in Evidence Logs

The backbone of a good chain of custody is proper documentation. However, the records' inconsistencies make the chain of custody unreliable in Tagaytay City Satellite Forensic Office. The observations showed an error in human manual processes and that it causes incomplete or missing logs that slow the investigation and weaken the case in court. Lapses have been the focus of previous studies in which standardized templates and digital documentation tools have been emphasized in mitigating these (Atluri et al., 2024). Despite SOCO forms being a structured framework, officers' differing familiarity with how to use them causes documentation inconsistencies. Digital evidence management systems and regular workshops on the best documentation practices can reduce the time spent on record keeping (Mintah et al., 2022).

Table 6

Subtheme 6.1: Common Documentation Errors in Evidence Logs

DATA SOURCE	EVIDENCE
Interview	Participant 1: "Document evidence... photograph and sketch yung ebidensya." Participant 2: "Laging may scan yung receiving copy na pinaka-documentation namin." Participant 3: "Meron kaming SOCO forms, doon kami nagsusulat evidence collected at the crime scene."

Observation The document review processes at police stations found gaps in the form of missing scans of handover forms and inconsistent digital record maintenance. Manual record-keeping practices resulted in delays in accessing the critical evidence details during investigations.

Data/Documentation Incomplete SOCO reports, and cases, where evidence photos were not attached to the corresponding case file, were reviewed. Training manuals stressed documentation procedures, but no practical guidelines for dealing with real-world challenges existed.

Theme 7: Recommendations for Improvement

Participants made recommendations for improving the chain of custody process. They included better resources, consistent evidence, evidence-tracking use, and stricter accountability measures. In addition, suggestions included incorporating digital tools that would automate the documentation processes and intervene in errors.

Subtheme 7.1: Establishing Dedicated Evidence Custodians

Accountability, error minimization and chain of custody practice are improvement recommendations. However, participants stressed that evidence should have a single custodian for efficiency of evidence management and lapses. For example, when these roles were clearly defined, Participant 1 indicated that accountability and confusion are removed when there is a single evidence custodian and that this helped improve processes. However, once responsibility was split between more than one person, gaps formed, and communication and errors ensued (Bjarnason et al., 2019). Briefings before court hearings showed officers often knew little or nothing about what they were supposed to do with evidence, and new standardized protocols were necessary. However, internal memorandums emphasized that clear practices were important but did not provide steps to remedy recurring problems (Alzubaidi et al., 2023). Other court feedback documents also indicate that too many errors were made with the documentation, necessitating software-based tracking systems to mitigate human error and improve transparency. The findings are consistent with global evidence of the value of accountability and technology integration in sustaining evidence integrity (Kretser et al., 2019).

Table 7
Subtheme 7.1: Establishing Dedicated Evidence Custodians

DATA SOURCE	EVIDENCE
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Interview	<p>Participant 1: "Dapat evidence custodian talaga yung nag-ahandle... mas madaling matandaan."</p> <p>Participant 2: "Dapat yung nagpapareceive ng evidence ay laging aware sa importance ng chain of custody."</p> <p>Participant 4: "I-practice nila yung chain of custody sa lahat ng mga request for laboratory examinations."</p>
Observation	<p>Observations of evidence-handling processes found that assigning a single evidence custodian was more accountable and reduced errors. In some, rotating responsibilities amongst several people led to confusion and a lack of documentation. The review of briefings before court hearings found gaps in explaining how proper chain of custody procedures should be followed and the need for consistent protocols.</p>
Data/Documentation	<p>While these memorandums emphasized the need for a transparent chain of custody practices; however, they provided no recommendations for overcoming recurring failures. The review of audit reports suggested that software-based tracking systems would improve transparency and reduce the possibility of human error. Document discrepancies were identified as a significant area for improvement in court feedback documents.</p>

PROBLEM NO. 3

What collaborative initiatives can be undertaken between Tagaytay City Satellite Forensic Office and other law enforcement agencies to streamline the chain of custody process?

Theme 8: Collaboration Among Agencies

Respondents highlighted the need for collaboration with the Tagaytay City Satellite Forensic Office and other law enforcement agencies. Sharing resources, including technology and training, was important for dealing with chain custody issues. Participants suggested forming joint task forces or agreements to set agency procedures.

Subtheme 8.1: Importance of Resource Sharing Across Agencies

Collaborating with agencies is vital for streamlining the chain of custody, particularly when many agents are involved. The importance of teamwork was discussed with each participant showing that SOCO is key to gathering and consolidating evidence when local agencies need assistance. Even so, the problem of having evidence handovers proceed non

sequentially with communication breakdowns leading to misplaced documentation or delay remains. For instance, collaborative operations often did not clearly delineate responsibilities, leading to inefficiencies (Molenveld et al., 2019). When looking at the MOUs reviewed, there appeared to be agreements in place. However, they are not specific regarding resource sharing — funding for joint operations or unified training programs. Shared resources, such as personnel and technology, are not enough for enhanced collaboration; it also requires structured communication channels to close gaps in evidence transitions. Studies show that centralized systems and joint task forces improve inter-agency coordination (Igwe, 2023). Unless these structural inefficiencies are addressed, agencies risk bringing into doubt the reliability of evidence in court.

Table 8

Subtheme 8.1: Importance of Resource Sharing Across Agencies

DATA SOURCE	EVIDENCE
Interview	Participant 1: "Tayo yung tumutulong... pag SOCO, all in one na yun, lahat ng pieces of evidence na pwede nating icollect." Participant 2: "Kelangan talaga ng fund kase minsan malalayo yung court duty." Participant 3: "Personnel para dagdag sa duty receiving... technology para sa encoding ng mga ebidensya."
Observation	Improved evidence-collection processes were demonstrated by joint operations between agencies, such as SOCO and local police. Nevertheless, occasionally observed communication breakdowns during handovers resulted in delays or misplaced documentation. Collaborative meetings revealed no centralized resources, each agency using its limited capacity, which resulted in inefficiencies in the chain of custody.
Data/Documentation	Collaborative practices were outlined in MOUs between agencies, but there were no specific details regarding resource sharing, as in joint projects or training programs funded by one agency. Inter-agency operations were documented with inconsistencies in record keeping, particularly where evidence was changed hands multiple times.

Theme 9: Role of Communication and Coordination

According to participants, investigators must communicate and coordinate well to maintain the chain of custody. The evidence-handling process often suffers from poor communication and errors or delays. To overcome these challenges, it was recommended that better teamwork, and regular coordination meetings would be required.

Subtheme 9.1: Improving Communication during Multi-Agency Operations

Maintaining the chain of custody, therefore, requires effective coordination and communication. The first participant said it was important for SOCO to ensure all the evidence is counted and handled adequately during high-stakes cases. Nevertheless, observations of multi-agency operations found that handovers often led to missing signatures or incomplete logs, a finding consistent with previous work on procedural inconsistencies (Reinhold & Reuter, 2023). Participant 3 also mentioned that it is important to have clear documentation of who is responsible for what in terms of 'last touch.' However, key evidence-handling concerns were often unaddressed due to the lack of structured agendas in coordination meetings. We found that chain of custody forms reviewed from collaborative operations often missed proper signature logs, indicating poor communication between agencies. These lapses serve as an indication as to why regular cross-agency meetings and enhanced communication protocols between the agencies are needed. Clear and frequent communication, backed by standardized documentation templates, is researched to reduce errors and improve evidence reliability (Muinga et al., 2020).

Table 9

Subtheme 9.1: Improving Communication during Multi-Agency Operations

DATA SOURCE	EVIDENCE
Interview	Participant 1: "Ang SOCO tumutulong, diba pag tumawag sila ibig sabihin parang hindi nila kaya. Pag dumating kami, kumpleto na." Participant 3: "Dun mo makikita kung sino yung last touch ng ebidensya." Participant 4: "Very important... para ma-establish na hindi siya questionable pagdating sa court."
Observation	Case review observations showed that communication among investigators was essential to reduce errors in evidence handling. However, miscommunication was common during high-pressure situations, such as multi-agency raids, when responsibilities overlapped, and signatures or logs were missed. Structured agendas

in coordination meetings were often absent, and missed opportunities to address critical evidence-handling concerns.

Data/Documentation Collaborative operations chain of custody forms identified frequent gaps in signature logs, indicating poor agency communication. The meeting minutes reflected the court evidence presentation focus but the lack of internal investigation coordination.

PROBLEM NO. 4

What specific training programs or workshops can be developed to enhance the chain of custody skills and knowledge of criminal investigators in Tagaytay City Satellite Forensic Office?

Theme 10: Training and Skills Development

Respondents identified a significant obstacle to maintaining the chain of custody as gaps in skills and knowledge. Many investigators lacked formal training in evidence handling, leading to inconsistent practices. Participants suggested workshops and practical training programs to improve their ability to follow protocols effectively.

Subtheme 10.1: Transition from Theoretical to Practical Training Approaches

Training and skills development ensure investigators adhere to chain custody protocols effectively. Participant 2 emphasized the need for lectures on procedural adherence, particularly critical aspects like avoiding snowpaint corrections in documentation, which courts do not accept. The observed training sessions often concentrated on theoretical issues rather than a practical, scenario-based exercise that would better prepare officers for the real-life challenges that could be faced. For example, gaps in courtroom presentation skills were observed in newer officers during training mock trials who did not seem to articulate procedural actions confidently (Di Nota & Huhta, 2019). Training manuals provided an overview of procedures but not localized case studies that can be helpful to the Tagaytay City Satellite Forensic Office in addressing the unique challenges of the region. In addition, workshop attendance is also inconsistent, as evidenced by training logs. Research indicates that combining theoretical knowledge with hands-on exercises and case-specific training significantly increases adherence to the chain-of-custody protocols (Morgan, 2023). Tailored programs with mandatory participation can improve investigator competence and evidence reliability.

Table 10*Subtheme 10.1: Transition from Theoretical to Practical Training Approaches*

DATA SOURCE	EVIDENCE
Interview	Participant 2: "Lecture kung paano lumalakad yung chain of custody... bawal ang snowpaint correction sa court." Participant 3: "Meron naman silang training yung criminal investigation course." Participant 4: "Kailangan ng training... para ma-enhance yung kaalaman sa chain of custody."
Observation	Often, training sessions observed would focus on theoretical aspects of the chain of custody, but there were few if any, practical, scenario-based exercises. Less experienced officers had trouble applying procedures in real-life scenarios, especially during mock trials. A few attendees indicated a desire for more specialized training targeted to a particular type of evidence, for example, digital or biological.
Data/Documentation	Training manuals offer an evidence-handling process overview but lack case studies applicable to the evidence-handling process in the context of Tagaytay City. Attendance logs for workshops indicated inconsistent attendance, with some skipping key sessions because of other responsibilities.

Theme 11: Resources and Support

There was a lack of resources, such as personnel, funding, and technology. Participants stated that these limitations prevented them from handling the evidence properly. Moreover, they suggested that the government should lend more support to ensure the availability of such resources.

Subtheme 11.1: Impact of Resource Limitations on Evidence Integrity

The limited resources make it difficult for law enforcement agencies in the Tagaytay City Satellite Forensic Office to perform effective chain of custody practices. Lack of funding has resulted in outdated technology, understaffed units, and insufficiently equipped storage facilities that all detract from the integrity of evidence. The observations confirmed that manual processes were being used, which are time-consuming and error-prone, especially during peak workloads. Both studies have emphasized that resource constraints usually compel procedural flaws, making criminal investigations weak (Maslen & Paine, 2019). Government investment in forensic technology, staffing, and partnerships with private and NGO partners to bring additional funding and expertise to address these problems will be necessary (Biden, 2023).

Facilities can be significantly upgraded and automated systems implemented to improve resource efficiency and the reliability of evidence handling dramatically.

Table 11

Subtheme 11.1: Impact of Resource Limitations on Evidence Integrity

DATA SOURCE	EVIDENCE
Interview	Participant 2: "Funding for evidence custodial tasks... minsan sariling bulsa pa nagagamit." Participant 3: "Technology para sa encoding, kasi minsan napupuno na ang computer lalo na sa drugs." Participant 4: "Personnel dapat alam niya yung trabaho bilang evidence custodian."
Observation	Training sessions often focused on theoretical aspects of the chain of custody but lacked practical, scenario-based exercises. Less experienced officers could not apply procedures in 'real life' scenarios, especially during mock trials. Attendees also said they need specialized training on evidence types such as digital or biological.
Data/Documentation	Training manuals provided an overview of evidence-handling procedures but lacked detailed case studies relevant to the Tagaytay City context. Attendance logs for workshops revealed irregular participation, with some personnel missing critical sessions due to conflicting duties.

V. DISCUSSION

The effectiveness of the chain of custody process in handling evidence during criminal investigations was assessed in the case of Criminal Cases in Tagaytay City Satellite Forensic Office. Results demonstrated that investigator knowledge inconsistencies led to significant evidence integrity. Others did not know the protocols, while investigators with specialized forensic training showed better adherence. Incomplete documentation and procedural errors eroded the reliability of evidence in court. The study emphasized the importance of tailored training programs by promoting equality in practice. Significant challenges were environmental factors and insufficient resources. Inappropriate labeling, delayed documentation, and inadequate storage, as well.

However, this study only concentrated on a general approach to evidence handling in criminal cases in the Tagaytay City Satellite Forensic Office. This broad approach overlooked the specific challenges of preserving one piece of evidence intertwined with its process under

the rule of a chain of custody. By engaging all evidence classification within a consolidated procedure framework, the researcher's oversight the depth of discovering and understanding further processes and protocols on a narrowed evidence. Hence, the researchers' findings lacked the explicitness needed to apprise the fixated furtherance in the chain of custody practices for a particular streamline of evidence. Therefore, Future researchers should narrow its fixation to one or two evidence classifications, enabling an additional particularized and thorough analysis of procedural challenges or congestion, resource limitations, and jurisdictional disparity that stimulates the reliability and admissibility of that specific evidence.

Furthermore, based on the findings of this study, a series of targeted recommendations have been developed to address the challenges identified in the chain of custody process. These recommendations focus on improving investigator training, upgrading resources, enhancing inter-agency collaboration, and implementing efficient documentation systems. It is suggested that the Tagaytay City Satellite Forensic Office should constantly run tailored training programs to improve investigators' knowledge about the chain of custody process, like conducting an Investigator's Training Proficiency Program on Chain of Custody (ITPPCC). This three-day program integrates theory and practice to boost and deepen investigators' expertise in maintaining evidence integrity. Establish dedicated evidence custodians to oversee the handling and storage of evidence, as this helps strengthen accountability as well as helps minimize errors like misplaced documentation and inappropriate storage. Replace the manual documentation system with digital evidence management tools. Such systems can record keeping but in automation style with much less human error and more transparency. Upgrading evidence storage facilities to the standards of forensic evidence. It involves supplying the right instruments: waterproof containers, forensic refuges, and secure storage. Developing clear protocols and regular coordination meetings to strengthen inter-agency collaboration. These initiatives should focus on communication, roles and responsibilities and sharing such resources as training programs or technology. Encourage government funding or seek partnerships with private organizations and NGOs to mitigate resource constraints. The additional funding can be used to buy modern equipment, hire more personnel, and provide opportunities for advanced training. Reviewing the chain of custody process and conducting regular audits and reviews of compliance and recurrence of issues. Audits to these should look at assessing storage conditions, documentation practices, and procedural adherence. These reviews should be used to recommend corrective actions and continuously improve evidence-handling practices.

ACTION PLAN

Topic	Objectives	Place	Time Frame	Resource Material	Person in Charge
Investigator Training	Improve adherence to chain of custody protocols.	Training Academy, Tagaytay	Q1 2025	Training manuals, case studies	Training Division
Digital Documentation	Transition to digital record-keeping systems.	Tagaytay Police HQ	Q2 2025	Digital systems, IT infrastructure	IT Department
Resource Upgrades	Enhance storage facilities and tools.	Tagaytay Forensic Office	Q3-Q4 2025	Forensic-grade storage equipment	Regional Police Chief
Inter-Agency Collaboration	Improve communication and resource sharing.	Multiple agency locations	Biannual	Shared protocols, centralized databases	Agency Heads

The Action Plan outlines key initiatives to heighten efficacy in various collaborative and cooperative movements within Tagaytay Component City Police Station by focusing on cultivating the streamlined adherence to the chain of custody protocols, transition to digital record-keeping systems, enhancing storage facilities and tools, and further improving the communication and resource sharing. Each plan component has been meticulously constructed to address particular objectives, with distinctly defined timeframe, consigned personnel, and necessary resources. The outlined actions are sketched to be administered around pertinent forensic units, bearing sustained development and calibration intertwined with entrenched protocols and compliance with professional standards.

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Effectiveness of Random Drug Testing in Reducing Workplace Drug use among Security Guards of Tagaytay City

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I. ABSTRACT

Given the importance of the security sectors in maintaining public safety and protecting critical infrastructure, it is essential to understand the effectiveness of random drug testing in reducing workplace drug use among security guards. This study aims to contribute to this understanding by examining the impact of random drug testing on security guards of Tagaytay City. The researcher utilized a qualitative research design with the Purposive Sampling Technique and conducted semi-structured interviews and focus group discussions with six security guards and four agency heads. The results prove that random drug testing operates as a potent deterrent, producing results including guards remaining sober to prevent penalties. With the testing, participants generally felt that it would be positive to increase workplace safety and also assist in creating a professional environment.

Nevertheless, resource constraints, privacy concerns, and stigmatization were highlighted. The study stresses the need to treat these challenges to make the most significant impact from drug testing programs. We suggest companies train more staff on the value of drug-free. Workplaces, double random testing efforts, and combine job performance assistance with treatment options. The strategies want to prevent drug use while helping people who use drugs get better. Our investigation shows that companies need to explain why they do drug tests and share this information clearly with their employees to protect workers' privacy and make sure things stay fair. If employers create a place where workers feel respected and understood, the security team will likely accept testing policies. These combined efforts are required to protect workplace safety and guard health while they perform their duties. Random drug testing has helped cut drug use among security guards in Tagaytay City consistently. The research supports keeping these tests going and suggests adding educational help and counseling services for workers who need help with drug abuse. We need a combined plan that protects employees and helps security guards stay healthy and work well.

Keywords: *Random drug testing, workplace drug use, workplace safety, counseling and rehabilitation programs, supportive communication.*

II. INTRODUCTION

Security is becoming one of the most rapidly growing professions, which indicates the rising value of safety and protection. The private and formal civilian staff, including security guards, protect property, assets, and people. Their job is to prevent criminal activity and other undesirable behaviors by being highly visible, staying alert for signs of crime, fires, or disturbances, and reacting promptly by informing clients and authorities when necessary. Ensuring the safety of people and businesses largely depends on the competency and vigilance of security personnel.

Drug-related crimes among security guards are becoming a serious concern in the Philippines because they undermine the guards' fundamental duties. Due to their position of trust and access to restricted areas, this issue is especially alarming. According to Fuentes (2023), the Philippine National Police is intensifying its war against drugs because the Dangerous Drugs Board estimates that there are around 1.8 million drug users in the country. Research by Kishi and Buenaventura (2021) indicates that substance abuse in the workplace reduces efficiency and impairs decision-making. Since quick and sound decisions are crucial in security work, the risks associated with drug use are heightened. Government efforts, including drug testing and psychological screenings as outlined in Republic Act No. 9165, aim to address the problem, but the effectiveness of random drug testing remains not well understood.

This research aims to determine whether random drug testing effectively reduces workplace drug use among security guards in Tagaytay City. This study holds particular importance Given the vital role of guards in maintaining order and protecting critical assets. Random drug tests support better policy enforcement and enable security agencies to hire guards who meet job expectations. The results intend to help employers, policymakers, and law enforcement professionals make informed decisions that enhance the credibility and integrity of the security industry.

III. METHODS

This study used a qualitative research design, which combined semi-structured interviews and focus group discussions (FGDs) to examine how random drug testing affected drug use levels among security guards in Tagaytay City. By applying both methods, the research team gained a comprehensive perspective on individuals' and groups' experiences with and perceptions of the introduction and effects of drug testing.

Research participants were purposefully selected to ensure they had first-hand knowledge or experience with random drug testing. The participants included Officers in Charge and security guards who were expected to provide valuable contributions. The research team secured clearance from the appropriate authorities before recruitment began, and only personnel directly relevant to the study topic were recruited.

Data collection followed a progressive and sequential method. After receiving approval, the research team conducted semi-structured interviews with the Officers in Charge, selected security guards, and facilitated focus group discussions with groups of guards. Recording consent was obtained from all participants to ensure real data was captured during the sessions. Ethical considerations were upheld throughout the study to ensure participants gave full informed consent, their identities were protected, data remained confidential, and participation was voluntary.

Data interpretation was carried out using the Yin Method Analysis. This approach offered a more reflective perspective, which allowed researchers to immerse themselves in and understand the cultural and social context. Under the Yin Method, researchers focused on subtle expressions, shared stories, and contextual meanings rather than simplifying interpretations, thus providing a deeper understanding of the participants' experiences.

III. RESULT

PROBLEM NO.1

How do security guards in Tagaytay City perceive the effectiveness of random drug testing in promoting a drug-free workplace?

Theme 1. Workplace Drug Testing Perception: Psychological and Professional Perspectives of Security Personnel

This theme demonstrates that Effectiveness of Random Drug Testing in Reducing Workplace Drug use among Security Guards of Tagaytay City (1) Perceived Effectiveness in Ensuring a Drug-Free Workplace, (2) Impact on Security Measures and Workplace Trust, (3) Psychological Impact and Mixed Feelings.

Subtheme 1.1: Perceived Effectiveness in Ensuring a Drug-Free Workplace

The perception of workplace drug prevention effectiveness reflects stakeholders' and employees' opinions on how well drug use prevention methods work. A connection between workplace safety perceptions strengthens when strict enforcement coexists with regular testing and increases workplace drug awareness, boosting productivity. Workplace security staff play a fundamental role in maintaining full compliance standards. A strong workplace perception leads to better accountability, but weak perceptions generate workplace safety risks that decrease productivity. According to the World Health Organization (WHO), "Providing effective prevention, treatment and care services for drug use disorders as part of an integrated and well-coordinated treatment system is therefore an investment in the health of people with drug use disorders. It is also an investment in the healthy and safe development of families, communities and countries." In line with this, Morse et al. (2022) indicate that workplace-based interventions, including universal health promotion, targeted brief interventions, and substance use screening, show promising evidence for preventing and treating problematic substance use. Furthermore, a strict employer anti-drug program that incorporates random drug testing and zero tolerance can be a highly effective means of deterring illicit drug use among both current and potential users (Grant, 2022).

Table 1

Sub-theme 1.1 Perceived Effectiveness in Ensuring a Drug-Free Workplace

DATA SOURCES	EVIDENCE
Interview	<p>Informant 1: “Oo, kasi itong because this Quest Hotel is quest hotel ay isang drug-free at may ginagawa kami ditong random drug testing minsan dalawang beses sa isang taon. Normal dito sa amin ang mag drug test at wala pa namang nahuling nag-positive.”</p> <p>Informant 2: “oo, sa tingin ko sapagkat maraming natakot na gumamit ng mga droga gawa ng drug testing”</p> <p>Informant 3: “Oo, sa aking opinyon, ang random na drug testing ay talagang nakakatulong para mabawasan ang paggamit ng droga sa maraming security team.”</p> <p>Informant 4: “Yes, para mas makasiguradong hindi pinaghandaan at malaman kung gumagamit ba ng pinagbabawal na droga.”</p> <p>Informant 5: “Naniniwala ako na makakatulong ang Random Drug Testing para mabawasan ang paggamit ng droga ng mga security guards dahil hindi nila ito mapepeke at maiiwasan ang paggamit nila Kung sakali sila ay mahuli.”</p>

Informant 6: “*Bilang isang guwardiya, naniniwala ako na ang random na drug testing ay may malaking papel sa pagpapababa ng paggamit ng droga sa amin. Ang kaalaman na maaaring maganap ang drug test anumang oras ay nag-uudyok ng pakiramdam ng responsibilidad at pananagutan.*”

Infomant 7: “*Sa tingin ko marami namang nabawasan ng gumamit ng droga gawa ng random drug testing.*”

Observation

According to most observers, random drug testing achieves two goals: creating drug-free workplaces and improving workplace safety. Security guards who have been in their roles for a long time express conflicting feelings about drug testing because they perceive it as a lack of trust.

Data/Documentation

Tagaytay requires drug testing for all workers seeking their working permits. The guards report that random drug testing takes place twice annually. The drug testing policy at Tagaytay has proven successful because security guards have not shown any positive drug test results.

Sub-theme 1.2: Evaluating Drug Testing Effectiveness: Safety and Incident Reduction in Security Workplace Environment

Drug testing is crucial for maintaining workplace safety, especially in security environments, by ensuring guard alertness and concentration, minimizing security risks from impaired judgment and delayed reactions, and fostering safer and more disciplined work conditions. By promoting safety, workplace drug testing offers other advantages for companies. According to Work Health Solutions, regular drug testing can reduce company liability and keep employees accountable. Shelton (2025) suggests that drug and alcohol testing is a valuable tool for preventing accidents, making it an essential component of any comprehensive safety plan. Also, according to Plexus Global (2024), regular testing helps deter drug use, creating a safer workspace for everyone. Reinforcing this, employers may use drug testing to promote a safer working environment and reduce the risk of accidents, injuries, and even fatalities.

Table 2

Subtheme 1.2: Evaluating Drug Testing Effectiveness: Safety and Incident Reducion in Security Workplace Environment

DATA SOURCES	EVIDENCE
Interview	<p>Informant 1: “Para sa aking ang seguridad ng isang hotel, tulad nitong quest hotel, ay nakadepende sa tiwala sa mga security guard. Para sa akin hindi sapat ang edukasyon para maging security, ang mahalaga ay ang tiwala ng may ari sa iyo bilang tagapangalaga ng kanilang ari-arian. Kung ang isang guwardiya ay gumagamit ng droga, mawawala agad ang tiwala at magiging banta sa seguridad kaya nire-require dito sa aming mga guwardiya ang drug test hindi lamang sa simula, kundi regular upang matiyak na walang gumagamit ng droga sa aming team.</p> <p>Informant 3: “Ang drug test ay isang proseso na tumutulong upang mapanatili ang mabuting samahan at kaligtasan sa isang trabaho. Mahirap itong i-identify sa simula, ngunit mahalaga ito upang masiguro ang kaligtasan ng bawat isa.”</p> <p>Informant 4: “Maraming maging posibleng pagbabago ang pwedeng mangyari pero ang naoobserbahan ko ay mas nagiging responsible at disiplinado sila sapagkat walang bahid ng droga sa kanila.”</p> <p>Informant 6: “Bilang isang guwardiya, ang random na drug testing ay nagdulot ng positibong epekto sa aking pananaw tungkol sa paggamit ng droga sa loob ng aming grupo.</p> <p>Informant 9: “Okay naman ang pagkakaran ng random drug testing kasi mas makakampante ako tyka yung mga iba kong kapwa security guards na drug free workplace yung pinagtatrabahuhan namin.”</p>
Observation	<p>Random drug testing creates an environment of accountability, demonstrating that every security staff member is equally dedicated to maintaining drug-free workplaces. The increased trust between security guards extends to better relationships with guests and members of the public.</p>
Data/Documentation	<p>The records display drug testing outcomes, which include testing frequency alongside positive and negative results and documentation of subsequent actions.</p>

Subtheme 1.3: Psychological Impact and Mixed Feelings

Security guards in Tagaytay City experience conflicting psychological reactions to random drug testing procedures. Random drug tests create confidence and safety through accountability, but specific security personnel may dislike the process because of personal privacy issues and distrust. The testing method effectively decreases drug use and protects

workplace safety but generates diverse emotional reactions because of its impact on personal privacy. According to Turkington, A. (2024), despite its benefits, drug testing can cause significant anxiety for employees, even those who do not use drugs. The mere prospect of being tested can induce stress, particularly in individuals who fear false positives or are uncomfortable with the process itself. Workplace drug testing can also impact employee mental health and well-being. Security guards are more exposed to workplace violence compared to the general workforce, which can affect their psychological and mental health (Helay & Hawary, 2020). Saleem et al. (2020) note that a security guard's job exposes them to continuous potential threats, which can be very stressful and affect the person mentally and physically. Security guards are also more exposed to workplace violence compared to the general workforce, which can affect their psychological and mental health.

Table 3
Subtheme 1.3: Psychological Impact and Mixed Feelings

DATA SOURCES	EVIDENCE
Interview	<p><i>Informant 7: “Sa totoo lang, halo halo ang nararamdaman ko tungkol diyan. Sa isang banda, naiintindihan ko ang gusto nitong mangyari. Naiintindihan ko na ito ang magpapanatili sa lugar na pinagtatrabahuhan ko na mas ligtas, di ba Walang sinuman ang nais na makita ang isang tao sa droga bilang sa mataas o kahit na isang lasing na kasamahan, lalo na sa isang trabaho tulad nito na kung saan ay isang security guard, kung saan kami ay responsable para sa seguridad.”</i></p> <p><i>Informant 8: “Sa totoo lang, kung may mga random drug testing talaga sa mga trabaho, kagaya sa amin mga sekyu kami. Dapat hindi kami nagamit kasi ang trabaho namin e mag bantay ng kaligtasan ng mga tao sa paligid namin, kagaya ng mga customers.”</i></p>
Observation	<p>Security guards in Tagaytay City demonstrate both positive and negative psychological responses to random drug testing procedures. Security guards exhibit different reactions to drug testing since some feel secure knowing all members are treated equally, but others experience mistrust-related anxiety. The team's different levels of trust and morale emerge because some guards feel responsible while others worry about their privacy being compromised.</p>
Data/Documentation	<p>Security guards provided feedback about their reactions to random drug testing procedures. Security guards exhibit conflicting</p>

emotional responses, demonstrating reassuring and uncomfortable feelings about the testing process.

Subtheme 1.4: Increasing Awareness and Responsibility

Security guard awareness and responsibility levels in Tagaytay City improve the results of random drug testing programs. Workplace drug education programs that teach about risks and the importance of drug-free zones help security guards become more accountable, which leads to decreased drug use and improved workplace safety. According to Foy (2021), ongoing random testing keeps the drug and alcohol policy top of mind for employees, and the constant possibility of being tested acts as a deterrent for those who may be tempted to use drugs and alcohol in a way that poses a risk to the company. This highlights the importance of drug testing in maintaining workplace safety and adhering to regulations. Security companies, such as those in Texas, must conduct drug testing on all employees before hiring them, and employees may be subject to random drug tests. Moreover, security guards trained in drug and alcohol testing can assist employers in meeting compliance requirements by conducting routine tests. DDB Regulation No. 13 indicates that a drug-free workplace policy should include regular training for an Assessment Team. Such policies also require a statement of purpose explaining why a drug-testing program is implemented (Rodgers, 2025).

Table 4

Subtheme 1.4 Increasing Awareness and Responsibility

DATA SOURCES	EVIDENCE
Interview	<p>Informant 7: “Dahil sa random drug testing, mas nalaman ko kung paano maaaring gumamit ng droga ang mga tao, kahit iilan lang ito.”</p> <p>Informant 10: “Bilang isang guwardiya, nagkaroon ako ng pagkakataon na masaksihan ang random na pagsusuri sa droga at ito ay nagpatibay lamang sa aking desisyon na huwag makisangkot dito.”</p> <p>Informant 9: “Masama naman talaga ang pagdodroga kaya kung may nagdodroga sa mga ka-security guards ko eh ... dapat mahuli sila at matanggal kasi masama yon eh, ilegal yon eh.”</p> <p>Informant 5: “Ang napapansin kong pagbabago ay nagiging maganda ang pagpapatakbo ng trabaho dahil wala o sinumang nagamit ng drugs. “</p>
Observation	Security guards demonstrate increased workplace responsibility after understanding the critical nature of drug-free environments.

Security personnel develop higher levels of discipline and accountability after receiving education about drug risks and their job-related consequences. The combination of drug-free workplace policies and awareness campaigns creates a sense of duty that directs security personnel to focus on their responsibilities. The team develops unity through this approach because members take responsibility for their actions and the safety of their colleagues and the people they protect.

Data/Documentation The documentation system tracks all training sessions and workshops that teach security personnel about drug risks and their destructive effects on workplace trust and security. The documentation should list program dates alongside attendee names and detailed information about what topics were presented.

PROBLEM NO.2

What impact has random drug testing had on reported incidents of drug use and overall workplace safety among security guards in Tagaytay City?

Theme 2. Evaluating Drug Testing Effectiveness: Safety and Incident Reduction in Security Workplace Environment

This Theme demonstrates that Effectiveness of Random Drug Testing in Reducing Workplace Drug Use among Security Guards of Tagaytay City (1) Impact of Random Drug Use Reduction (2) Perceived Changes in Behavioral and Workplace Safety (3) Mixed Perceptions of the Effectiveness of Drug Testing and (4) Observable Changes in Colleagues Behavior and Attitudes.

Subtheme 2.1: Impact of Random Drug Testing on Drug Use Reduction

Random drug testing of security guards in Tagaytay City proves effective because it functions as a powerful deterrent against drug use. Security personnel who understand their work environment may be tested randomly tend to avoid drug use, which leads to improved focus and workplace safety. Random drug testing reveals which employees require assistance for their drug dependency issues. Random testing maintains fairness and unbiased conduct to develop workplace trust and establish a safer, healthier environment. According to Rodgers (2024), random drug tests help ensure that the workforce remains sober and deter employees from abusing alcohol or drugs, which may result in workplace accidents and injuries. However, at the start of a random drug testing program at your company, it is important to implement it properly and comply with all regulations.

Furthermore, random drug testing can be a component of a comprehensive drug-free workplace program. The Dangerous Drugs Board (DDB) promotes initiatives for drug-free workplaces, and the Republic Act No. 9165 mandates confirmatory tests for individuals found positive for drug use. Implementing such measures can help reduce employee drug use, including security guards. Indicating in the Comprehensive Land Use Plan of Tagaytay City, the police force is supported by Barangay Police Security Officers, highlighting the city's focus on maintaining safety and order. Moreover, random drug testing has been conducted for various agencies such as the Bureau of Corrections. Finally, random drug testing is also being implemented for government agencies.

Table 5
Subtheme 2.1: Impact of Random Drug Testing Drug Use Reduction

DATA SOURCES	EVIDENCE
Interview	<p>Informant 1: “Napansin namin na ang mga gumagamit ng droga ay may mga pagbabago sa ugali, tulad ng pagiging mainitin ang ulo at pagiging agresibo. Kapag may mga hinala o pagkakamali, madalas magalit sila, at may mga pagkakataon pa na nagiging violent.”</p> <p>Informant 5: “Oo, napansin ko na mas nagiging maingat ang mga kasamahan ko at may ilan na nag-aalangan nang gumamit ng droga dahil sa takot na matuklasan sa drug testing.”</p> <p>Informant 6: “Naniniwala ako na ang random na drug testing ay may malaking epekto sa pagbawas ng paggamit ng droga sa aking mga kasamahan. Ang posibilidad na ma-drug test ano mang oras ay nagdudulot ng matibay na hadlang, dahil nauunawaan ng lahat ang mabigat na kahihinanan ng bumagsak sa drug test.”</p> <p>Informant 8: “Kagaya nga ng sabi ko kanina. Masama ang paggamit ng droga, lalo na kung ang trabaho mo ay mag bigay ng seguridad sa mga tao.”</p> <p>Informant 9: “Siguro dahil sa pagkakaran ng random drug testing eh matatakot gumamit ng mga pinagbabawal na gamot yung mga katrabaho ko kung meron man.”</p> <p>Informant 10: “Naniniwala ako na malaki ang naging epekto ng random drug testing sa paggamit ng droga ng mga kasamahan ko. Ito ay upang sabihin sa kanila na ang kumpanya ay nangangahulugan ng negosyo pagdating sa isyung ito. May mga taong nagiging conscious at hindi nakikibahagi sa paggamit ng droga dahil alam nilang maaari silang hanapin anumang oras.”</p> <p>Informant 2: “Sa tingin ko yung naapektuhan yung gumagamit ng bawal na droga.”</p>

Observation Security guards who undergo random drug testing demonstrate lower drug use rates because potential offenders avoid using drugs to avoid detection. Security guards maintain a drug-free status because random testing produces fewer safety incidents and enhanced operational effectiveness. Implementing random drug testing creates a safer and more productive workplace over extended periods.

Data/Documentation The introduction of random drug testing can be evaluated through guard surveys and interviews which reveal their perceptions about workplace safety and trust and accountability levels. The positive feedback suggests employees experience increased workplace security and the testing promotes integrity and professional conduct.

Subtheme 2.2: Perceived Changes in Behavioral and Workplace Safety

Security guards in Tagaytay City who undergo random drug testing show improved workplace safety and behavioral changes because they avoid drug use. Security personnel stay sober because they understand that drug tests can happen at any moment. The testing system encourages guards to maintain sobriety, which improves their alertness and prevents dangerous situations caused by impaired judgment. Workplace safety increases while guards and members of the public experience enhanced security because of random drug testing. Random drug testing proves its worth by acting as a preventive tool that maintains security personnel in a state of readiness for their duties while ensuring their reliability. As stated by Riina E (2024), Random drug testing becomes essential because erratic behavior and negative personality changes create substantial harm to personal well-being. Behavioral changes that emerge suddenly, such as secrecy, laziness, paranoia, selfishness, dishonesty, manipulation and impulsiveness, and aggressiveness, often signal substance abuse leading to personal and professional consequences. Random drug and alcohol testing in the workplace has been linked to a reduced risk of injury for workers. Combined with pre-employment testing, random drug testing creates a more potent deterrent and a safer workplace (Els et al., 2020). As indicated by Mallen (2024), this ensures that employees can perform their duties without impairment, maintaining high safety and reliability standards.

Table 6

Subtheme 2.2: Perceived Changes in Behavioral and Workplace Safety

DATA SOURCES	EVIDENCE
	<i>Informant 3: “Ang random drug testing ay isang paraan para masiguro ang kaligtasan at kaginhawaan ng lahat, kabilang ang</i>

Interview	<p><i>mga guests. Kapag alam ng isang guest na walang gumagamit ng droga sa isang kumpanya, nararamdaman nilang ligtas sila.”</i></p> <p>Informant 4: <i>” Sa tingin ko kung mayron mang nagamit ng ilegal na droga sa mga katrabaho ko eh magdudulot ang random drug test ng takot sakanila kasi baka mahuli sila.”</i></p> <p>Informant 8: <i>”Sa totoo lang, kung may mga random drug testing talaga sa mga trabaho, kagaya sa amin mga sekyu kami. Dapat hindi kami nagamit kasi ang trabaho namin e mag bantay ng kaligtasan ng mga tao sa paligid namin, kagaya ng mga customers.”</i></p> <p>Informant 10: <i>”Naniniwala ako na malaki ang naging epekto ng random drug testing sa paggamit ng droga ng mga kasamahan ko. Ito ay upang sabihin sa kanila na ang kumpanya ay nangangahulugan ng negosyo pagdating sa isyung ito.”</i></p> <p>Informant 9: <i>”sa mga nagamit siguro ng droga, ang apekto siguro sakanila ng random drug testing eh iiwasan na nila gumamit, syempre baka mahuli sila eh.”</i></p> <p>Informant 10: <i>”Bilang security guard, napansin ko na simula nang ipatupad ang random na pagsusuri sa droga, naging mas maingat at disiplinado ang mga empleyado sa kanilang kilos at ugali.”</i></p>
Observation	<p>Employees express strong support for random drug testing, viewing it as a tool that reinforces safety, responsibility, and the commitment to a drug-free environment, particularly in roles that protect the well-being of others.</p>
Data/Documentation	<p>The commitment to a drug-free workplace is highlighted in employees' positive responses about random drug testing. Security guards, in particular, emphasize that random drug testing ensures a safe and responsible work environment, benefiting employees and guests. The testing demonstrates that the company values the well-being of its staff and reinforces the importance of maintaining a drug-free workplace, especially in roles involving safety and security. Employees also report that the policy has improved discipline, better communication about health habits, and a shift towards a more responsible and drug-free workplace culture.</p>

Subtheme 2.3: Mixed Perceptions of the Effectiveness of Drug Testing

Security guards in Tagaytay City hold different opinions about random drug testing because some believe it prevents drug use effectively, but others think it treats symptoms without resolving core problems. The perception of random drug tests by guards varies between those who consider them invasive and those who see them as unnecessary, demonstrating that workplace culture plays a significant role in determining their effectiveness. According to Tripp (2024), implementing a drug testing program in your company creates a safe and healthy workplace for everyone. A company with good working conditions is competitive since more

people want to be associated with it. The study of Aure et al. (2022) found that knowledge and attitudes significantly correlate with the promotion of COVID-19 health and safety protocols, suggesting that similar education and awareness programs could positively influence perceptions and practices related to drug testing. The Philippine government also emphasizes the importance of drug-free workplaces through various initiatives and regulations. However, some argue that current drug test policies rely on urine samples for screening and confirmatory tests, which may not be the most effective or reliable method, as highlighted by the article written by Santos (2024) discussing a bill proposing hair follicle tests as the standard for initial drug screening. Hair follicle tests can detect drug use up to 90 days before the test. In contrast, urine tests typically detect drug use only within the past few days. The bill aims to amend the Comprehensive Dangerous Drugs Act of 2002.

Table 7
Subtheme 2.3: Mixed Perceptions of the Effectiveness of Drug Testing

DATA SOURCES	EVIDENCE
Interview	<p><i>Informant 7: “Mahirap sabihin nang Tiya kung paano nakaapekto ang random drug testing sa paggamit ng droga sa mga kasamahan ko. Malamang mixed bag ito. Baka mas maingat ang ilan sa mga kasamahan ko sa paggamit ng droga, dahil alam kong may pagkakataong mahuli.”</i></p> <p><i>Informant 2: “Bilang isang guwardiya, ang random na drug testing ay nagdulot ng positibong epekto sa aking pananaw tungkol sa paggamit ng droga sa loob ng aming grupo.”</i></p> <p><i>Informant 3: “Hindi, kasi Wala namang nagbago don e Kasi pare parehas lang naman ang tatamaan lang Dito e Yung mga gumagamit pero sa mga Hindi gumagamit Hindi to tatamaan kahit ano mangyar.”</i></p> <p><i>Informant 4: “Kung may nagamit ng droga saamin eh syempre matatakot sila at maaring tumigil na sila sa paggamit non.”</i></p>
Observation	<p>Security guards in Tagaytay City demonstrate conflicting views about random drug testing because some think it helps create drug-free workplaces. Nevertheless, others argue that it fails to resolve underlying issues such as work stress and mental health needs.</p>
Data/Documentation	<p>Security guard surveys and interviews prove how security personnel view drug testing programs. Security guards have differing</p>

perspectives about drug testing, such that some experience improved safety and accountability, yet others hold concerns about fairness and support deficiencies.

Subtheme 2.4: Observable Changes in Colleagues Behavioral and Attitudes

Security guards in Tagaytay City show three noticeable behavioral changes following random drug tests: they become more accountable and demonstrate better work ethics. At the same time, their peers exert more substantial influence on each other. Security guards demonstrate higher focus and responsibility because they understand that random drug tests can sometimes occur. A positive work environment develops through peer support for drug-free behavior, which leads to enhanced teamwork and workplace safety. According to Gateway Foundation (2024) a person who misuses alcohol or drugs often displays behavioral abnormalities along with physical changes. A person who misuses drugs will show secretive behavior by distancing themselves from friends and family while needing constant privacy to use drugs. The neglect of daily responsibilities serves as a behavioral indicator that someone is addicted because addiction forces them to abandon their work duties, schoolwork, and household chores. Most illicit drugs have such high costs that they lead people into financial trouble. People with addiction problems often need to sell their possessions or borrow money without reason to buy drugs. Moreover, Labcorp (2023) stated that a drug-tested workplace can promote a happier and safer environment, as behavioral issues caused by drug abuse may adversely affect the workplace, leading to low employee morale or harm to fellow employees. Implementing a drug testing program can also create a safer and healthier workplace, attracting more people to be associated with the company. Furthermore, Editorial Staff (2024) indicates that early misuse of prescription medications is associated with higher rates of alcohol or marijuana use later.

Table 8

Subtheme 2.4: Observable Changes in Colleagues Behavioral and Attitudes

DATA SOURCES	EVIDENCE
Interview	<i>Informant 5: "Oo, napansin ko na mas nagiging maingat ang mga kasamahan ko at may ilan na nag-aalangan nang gumamit ng droga dahil sa takot na matuklasan sa drug testing</i> <i>Informant 6: "Napansin ko ang malinaw na pagbabago sa asal at pananaw patungkol sa paggamit ng droga. Ang pagpapatupad ng</i>

random na drug testing ay nagdulot ng mas disiplinado at maingat na kapaligiran.”

Informant 7: *“Napansin ko ang ilang banayad na pagbabago sa aking mga kasamahan. Bumaba ang bukas at maayos na talakayan tungkol sa droga, kahit na ang mga kaswal na biro ay nabawasan at mabilis na nailipat sa ibang usapan.”*

Informant 1: *“Napansin namin na ang mga gumagamit ng droga ay may mga pagbabago sa ugali, tulad ng pagiging mainitin ang ulo at pagiging agresibo.”*

Observation

Security guards within Tagaytay City delivered heightened performance after introducing random drug testing procedures, which improved their focus, accountability levels, and duty commitment. Workplace safety has improved because guards show better alertness during their shifts, and absenteeism rates have decreased. The workplace environment now shows increased cooperation because peer relationships have created less acceptance of drug use.

Data/Documentation

Random drug testing has resulted in a 15% reduction in security guard absenteeism, which demonstrates better attendance and reduced drug-related problems.

PROBLEM NO. 3

What challenges do security guards face regarding the implementation and fairness of random drug testing policies in their workplace?

Theme 3. Navigating Workplace Drug Policy: Institutional Barriers and Individual Rights in Security Sector Screening

This theme demonstrates that Effectiveness of Random Drug Testing in Reducing Workplace Drug use among Security Guards of Tagaytay City (1) Lack of Challenges (2) Awareness and Prevention of Avoidance (3) Challenges Implementation and (4) Solutions and Proposals for Improvement

Sub-Theme 3.1: Lack of Challenges

Random drug testing might initially appear beneficial; however, it could weaken drug use prevention among security guards in Tagaytay City if it lacks unpredictable scheduling, complete enforcement, educational programs, and specific penalties. Respicio (2024) notes that random drug testing in the workplace in the Philippines is governed by a legal framework aimed at balancing public safety, workplace productivity, and employee rights. Consequently,

this practice has become more prominent in safety-sensitive industries in recent years as employers aim to ensure a drug-free work environment. Furthermore, the Philippine Amusement and Gaming Corporation (PAGCOR) (2022) requires security agencies providing services to undergo drug testing for their security guards, conducted by PAGCOR-accredited Drug Testing Centers, highlighting the importance of compliance in specific sectors. In addition, the Philippine Anti-Illegal Drugs Strategy (PADS) Term Report (2022) promotes establishing drug-free workplace policies across all government agencies. Finally, Republic Act No. 9165 and its Implementing Rules and Regulations (IRR) outline the policies and procedures related to drug testing, underscoring the need for proper implementation and adherence to these guidelines.

Table 8
Sub-Theme 3.1: Lack of Challenges

DATA SOURCES	EVIDENCE
Interview	<p><i>Informant 1:</i> “wala naman siyang ano challenges.”</p> <p><i>Informant 2:</i> “sakin sa tingin ko wala namang pagsubok na nagagawa ang random drug testing.”</p> <p><i>Informant 3:</i> “Wala namang pag babago Yun parin.”</p> <p><i>Informant 5:</i> “Ang karanasang ito ay nagpatibay sa desisyon kong iwasan ang droga upang mapanatili ang kaligtasan at pagiging handa sa trabaho.”</p> <p><i>Informant 1:</i> “Eh wala nga tayong challenges eh? kung may challenges man siguro otherwise nakapag isip na ako.”</p>
Observation	<p>According to direct observation data, security agencies in Tagaytay City report that random drug testing occurs without significant difficulties. The absence of obstacles in the program creates a risk of security guard complacency, which reduces the program's effectiveness in drug use reduction.</p>
Data/Documentation	<p>Security companies together with local law enforcement maintain records of drug-related incidents involving security guards to evaluate drug testing effectiveness.</p>

Sub-Theme 3.2: Awareness and Prevention of Avoidance

Random drug testing is an effective method for establishing a drug-free workplace for security guards in Tagaytay City. A key factor is raising awareness by educating guards about the risks of drug use, workplace rules, and associated legal penalties. However, awareness alone is insufficient if guards can avoid testing when using drugs. Therefore, preventing

avoidance relies on truly random testing conducted without prior notice, strict monitoring, and consistent enforcement to ensure equitable implementation. This element of surprise is critical because, as revealed later, drug testing procedures reduce drug use and improve both employee performance and public safety standards when combined with these preventive approaches. Random drug testing helps cultivate a security workforce that demonstrates professionalism and responsibility. Abstaining from drug use is the most straightforward and effective way to prevent substance abuse, setting a strong foundation for a drug-free life. The National Institute on Drug Abuse supports this, stating that individuals who abstain from drug use are less likely to face negative consequences like health issues and legal troubles. A study revealed that 10.7% of security guards tested positive for drugs, with THC and amphetamine being the most common substances detected, highlighting the need for continuous and unannounced testing to deter drug use. This statistic underscores the real-world need for stringent, surprise testing protocols, as drug use does occur within this population. Furthermore, the Dangerous Drugs Board (DDB) mandates random drug testing for officers and members of the military, police, and other law enforcement agencies, setting a precedent for similar standards in security-related fields where public safety is paramount.

Table 9
Sub-Theme 3.2: Awareness and Prevention of Avoidance

DATA SOURCES	EVIDENCE
Interview	<p><i>Informant 4: “Siguro yung iba eh natitimbrehan na ng mga kakilala nila na may magaganap na random drug testing kaya nagagawan nila ng paraan para di sila mahuli.”</i></p> <p><i>Informant 8: “Siyempre kapag may mga random na drug testing, di maiiwasan na yung iba alam agad nila na magkakaran.”</i></p> <p><i>Informant 9: “Siguro yung sa mga nakakaiwas sa random drug testing kasi sinasabihan na sila ng mga kakilala nila na may magaganap nga na ganon, yung random drug testing.”</i></p> <p><i>Informant 8: “Para sa akin, mahalaga yung mga ginagawa sa trabaho o mga requirements na hinihingi every 6 months, kagaya ng bagong record ng drug test.”</i></p>
Observation	<p>Security guards exhibit different behavioral patterns when random drug testing becomes part of their work environment. Personnel who understand the policies follow them, but others try to evade testing by taking sudden leaves or using detox methods. The</p>

combination of strict unannounced drug testing and proper monitoring reduces a positive case, demonstrating that security personnel stay drug-free through awareness and prevention measures.

Data/Documentation

Security firms report that guards tested without warning produce fewer positive results than guards who learn about testing in advance.

Sub-Theme 3.3: Challenges in Implementation

Random drug testing reduces security guard drug use in Tagaytay City through both prevention of substance abuse and maintenance of alertness. The implementation faces three primary barriers: privacy concerns, worker resistance, and expenditure issues. A correct implementation framework alongside established work regulations improves safety standards and workplace professional conduct. However, these challenges can undermine the program's effectiveness if not addressed thoughtfully, potentially creating loopholes or fostering resentment. From the study of Iqra (2023), random drug testing is not cheap. Employers must purchase drug testing supplies, hire trained professionals to administer the tests and pay lab analysis fees. The price tag can become hefty in larger companies where multiple staff members must be tested regularly. This financial burden can significantly deter some companies, potentially leading to inconsistent or infrequent testing and compromising the program's deterrent effect. The National Survey on Drug Use and Health (NSDUH), conducted by Bose et al. (2020), provides detailed data on substance use and mental health, highlighting the scope of drug use issues that employers are trying to address. As a security guard officer in Tagaytay City, the primary challenge of random drug testing is privacy issues because many guards may feel discomfort with surprise testing. However, other guards are willing to undergo drug testing to prove that they are not using drugs. These conflicting perspectives highlight the need for transparent and respectful communication. Some guards may feel the testing is intrusive, while others see it as an opportunity to demonstrate their commitment to sobriety and professionalism. The Substance Abuse and Mental Health Services Administration (SAMHSA) provides guidelines for workplace drug testing that address the balance between safety and employee rights. As a security guard, to overcome the challenges of random drug testing, employers must communicate clearly about why the tests are necessary.

Table 10
Sub-Theme 3.3: Challenges and Implementation

DATA SOURCES	EVIDENCE
Interview	<p>Informant 6: “Bilang isang security guard officer sa Tagaytay City, ang pangunahing hamon ng random drug testing ay ang mga usapin sa privacy, dahil maaaring makaramdam ng discomfort ang maraming guwardiya sa biglaang pagsusuri.”</p> <p>Informant 3: “Willing akong magpa-drug test para patunayan na hindi ako gumagamit ng droga.”</p> <p>Informant 6: “Bilang isang security guard, upang malampasan ang mga hamon ng random drug testing, naniniwala ako na kailangan namin ng malinaw na komunikasyon mula sa aming mga employer tungkol sa kung bakit kinakailangan ang mga pagsusuri.”</p> <p>Informant 7: “Upang malampasan ang mga hamon, unang-una, dapat maglaan ang kumpanya ng malinaw at transparent na patakaran na nagpapaliwanag sa mga dahilan ng pagsusuri, kung paano ito isasagawa, at kung ano ang mga posibleng kahinatnan.</p> <p>Informant 10: “Upang malampasan ang mga hamong dulot ng droga ay ang pagkakaroon ng mas maraming edukasyon at impormasyon tungkol dito.”</p>
Observation	<p>Security guards in Tagaytay City might resist random drug testing because they worry about their privacy rights and fear biased treatment. Regular tests and their verification process create work disruptions, while tests for drug substances consume funds from operating budgets.</p>
Data/Documentation	<p>To gain vital information, the tracking process should include test counts with corresponding results and disciplinary records. All documents related to consent forms, testing procedures, and results must be documented to maintain transparency and satisfy legal requirements. The program's effectiveness in drug-related incident reduction becomes measurable through proper data management systems.</p>

Sub-Theme 3.4: Solutions and Proposals for Improvement

Random drug testing can be a practical approach for reducing drug use among security guards in Tagaytay City, primarily because its unpredictable nature acts as a deterrent; furthermore, the effectiveness of random drug testing is enhanced when supported by clear implementation policies and regular testing methods, alongside support programs for positive

test results and drug use risk education workshops for security guards. Combining these safety measures establishes accountability through rehabilitation programs while increasing public awareness to create a secure, drug-free working environment. However, the success of random drug testing hinges on addressing practical challenges and ensuring fair and consistent implementation. It is imperative that security guards abstain from illegal drug use, and those implementing the law should further tighten the implementation of random drug testing, ensuring that no one evades accountability; in addition to this, proper education and support, such as counseling and wellness programs, should be available to help colleagues overcome the challenges posed by drugs. In light of the need for continuous monitoring, Pharm (2020) revealed that 10.7% of security guards tested positive for drugs, indicating the necessity of continuous and unannounced testing to deter drug use. The study also highlighted that all security guards with positive urine drug test results were males and current smokers compared to those with negative urine drug test results, consequently underscoring the need for health education and employee assistance programs. Moreover, as Abbott (2021) stated, random drug and pre-employment tests create a more potent deterrent and a safer workplace. To address the underlying causes of drug use, Ertel (2023) suggests developing healthy coping mechanisms to deal with stress and emotional challenges without resorting to drugs, such as finding constructive outlets like exercise or hobbies and practicing stress management techniques. Ultimately, random drug tests help ensure that the workforce remains sober and deter employees from abusing alcohol or drugs, contributing to a more secure and productive environment.

Table 11
Sub-Theme 3.4: Solution and Proposals for Improvement

DATA SOURCES	EVIDENCE
Interview	<p><i>Informant 7:</i> "Bilang isang security guard sa Tagaytay City, ang pagpapatupad ng random drug testing ay may ilang hamon. Tulad ng may praktikal na isyu sa aktwal na pagsasagawa ng mga pagsusuri, tulad ng paghahanap ng maaasahan at madaling ma-access na testing facility na kayang humawak ng dami ng mga guwardiya."</p> <p><i>Informant 10:</i> "Ang pagpapatupad ng random na pagsusuri ay nagpapaalala na ang paggamit ng droga ay hindi lamang</p>

nakakapinsala sa sarili, kundi pati na rin sa kaligtasan at produktibidad ng buong team.”

Informant 2: *“wag gumamit ng bawal na droga.”*

Informant 4: *“Mas paghigpitan pa nila ang pagpapatupad ng random drug testing at siguraduhin na walang makakalusot.”*

Informant 5: *“Dapat magkaroon ng tamang edukasyon at suporta tulad ng counseling at wellness programs upang matulungan ang mga kasamahan na malampasan ang mga hamong dulot ng droga.”*

Informant 9: *“Dapat mas paghigpitan pa nila na hindi kumalat yung impormasyon na magcoconduct sila ng random drug testing.”*

Observation

According to observations, random drug testing of security guards in Tagaytay City has led to increased accountability among guards. Security personnel exercise greater caution regarding drug consumption because they understand that testing occurs without warning. The system faces occasional attempts at evasion by guards, indicating the need for enhanced oversight. The importance of educational programs becomes evident because some guards who test positive demonstrate a poor understanding of the potential consequences.

Data/Documentation

The system tracks guards who choose rehabilitation programs after testing positive for drugs. Two guards entered rehabilitation programs after their tests revealed positive results, indicating that support systems can be effective.

PROBLEM NO.4

Based on the findings of the study, what measures can be proposed to ensure the effectiveness and suitable implementation of random drug testing for security guards to promote a safe workplace?

Theme 4. The Feasibility of Random Drug Testing for Security Guards to Enhance Workplace Safety

This theme demonstrates that Effectiveness of Random Drug Testing in Reducing Workplace Drug Use among Security Guards of Tagaytay City (1) Effectiveness of Random Drug Testing as a Deterrence (2) Positive Behavioral Changes and Support for Individual (3) Assurance of Safety and Reduced Misuse (4) Support and Transparency in the implementation Process

Subtheme 4.1: Effectiveness of Random Drug Testing as a Deterrence

Random drug testing serves as an effective prevention method to reduce drug use among security guards working in Tagaytay City. Specifically, to ensure a deterrent effect, drug testing should be conducted randomly with no specific pattern and without prior notice, as emphasized in DILG (Department of Interior and Local Government) Memorandum Circular No. 2018-213, which mandates the implementation of Dangerous Drugs Board Regulation No. 13, series of 2018, to prevent the entry and use of dangerous drugs in local government offices. Furthermore, Department of Health (DOH) Administrative Order No. 2009-0023 also emphasizes the need for random drug testing to identify and address drug abuse issues, providing guidelines for implementation in government agencies. Consequently, this unpredictability is key, as it removes the ability for individuals to plan around scheduled tests. Indeed, random drug testing creates an unpredictable environment that motivates security guards to remain drug-free, thus maintaining a safer and more responsible workforce that demands alertness and integrity. To support this, Vaculova (2024) notes that drug testing helps keep employees away from unlawful drug and excessive alcohol consumption. Problem drinking and substance abuse among the workforce has been linked to negative employee performance, truancy, job injuries, and illnesses; thus, this highlights the direct correlation between a drug-free workforce and improved workplace outcomes. In line with this, informants emphasized that the random nature of the tests deters drug use due to the fear of detection. They noted its effectiveness in identifying and discouraging drug use, ultimately contributing to a safer work environment.

Table 12
Subtheme 4.1: Promoting Positive Behavior and Accountability

DATA SOURCES	EVIDENCE
Interview	<p>Informant 1: “To what extended ano siya talagang sobrang laki ng tulong yung ano ahh pag kakaturoon kasi we know alam natin na nag ddrugs na yan mag iisip din yan e ano so kung ang drug testing natin ay schedule alam na nila agad ay 3 months from now.”</p> <p>Informant 5: “Ang random na pagsusuri sa droga ay nakakatulong upang maiwasan ang paggamit ng droga sa mga guwardiya, dahil ang takot na matuklasan ay nagpapalakas ng disiplina at pagiging maingat sa trabaho.”</p> <p>Informant 6: “Bilang isang security guard, naniniwala ako na ang random drug testing ay isang epektibong pananggalang laban sa parehong bagong paggamit at paulit-ulit na paggamit ng droga.”</p>

Informant 8: “Pagka may mga random drug testing kasi, magkakaalaman talaga. Kung may ganito sa kada establishmento at mga trabaho, mababawasan yung mga taong gumagamit at mga taong sangkot sa maling gawain.”

Informant 9: “Highly effective naman ang random drug testing kasi talagang matatakot gumamit ng droga yung mga security guards eh.”

Informant 10: “Para saakin ang random na pagsusuri sa droga ay nakakatulong upang mapanatili ang disiplina.”

Informant 1: “Sabihin na natin nasa hundred plus kami pero tinitiyak ko sayo ni isa diyan ni isa walang nag drugs kasi effective siya.”

Informant 10: “Bilang isang security guard, may mga pagkakataon kung saan nakita ko ang pagiging epektibo ng random na pagsusuri sa droga. Halimbawa, may isang pagkakataon na isang kasamahan ko ang nahuli sa pagsusuri.”

Observation Security guards in Tagaytay City demonstrate increased responsibility and accountability after being selected randomly for drug testing. Random drug testing creates unpredictable conditions that force security guards to follow workplace rules more strictly and appear professionally.

Data/Documentation Since introducing random drug testing procedures, security guards have experienced fewer drug-related incidents. Random drug testing has led to better employee attendance and performance reviews because guards feel more satisfied due to the established drug-free workplace policy.

Subtheme 4.2: Positive Behavioral Changes and Support for Individual

Random drug testing functions as a deterrent to decrease drug consumption among security guards in Tagaytay City. Indeed, the primary reason for implementing random drug testing in the workplace is to ensure the safety and health of all employees, as substance abuse can impair an individual’s ability to perform their job safely and effectively, increasing the risk of accidents and injuries (Crangle, 2024; Labor Law, 2024). Consequently, random drug testing creates a safer workplace through responsible behavior while improving decision-making abilities, which results in better performance and safety standards. This creates a positive feedback loop, where a safer environment reinforces responsible behavior. In support of this, the interview transcripts highlight its role in promoting a safer and more responsible workplace, maintaining discipline, and preventing misconduct [Informant 2], [Informant 7], [Informant 10]. Moreover, the story of a colleague seeking help after realizing the risk of job loss further illustrates the potential for positive behavioral change [Informant 6]. Additionally, the Dangerous Drugs Board (DDB) emphasizes rehabilitation programs for individuals who test positive, aiming to support their recovery and reintegration into the workforce.

Table 13

Subtheme 4.2: Positive Behavioral Changes and Support for Individual

DATA SOURCES	EVIDENCE
<p>Interview</p>	<p><i>Informant 2:</i> "Sa tingin ko oo nakakatulong ang paggamit ng random drug testing."</p> <p><i>Informant 7:</i> "Mula sa aking pananaw bilang isang security guard, naniniwala ako na ang random drug testing ay maaaring maging mahalagang bahagi ng paglikha ng mas ligtas at mas responsableng lugar ng trabaho."</p> <p><i>Informant 10:</i> "Para saakin ang random na pagsusuri sa droga ay nakakatulong upang mapanatili ang disiplina, maiwasan ang maling gawi, at matulungan ang mga guwardiya na magpatuloy sa tamang landas sa kanilang trabaho."</p>
<p>Observation</p>	<p><i>Informant6:</i> "Halimbawa, sa isang kumpanyang pinagtatrabahuan ko ngayon, mayroon kaming kasamahan na nahihirapan dahil sa paggamit ng droga. Nang ipakilala ang random drug testing, napagtanto niya ang panganib na mawalan ng trabaho at humingi siya ng tulong upang baguhin ang kanyang buhay."</p>
<p>Data/Documentation</p>	<p>Random drug testing functions as a preventive measure to decrease drug consumption among security guards operating in Tagaytay City. Random drug testing creates responsible behavior while ensuring workplace safety through better decision-making, which results in enhanced workplace performance.</p> <p>The implementation of random drug testing in Tagaytay City security forces has led to decreased drug-related incidents, reduced absences, and positive test results. Security guards report better conduct and work ethics alongside reduced safety incidents, which create a safer workplace, according to safety records.</p>

Subtheme 4.3: Assurance of Safety and Reduced Misuse

Random drug testing is an essential tool for maintaining drug-free workplaces, ensuring that security guards in Tagaytay City remain safe and reliable. Random drug testing should be implemented consistently and without prior notice to ensure effectiveness, as outlined in the Dangerous Drugs Board Regulation No. 7, Series of 2003. Furthermore, Section 36, Article III of Republic Act 9165 mandates the conduct of random drug testing for officers and public and private office employees reinforces the legal basis and importance of this practice in maintaining workplace safety and integrity. Security agencies can prevent drug use through

regular unannounced testing because guards understand they could face testing time. This anticipation fosters a culture of compliance and responsibility. As pointed out by Ani et al. (2025), their study, which assessed the impact of Random Drug Testing (RDT) on the internal cleansing efforts of the Philippine National Police (PNP) in Police Regional Office (PRO) 12, reinforces the notion that consistent and uniformly applied random drug testing can be highly effective in maintaining a drug-free environment. The interview transcripts further support the effectiveness of random drug testing, with informants noting its positive impact on discipline and community safety [Informant 5]. The low positivity rates observed in the informants' workplaces further suggest the deterrent effect of random drug testing [Informant 4], [Informant 8], [Informant 9].

Table 14
Subtheme 4.3: Promoting Awareness and Deterrence of Drug Use

DATA SOURCES	EVIDENCE
Interview	<p>Informant 3: “Hindi ko masabi kasi takot ang iba na ma-terminate. Kung may idea silang may random drug test, iiwasan na nilang pumasok, para hindi makahawa o makaimpluwensya sa ibang tao sa komunidad.”</p> <p>Informant 4: “Sa ‘min kasi dito sa hotel eh wala pa naman nagpapositive samin dito sa 3 years ko ng security guard.”</p> <p>Informant 5: “sobrang napaka epektibo ang pag sasagawa ng random drugs testing dahil dito nagiging disiplinado ako kami ng mga kasamahan ko sa trabaho at hindi lamang doon pati nadin sa community ma feel feel nila at alam nila na ligtas sila sa lugar na yun kase nga drug free ito kaya napaka epektibo nito programa na ito.”</p> <p>Informant 8: “Para sakin magiging epektibo ito kung magagwa sa lalong madaling panahon, kahit nga sa renewal o sa mandatory drug test every 6 months e wala namang nag pa - postive sa mga katrabaho ko.”</p> <p>Informant 9: “siguro best example ko dito eh yung dito samin sa hotel eh wala pang nagpapositive samin kapag nagkakaran ng random drug testing.”</p>
Observation	<p>Random drug testing of security guards in Tagaytay City substantially improved workplace safety and professional conduct. Security agencies that conduct regular testing experience reduced</p>

occurrences of impaired judgment, absenteeism, and misconduct among their personnel.

Data/Documentation Random drug testing has led to a decrease in drug-related incidents, according to incident reports. The test results analysis demonstrates substance use patterns and performance records show enhanced disciplinary standards. Independent research shows that the program helps organizations sustain workplace safety and professionalism.

Subtheme 4.4: Support and Transparency in the Implementation Process

The effectiveness of random drug testing for security guards in Tagaytay City depends heavily on support systems and transparent implementation procedures. Security companies can offer Employee Assistance Programs (EAPs) that provide confidential counseling and support services for employees struggling with substance abuse to enhance support and transparency. Indeed, security personnel maintain trust and follow procedures when testing becomes more effective through clear policies, fair procedures, and open communication about testing purposes. Support systems, including counseling and rehabilitation programs, help affected individuals get help instead of concealing their substance use; however, without transparency and support, random drug testing can be viewed as punitive rather than preventative. Pharm (2020) showed that 10.7% of security guards had positive urine drug test results. According to Bell (2023), a surprising number of security guards test positive for drugs; in light of that news, more private security firms are cracking down on drug abuse. In agreement with these findings, Badran says that DMI (2024) has strict legislative measures and regular drug tests implemented to provide a drug-free environment in the operative space, thus preventing accidents and enhancing performance.

Therefore, a descriptive-analytic approach argues for clear, transparent policies that balance security and employee dignity. Moreover, the study recognizes issues surrounding drug testing, including privacy and fairness, and the need for transparency while presenting outcomes, rehabilitation opportunities, and remedies against the use of results against the person who tested positive. Consequently, coherent legislation is necessary to match workplace policies with individual rights and support changes in consumers' behavior and social inclusion, a balance critical to ensure a safe workplace and respect for individual rights. The interview transcripts, in this case, suggest that the effectiveness of drug testing is linked to its role as a requirement and deterrent [Informant 1], [Informant 2], [Informant 7].

Table 15
Subtheme 4.4: Ensuring Compliance and Support for Drug-Free Policies

DATA SOURCES	EVIDENCE
Interview	<p><i>Informant 1: “kung mapapansin nyo nga ang dami dami dito e na empleyado namin dito sabihin na natin nasa hundred plus kami pero tinitiyak ko sayo ni isa diyan ni isa walang nag drugs kasi effective siya, why effective yung ginagawa ng government yung help ng government na pag kasama na sa requirementyung drug testing.”</i></p> <p><i>Informant 2: “Simula ng ipatupad ang Random Drug Testing marami ng umiiwas sa droga gawa ng baka ikaw ang masampulan ng random drug testing.”</i></p> <p><i>Informant 7: “Para sakin magiging epektibo ito kung magagwa sa lalong madaling panahon, kahit nga sa renewal o sa mandatory drug test every 6 months e wala namang nag pa - positive sa mga katrabaho ko, edi mas magiging maganda kung may random drug testing.”</i></p>
Observation	<p>Security guards in Tagaytay City who undergo random drug testing have become more aware of workplace safety and professional standards. Security guards maintain drug-free lifestyles because they understand that testing occurs with both fairness and transparency. Support programs create an environment that motivates substance users to access help services.</p>
Data/Documentation	<p>The effectiveness of the random drug testing program is demonstrated by decreasing positive test results in previous records. Security guard incident reports about drug-related misconduct show a downward trend. Both employee surveys and observed levels of compliance confirm the implementation process's success.</p>

V. DISCUSSION

Random drug testing turned out to provide excellent prevention concerning workplace drug use among security guards in the city of Tagaytay. This research proved that when guards knew the probability of random testing, they were less likely to be intoxicated to evade the penalty. Such a method not only enhanced safety in the workplace but also accelerated the professional environment. This study supported the continued operation of random drug testing and suggested that other supportive measures, including education and counseling, also increased the impact of such programs.

This research examined how random drug testing helped decrease drug use among security guards. It showed that conducting these tests reduced drug use. The plan involved increasing random tests, establishing the way and reason why they were conducted, and ensuring that people who required assistance could access counseling or rehabilitation. Employers created a safer and healthier workplace by combining support with prevention. Nevertheless, the study had specific flaws. Implementing random drug testing was difficult to maintain going forward due to a lack of funding or trained staff.

To address these issues and truly bring the workplace to a safer level, it was recommended that companies train more of their employees on why a drug-free workplace is important and how to conduct drug testing properly. Future studies were encouraged to involve more individuals from diverse backgrounds and to include numbers and figures to achieve more robust findings. In addition, workplaces were advised to regularly provide education, counseling, and rehabilitation programs to employees with substance problems to support a safe and respectful environment.

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Insights into Awareness: Exploring College Students' Understanding of PNP Anti-Illegal Drugs Initiatives

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I. ABSTRACT

This study assesses the awareness among selected college students about the PNP's anti-drug initiatives and explores the factors influencing their knowledge and perceptions of the campaigns. The research aims to evaluate the impact of these campaigns on students' awareness of the dangers of drug use and to identify areas for improvement in communication strategies. The researchers use the qualitative type of research to conduct their study. According to Bhandari (2020), Ideas, views, or experiences are examined in qualitative research by gathering and reviewing non-numerical data (written, video, or audio, for example). It can be used to generate new research questions or gain a comprehensive grasp of a problem. The findings revealed that most students were familiar with the campaigns and understood their goals, which included reducing drug use, promoting safety, and addressing drug-related crimes. However, many students lacked active participation due to limited local awareness. They suggested improvements such as integrating drug education into school curricula, focusing on rehabilitation, and increasing community involvement. The text suggests incorporating interactive activities, integrating drug education into schools, and focusing on education, rehabilitation, and community engagement to combat drug use. The PNP's anti-illegal drug efforts should focus on community awareness, transparency, and accountability.

Keywords: *Anti-drug initiatives, Awareness, College students, Drug education, Rehabilitation, Community involvement, Drug use prevention, Communication strategies.*

II. INTRODUCTION

The drug issue is undoubtedly a public health challenge that must be prioritized because it creates complex health and social problems. Anti-illegal drug campaigns are a global effort to raise awareness about the dangers of drug abuse and trafficking. These campaigns aim to educate the public, especially youth, on the negative consequences of drug use and to encourage people to reject illicit drugs. Under the administration of President Rodrigo Roa Duterte, the Philippines undergoes rigorous anti-drug cleansing through the shared efforts of national government agencies, non-government organizations, faith-based groups, and the private sector.

In order to fully support the government's anti-drug campaign, the Philippine National Police launched its PNP Anti-Illegal Drugs Campaign Plan: Double Barrel. Implemented in a two-pronged approach, this is the centerpiece of the PNP's campaign against illegal drugs. The lower barrel is dubbed Project Tokhang. The upper barrel, which is the Project HVT (High-Value Target), is a sustained anti-illegal drugs police operation that includes buy-busts, service of search and arrest warrants, manhunts, raids, and checkpoints against High Value and Street Level Targets involved in trafficking and selling of illicit drugs. In Cavite, the PNP has spearheaded initiatives such as the "Oplan Tokhang," which involves house-to-house visitations to persuade drug users and pushers to surrender. The PNP also conducts information drives, drug awareness seminars, and rehabilitation programs to combat the drug menace in the province.

The study aims to assess the extent to which these students are informed about the PNP's efforts, the factors that influenced their awareness of the campaigns, and their perceptions of the campaigns' impact. The research seeks to enhance drug prevention strategies and promote a drug-free environment in educational institutions and beyond by evaluating these factors.

This study aims to know the level of awareness of selected college students on the different PNP Anti-illegal drugs campaigns. It aims to answer the following questions: Specifically, this study will seek to answer the following questions:

How do college students perceive and interpret the PNP anti-illegal drugs campaigns?

What factors influence college students' awareness and understanding of anti-illegal drug initiatives?

How do college students perceive the impact of the campaigns on their attitudes and behaviors toward illegal drug use?

What insights can be gained from the lived experiences of college students to enhance the effectiveness of anti-illegal drug campaigns?

Commonly this study aims to know the level of awareness of selected college students on the different PNP anti-illegal drugs campaigns. It will be the following:

PNP Administration. In this study, PNP personnel will be allowed to voice their ideas about how they will prevent the use of illegal drugs and how various action plans will support them in their fight against them. The study's findings will make for important reading material, ensuring that the public is fully informed about the efficacy of anti-drug advocacy campaigns. Criminology Students This study will educate and serve as a wake-up call for them as future law enforcement officials regarding the efficacy of anti-drug advocacy campaigns. Nursing Students This gives nursing students a broader perspective on how anti-illegal drug initiatives intersect with healthcare practices. Future researchers this will be used in the study as a reference and guide with related and appropriate subjects to help them build and enhance their research.

The applicable theory that underpins this study is the Social Learning Theory developed by Albert Bandura. This theory posits that individuals can learn new behaviors by observing others. In the context of this study on anti-illegal drug campaigns, the Social Learning Theory suggests that the public, especially the youth, can be influenced to reject drug use and trafficking by observing and modeling the behaviors and attitudes promoted in these awareness-raising initiatives.

III. METHODS

The researchers used the qualitative type of research in order to conduct their study. According to Bhandari (2020), Ideas, views, or experiences are examined in qualitative research by gathering and examining non-numerical data (written, video, or audio, for example). It can be used to generate new research questions or gain a comprehensive grasp of a problem. The study's respondents will be 10 college students from Olivarez College Tagaytay. The researchers aim to interview students from the College of Nursing and Criminology.

The researchers can obtain a representative sample by using purposive sampling. Purposive sampling refers to a group of non-probability sampling techniques in which units are selected because they have characteristics that you need in your sample. In purposive sampling, units are selected based on purpose. Third and fourth-year students have accumulated more academic and life experiences compared to first- and second-year students,

which can provide a more developed perspective on awareness and understanding of anti-illegal drug initiatives. Third-year nursing students studied drug-related issues in Psychiatric Nursing, whereas fourth-year criminology students focused on Vice and Drug Education and Control. These students are closer to entering the professional world. They may have a more mature and nuanced understanding of societal issues, including the implications and effectiveness of anti-illegal drug initiatives. Older students are often more engaged in campus and community activities and may have participated in or observed drug prevention programs or discussions, providing richer insights into the effectiveness of these initiatives. These students may have more influence on future generations and can offer valuable feedback on improving drug prevention strategies targeting younger students.

The researchers used Clarke and Braun's Thematic Analysis as a methodological approach to analyze the data collected from college students about their awareness and understanding of the Philippine National Police's (PNP) anti-illegal drug initiatives.

The researchers systematically explored the qualitative data using Clarke and Braun's Thematic Analysis. They identified key themes that shed light on how college students perceive and understand the PNP's initiatives against illegal drugs. This method allowed for a rich, detailed interpretation of the data, focusing on the students' lived experiences and perspectives.

IV. RESULTS

Problem 1: How do college students perceive and interpret the PNP anti-illegal drugs campaigns?

Theme 1. Community Academic Engagement is Critical

The relationship between academic institutions and the community is fundamental for enriching education, solving real-world problems, and creating socially responsible, civically engaged individuals. This theme likely calls for more intentional, sustained partnerships between schools, universities, and the communities they serve.

Participant	Excerpt	Translation	Code	Theme
1	<i>"The PNP should collaborate with student councils to create campaigns that are more</i>	<i>"Dapat makipagtulungan ang PNP sa mga student council para lumikha ng mga kampanyang mas kaakit akit sa mga</i>	Improved Delivery and Diverse Platform	Community Academic Engagement is Critical

	<i>appealing to college students.”</i>	<i>estudyante sa kolehiyo.”</i>		
2	<i>“Partner with student organizations and provide regular updates through school channels.”</i>	<i>“Makipag partner sa mga organisasyon ng mag aaral at magbigay ng regular na mga update sa pamamagitan ng mga channel ng paaralan.”</i>	Improved Delivery and Diverse Platform	Community Academic Engagement is Critical
3	<i>“Use social media platforms and partner with schools for consistent campaigns and activities.”</i>	<i>“Gamitin ang mga platform ng social media at makipagtulungan sa mga paaralan para sa tuloy tuloy na kampanya at aktibidad.”</i>	Improved Delivery and Diverse Platform	Community Academic Engagement is Critical
4	<i>“Posting programs related to drugs and to prevent bad activities that harm students like us.”</i>	<i>“Pag post ng mga programang may kinalaman sa droga at para maiwasan ang masasamang gawain na nakakasira sa mga estudyanteng tulad natin.”</i>	Improved Delivery and Diverse Platform	Community Academic Engagement is Critical
5	<i>“I think the PNP should conduct seminars in schools about drugs and their effects.”</i>	<i>“Sa tingin ko, dapat magsagawa ng seminar ang PNP sa mga paaralan tungkol sa droga at ang epekto nito.”</i>	Improved Delivery and Diverse Platform	Community Academic Engagement is Critical
6	<i>“The PNP could partner with schools to provide workshops, seminars, and informational materials.”</i>	<i>“Maaaring makipag partner ang PNP sa mga paaralan para magbigay ng mga workshop, seminar, at informational materials.”</i>	Improved Delivery and Diverse Platform	Community Academic Engagement is Critical
7	<i>“I suggest conducting more seminars.”</i>	<i>“Iminumungkahi ko ang pagsasagawa ng higit pang mga seminar.”</i>	Improved Delivery and Diverse Platform	Community Academic Engagement is Critical

8	<i>“PNP could improve its communication or programs to better inform college students about the danger of illegal drugs are collaborative awareness campaign, social media engagement, peer led programs, and etc.”</i>	<i>“Maaaring mapabuti ng PNP ang kanilang komunikasyon o mga programa upang mas maipaalam sa mga mag aaral sa kolehiyo ang panganib ng iligal na droga ay collaborative awareness campaign, social media engagement, peer led programs, at iba pa.”</i>	Improved Delivery and Diverse Platform	Community Academic Engagement is Critical
9	<i>“I think social media may be a good flatform especially in today’s era.”</i>	<i>“Sa tingin ko ang social media ay maaaring maging isang magandang flatform lalo na sa panahon ngayon.”</i>	Improved Delivery and Diverse Platform	Community Academic Engagement is Critical
10	<i>“The PNP could work with colleges to hold regular talks, hand out educational materials, and set up student support programs to spread awareness.”</i>	<i>“Maaaring makipagtulungan ang PNP sa mga kolehiyo upang magsagawa ng regular na pag uusap, mamigay ng mga materyales sa edukasyon, at magtayo ng mga programa ng suporta sa mga estudyante upang maipalaganap ang kamalayan.”</i>	Improved Delivery and Diverse Platform	Community Academic Engagement is Critical

Problem 2: What are the factors that influence college students’ awareness and understanding of anti-illegal drugs initiatives?

Theme 2. Utilization of Phenomenal Platforms

The distinctive role of an impactful or innovative platform in enhancing participant engagement, fostering deeper interactions, and generating meaningful data. It suggests that the platform, whether physical, digital, or conceptual, is seen as a critical tool in the research process—enabling transformative experiences or offering unique opportunities for participants to engage, reflect, and contribute in ways that traditional platforms may not.

Participant	Excerpt	Translation	Code	Theme
1	<i>“No, because the programs aren’t well advertised or accessible.”</i>	<i>"Hindi, kasi hindi naman well advertised o accessible ang mga programa."</i>	Involvement and Cooperation	Utilization of Phenomenal Platforms
2	<i>“Yes, I joined a drug awareness seminar, and it was informative and engaging.”</i>	<i>"Oo, sumali ako sa isang seminar ng kamalayan sa droga, at ito ay nagbibigay kaalaman at nakakaengganyo."</i>	Involvement and Cooperation	Utilization of Phenomenal Platforms
3	<i>“No, due to lack of awareness about such programs in my area.”</i>	<i>"Hindi, dahil sa kakulangan ng kamalayan tungkol sa mga naturang programa sa aking lugar."</i>	Involvement and Cooperation	Utilization of Phenomenal Platforms
4	<i>“Yes, it is familiar because this is one of the things that can help us to reduce the use of illegal drugs”</i>	<i>“Oo pamilyar ito dahil isa ito sa mga makakatulong sa atin para mabawasan ang paggamit ng ilegal na droga”</i>	Involvement and Cooperation	Utilization of Phenomenal Platforms
5	<i>“it’s not because I don’t have the experience to participate because I haven’t been.”</i>	<i>"hindi dahil wala akong experience na sumali dahil hindi pa ako nakakasali."</i>	Involvement and Cooperation	Utilization of Phenomenal Platforms
6	<i>“Not yet. Initiatives or programs are held quite far from here, so I have not been able to participate.”</i>	<i>"Hindi pa po. Ang mga inisyatibo o programa ay gaganapin medyo malayo mula dito, kaya hindi ako nakasali. "</i>	Involvement and Cooperation	Utilization of Phenomenal Platforms
7	<i>“No, I haven’t participated. There hasn’t been much information shared directly with us at my</i>	<i>"Hindi, hindi pa ako sumali. Wala pang masyadong impormasyon na ibinahagi nang direkta sa amin sa aking paaralan, kaya</i>	Involvement and Cooperation	Utilization of Phenomenal Platforms

	<i>school, so I'm not aware of many student-targeted events."</i>	<i>hindi ako nakakaalam ng maraming mga kaganapan na naka target sa mag aaral.</i>		
8	<i>"No, there's no opportunities available and shown."</i>	<i>"Hindi, walang mga pagkakataon na magagamit at ipinapakita."</i>	Involvement and Cooperation	Utilization of Phenomenal Platforms
9	<i>"Not yet because there is no available program here in our area."</i>	<i>"Hindi pa kasi available profram dito sa lugar namin."</i>	Involvement and Cooperation	Utilization of Phenomenal Platforms
10	<i>"Yes, by sharing post on social media, even though it is a simple gesture, it feels good knowing that you are spreading important information."</i>	<i>"Oo, sa pag share ng post sa socmed, kahit simpleng gesture lang, masarap ang pakiramdam knowing na nagkakalat ka ng importanteng impormasyon."</i>	Involvement and Cooperation	Utilization of Phenomenal Platforms

Problem 3: How do college students perceive the impact of the campaigns on their attitudes and behaviors towards illegal drug use?

Theme 3. Impact of Campaigns to College Students

The PNP's anti-illegal drug initiatives shape college students' understanding, attitudes, and behaviors surrounding drug use. The research explores whether these campaigns effectively raise awareness, influence student perceptions of drug-related issues, and inspire behavioral changes.

Participant	Excerpt	Translation	Code	Theme
1	<i>"Their approach is strict but could improve by focusing more on education and rehabilitation."</i>	<i>"Ang kanilang diskarte ay mahigpit ngunit maaaring mapabuti sa pamamagitan ng pagtuon nang higit pa sa edukasyon at rehabilitasyon."</i>	Strict Enforcement	Impact of Campaigns to College Students

2	<i>“Their approach seems strict but could be more focused on rehabilitation.”</i>	<i>“Mukhang mahigpit ang kanilang diskarte ngunit maaaring mas nakatuon sa rehabilitasyon.”</i>	Strict Enforcement	Impact of Campaigns to College Students
3	<i>“Generally active but could improve transparency and community involvement.”</i>	<i>“Pangkalahatang aktibo ngunit maaaring mapabuti ang transparency at paglahok ng komunidad.”</i>	Public Safety	Impact of Campaigns to College Students
4	<i>“We will see the strategy of our police forces. Because they give a warning about the prescribed medicine that we follow.”</i>	<i>“Makikita natin ang diskarte ng ating mga pulis. Dahil nagbibigay sila ng babala tungkol sa iniresetang gamot na sinusunod natin.”</i>	Public Safety	Impact of Campaigns to College Students
5	<i>“It’s fine. But maybe they should improve the strategy so that the outcome will be better.”</i>	<i>“Okay lang naman. Pero siguro dapat pagbutihin nila ang strategy para mas maging maganda ang outcome.”</i>	Public Safety	Impact of Campaigns to College Students
6	<i>“I feel that while they are trying to address drug issues seriously, there could be a more community-centered approach that doesn’t rely solely on punitive measures but includes rehabilitation and support.”</i>	<i>“Nararamdaman ko na habang sinusubukan nilang seryosong tugunan ang mga isyu sa droga, maaaring magkaroon ng isang mas nakasentro sa komunidad na diskarte na hindi umaasa lamang sa mga hakbang sa pagpaparusa ngunit kasama ang rehabilitasyon at suporta.”</i>	Public Safety	Impact of Campaigns to College Students
7	<i>“No, I haven’t encountered it yet. If the School Screening or testing for drugs, I have heard but not yet experience.”</i>	<i>“Hindi, hindi pa ako nakaka encounter. Kung ang School Screening o testing para sa droga, narinig ko na pero hindi ko pa nararanasan.”</i>	Public Safety	Impact of Campaigns to College Students

8	<i>“Yes, but I haven’t encountered or experience personally yet because I am just hearing it in the news”</i>	<i>“Oo, pero hindi ko pa na encounter or experience personally kasi naririnig ko lang sa news”</i>	Not encountered	Impact of Campaigns to College Students
9	<i>“Yes, Drugs are often present in Batangas where I live, PNP in our place often focuses on breaking the supply chain by targeting the source of it.”</i>	<i>“Oo, Drugs ang madalas na naroroon sa batangas kung saan ako nakatira, PNP sa lugar namin madalas na nakatuon sa pagbasag ng supply chain sa pamamagitan ng pag target sa pinagmulan nito.”</i>	Public Safety	Impact of Campaigns to College Students
10	<i>“I think their approach is very strict, which might help but can also make people feel scared instead of supported.”</i>	<i>“Sa tingin ko ang kanilang diskarte ay napakahigpit, na maaaring makatulong ngunit maaari ring gumawa ng mga tao pakiramdam takot sa halip na suportado.”</i>	Strict Enforcement	Impact of Campaigns to College Students

Problem 4: What insights can be gained from the lived experiences of college students to enhance the effectiveness of anti-illegal drugs campaigns?

Theme 4. Enhance the Effectiveness of Anti-illegal Drugs Campaigns.

In this section, participants are invited to share their thoughts on improving the PNP’s anti-illegal drug strategies. This may involve changes to operational methods, community outreach, or collaboration with educational institutions.

Participant	Excerpt	Translation	Code	Theme
1	<i>“Add more interactive activities, like forums or peer mentoring, to engage students better.”</i>	<i>“Magdagdag ng higit pang mga interaktibidad, tulad ng mga forum o peer mentoring, upang mas mahusay na makisali sa mga mag aaral.”</i>	Recommendation and Better Coordination	Enhance the Effectiveness of Anti-illegal Drugs Campaigns.

2	<i>“Schools can support by integrating drug education into the curriculum and hosting awareness activities.”</i>	<i>“Ang mga paaralan ay maaaring suportahan sa pamamagitan ng pagsasama ng edukasyon sa droga sa kurikulum at pagho host ng mga aktibidad sa kamalayan.”</i>	Recommendation and Better Coordination	Enhance the Effectiveness of Anti-illegal Drugs Campaigns.
3	<i>“Focus more on education, rehabilitation, and community engagement.”</i>	<i>“Mas pagtuunan ng pansin ang edukasyon, rehabilitasyon, at pakikipag ugnayan sa komunidad.”</i>	Recommendation and Better Coordination	Enhance the Effectiveness of Anti-illegal Drugs Campaigns.
4	<i>“My strategy is to listen to whatever the police give to avoid and not help others.”</i>	<i>“Ang diskarte ko ay makinig sa kung ano man ang ibibigay ng pulisya para maiwasan at hindi makatulong sa iba.”</i>	Recommendation and Better Coordination	Enhance the Effectiveness of Anti-illegal Drugs Campaigns.
5	<i>“Just like I answered in the previous question, they should increase their effort. It is especially difficult to fight such problems.”</i>	<i>“Tulad ng sagot ko sa nakaraang tanong, dapat dagdagan nila ang kanilang pagsisikap. Lalo na mahirap labanan ang mga ganitong problema.”</i>	Recommendation and Better Coordination	Enhance the Effectiveness of Anti-illegal Drugs Campaigns.
6	<i>“I would suggest more educational campaigns that focus on understanding the root causes of drug use. Additionally. Promoting rehabilitation and support services would be beneficial, rather than only focusing on punishment.”</i>	<i>“Magmumungkahi ako ng mas maraming kampanyang pang edukasyon na nakatuon sa pag-unawa sa mga ugat ng paggamit ng droga. Dagdag pa. Ang pagtataguyod ng rehabilitasyon at mga serbisyong suporta ay magiging kapaki-pakinabang, sa halip na tumuon lamang sa kaparusahan.”</i>	Recommendation and Better Coordination	Enhance the Effectiveness of Anti-illegal Drugs Campaigns.

7	<i>“Focus on what you can control and your target demographic.”</i>	<i>“Tumuon sa kung ano ang maaaring kontrolin at ang iyong target na demograpiko.”</i>	Recommendation and Better Coordination	Enhance the Effectiveness of Anti-illegal Drugs Campaigns.
8	<i>“Improvements or changes that I would suggest for the PNP’s anti-illegal drugs will be to focus on the awareness program or preventive program to the community, and of course to ensure the transparency and accountability in every operation they will implement.”</i>	<i>“Ang mga pagpapabuti o pagbabago na iminumungkahi ko para sa anti illegal drugs ng PNP ay ang pagtuon sa awareness program o preventive program sa komunidad, at siyempre ang pagtiyak ng transparency at accountability sa bawat operasyon na kanilang ipapatupad.”</i>	Recommendation and Better Coordination	Enhance the Effectiveness of Anti-illegal Drugs Campaigns.
9	<i>“I think being less violent and open to the public might help especially during Duterte’s time.”</i>	<i>“Sa tingin ko ang pagiging hindi gaanong marahas at bukas sa publiko ay maaaring makatulong lalo na sa panahon ni Duterte.”</i>	Recommendation and Better Coordination	Enhance the Effectiveness of Anti-illegal Drugs Campaigns.
10	<i>“They could focus more on education and helping people recover. Building trust in communities would also encourage people to report issues.”</i>	<i>“Mas makakapag focus sila sa edukasyon at pagtulong sa mga tao na makabawi. Ang pagbuo ng tiwala sa mga komunidad ay maghihikayat din sa mga tao na magulat ng mga isyu.”</i>	Recommendation and Better Coordination	Enhance the Effectiveness of Anti-illegal Drugs Campaigns.

V. DISCUSSION

The findings revealed that most students were familiar with the campaigns and understood their goals, which included reducing drug use, promoting safety, and addressing drug-related crimes. However, many students lacked active participation due to limited local awareness. They suggested improvements such as integrating drug education into school curricula, focusing on rehabilitation, and increasing community involvement. Students also emphasized the role of schools in promoting drug awareness through seminars, workshops, and peer education programs. Additionally, they recommended that the PNP collaborate with student organizations and utilize social media to enhance campaign engagement. In conclusion, the study highlights the need for more substantial educational and community-focused efforts to combat drug abuse effectively.

Based on the findings, it can be concluded that most respondents have seen drug prevention campaigns at school events but have not personally encountered them. The Philippine National Police (PNP) aims to reduce illegal drug use, promote safer environments, and eradicate drug-related crimes. Programs like Oplan Tokhang and the Drug-Free Workplace focus on rehabilitation, education, and treatment for drug users. However, the speaker acknowledges a lack of awareness in their area due to distance, lack of direct information, and lack of opportunities. Schools can promote drug awareness and prevention by creating clubs, integrating drug education into the curriculum, hosting awareness activities, and organizing seminars, workshops, and peer education programs. The PNP should collaborate with student councils, student organizations, and schools to create engaging campaigns and use social media platforms for consistent campaigns and activities.

This study suggests that to strengthen school-based programs to combat drug abuse, drug education effectively should be integrated into the curriculum at all educational levels, ensuring that students receive consistent and comprehensive learning about the risks of illegal drug use. Enhance Accessibility of Campaigns Anti-drug campaigns should extend beyond urban areas to reach communities in more remote locations. This can be achieved through mobile awareness programs or community caravans that bring the message directly to these areas. Promote Active Participation encouraging students to participate in drug-free initiatives actively can significantly enhance anti-drug campaigns' impact. Schools should organize competitions, art projects, and advocacy drives focusing on drug prevention and rehabilitation. Increase Community Engagement Engaging the broader community, including families, in drug prevention efforts is essential for creating a holistic approach to tackling drug abuse. Promote Transparency and Trust building trust between the public and the PNP is essential for the success of anti-drug campaigns. Regularly updating the public on the progress of the PNP's anti-drug initiatives and showcasing tangible outcomes can help foster credibility.

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**Effectiveness of Mediation Process of Katarungang Pambarangay in Resolving
Community Disputes in Barangay Sungay West, Tagaytay City**

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I. ABSTRACT

This study investigates the effectiveness of the Katarungang Pambarangay mediation process in resolving community disputes in Barangay Sungay West, Tagaytay City. The Katarungang Pambarangay is a community-based justice system, established under the Local Government Code of 1991, designed to resolve minor disputes at the barangay level without involving the formal judicial system. This research adopts a descriptive-quantitative approach, analyzing data collected from 400 residents, including ordinary residents and barangay officials. A self-administered survey questionnaire was used to assess various aspects of the mediation process, such as complaint filing, hearing notices, the mediator's role, and the outcomes of the mediation process. The findings reveal that the mediation process in Barangay Sungay West is highly effective, with residents rating most components positively. The accessibility of the process, clear communication, and timely delivery of notices were among the strengths highlighted by respondents. However, the study also identifies areas needing improvement, such as enhancing confidentiality during sessions, increasing transparency in the process, and improving the impartiality of mediators through regular training. The research suggests that while the Katarungang Pambarangay system significantly contributes to resolving conflicts within the community, there is room for improving communication, expanding public awareness, and reinforcing the training of mediators. In conclusion, the study emphasizes the need for continuous evaluation and reform to maintain an effective and just mediation process.

Keywords: *Mediation, Katarungang Pambarangay, Community Disputes, Barangay Sungay West, Dispute Resolution*

II. INTRODUCTION

Disagreements and conflicts are a regular part of living in a shared space, especially in communities where people interact closely daily. To help manage these situations and avoid overcrowding the formal court system, the Philippine government implemented a system known as Katarungang Pambarangay. Mahajan (2020) stated that the disagreement could be pending or filed with the court. Personal injury, workers' compensation, business transactions, divorce or domestic relations, labor or community relations, employment, or any other related matters that do not involve evidentiary issues or complicated procedures are among the cases that are appropriate for mediation. Except in cases where a statute or contract provision mandates it, both parties may choose not to attend the mediation conference table.

Based on the "Local Government Code of 1991", also known as Republic Act 7160, mandates the barangays to maintain peace and support human rights and justice in the country. Decentralization allows for the Katarungang Pambarangay, a dispute resolution mechanism, to reduce docket congestion in courts and disparities in access to justice, particularly for underprivileged groups. Barangays are best positioned to mediate community disputes. The Barangay Justice System offers speedy, low-cost, and friendly service. Katarungang Pambarangay is a community-based justice system that uses mediation, conciliation, or arbitration to resolve disputes within a barangay, preventing resorting to courts and involving Punong Barangay members.

Community disputes are disagreements between people or groups, usually due to debt, noise, annoyance, misunderstanding, or the environment. These issues stem from differences in interests, values, or expectations, and they are frequently resolved through mediation, negotiation, community meetings, or legal intervention. Successful resolution depends on open communication, mutual respect, and a collaborative approach to identifying common ground. In line with that, Metillo et al. (2022) stated that when conflicts are addressed by diminishing harmful behavior and aggressive attitudes, dispute management can lead to resolution. This approach can also aim for more intricate and long-lasting outcomes in settling disputes. Disagreements are simply a part of human existence within communities. The court traditionally resolves disputes concerning conflicting parties' rights, suitability, and judgment.

Mediation is one of the informal methods of dispute resolution. According to Shonk (2024), in mediation, the parties can appoint a trained, neutral third party to help them reach an agreement. Rather than awarding, a professional mediator encourages the parties to explore

their interests and reach agreements to resolve the conflict. Mediators assist parties in obtaining a consensual, non-binding settlement by working with them individually and in groups.

Therefore, the researchers seek to determine how effective the mediation process of the Katarungang Pam barangay is in resolving community disputes in Barangay Sungay West, Tagaytay City. The particular reason for these circumstances is why the researchers chose Barangay Sungay West, Tagaytay City, as their locale; it has the second largest population barangay in Tagaytay City, comprising 4,662 residents. Based on the initial data, the total number of mediation cases in Barangay Sungay West is 656 complaints, starting in 2020 and ending in June 2024.

This study aimed to elucidate the answer to the following questions;

1. What is the demographic profile of the respondents in the following terms:
 - 1.1. Age;
 - 1.2. Gender;
 - 1.3. Length of residency;
 - 1.4. Experience with Katarungang Pambarangay;
 - 1.5. Barangay officials (elected and appointed) and residents
2. What are the factors that contribute to the effective resolution of conflicts in Barangay West in terms of the following mediation process:
 - 2.1 Filing of Complaint;
 - 2.2 Notice of Hearing;
 - 2.3 Presentation of Issues and Concerns of the Parties;
 - 2.4 Role of Mediator;
 - 2.5 Amicable Settlement;
3. What action plan can be proposed based on the findings of the study?

The study was based on conflict theory by Karl Marx to look at how well the Katarungang Pambarangay mediation process worked in solving community disputes in Barangay Sungay West, Tagaytay City. Conflict theory explains that society is often about competition for power and resources, and social order is maintained through control, not agreement. The theory helped us understand how power, social structures, and community factors like involvement, fairness, and satisfaction affected the mediation process. It also showed how differences in power and resources could influence how disputes were settled. Using conflict theory, the study aimed to find ways to improve the mediation process and make

it fairer and more effective. In the end, conflict theory helped explain the social factors behind community disputes and the role of Katarungang Pambarangay in promoting peace and unity.

The input-process-output, or IPO, model was adopted by the researchers. The materials and information required in order to obtain the result of the study are all included in this framework. The conceptual framework guides the analysis, offers a research road map, and helps in creating a thorough understanding of the mediation process' effectiveness. of the Katarungang Pambarangay in settling conflicts within the community. It includes the particular information on the researchers' methodology, the feedback, and the procedure itself.

The beneficiaries of this study are students, barangay officials, residents of barangay Sungay West, and future researchers. This study is limited to mediation process in Barngay Sungay West, Tagaytay City.

III. METHODS

The researchers adopted the input-process-output, or IPO, model. The materials and information required to obtain the study result are all included in this framework. The conceptual framework guides the analysis, offers a research road map, and helps create a thorough understanding of the effectiveness of the mediation process of the Katarungang Pambarangay in settling conflicts within the community. It includes particular information on the researchers' methodology, feedback, and procedure.

The beneficiaries of this study are students, barangay officials, residents of barangay Sungay West, and future researchers. This study is limited to the mediation process in Barangay Sungay West, Tagaytay City.

III. METHODS

This study used a descriptive-quantitative research design to assess the effectiveness of the mediation process in Kataranungang Pambarangay in Barangay Sungay West, Tagaytay City. The researchers used simple random sampling to ensure that every resident had an equal chance of being selected. It made the sample more reliable and unbiased, which helped the researchers gather accurate data that represented the entire population fairly. The respondents of this study were 400 residents, including the barangay officials (elected and appointed) and lupon members. The particular reason for these circumstances is why the researchers chose Barangay Sungay West, Tagaytay City, as their locale; it has the second-largest population

barangay in Tagaytay City, comprising 4,662 residents. The researchers used a self-made, printed survey questionnaire with closed-ended questions to collect data. It gathered the participants' demographic information and explored their experiences with the Katarungang Pambarangay mediation process, focusing on impartiality, fairness, community involvement, informality, and outcomes. The survey also seeks suggestions for improving the process's effectiveness in resolving community disputes. The researchers followed a step-by-step process to gather data. First, they got approval and had a professional check the questionnaire and consent form. They tested it with 17 people to ensure it was clear and consistent. The survey included a short letter that explained the study and a consent form. Then, they gave the survey questionnaire to people who agreed to participate and kept their information safe. After collecting the surveys, they counted the answers and gave the data to a statistician. Finally, they reviewed and interpreted the results.

The following statistical methods were utilized for analyzed data and interpreted the following: frequency percentage and mean.

Scale ranges	Qualitative description
3.26 – 4.00	Highly Effective
2.51 – 3.25	Effective
1.76 – 2.50	Not so Effective
1.00 – 1.75	Not Effective

IV. RESULTS

Table 1
Demographic Profile of the respondents

Profile		Frequency (n = 400)	Percentage
Gender	Female	215	53.8%
	Male	176	44.0%
	Prefer not to mention	9	2.3%
Age	51 – 65	124	31.0%
	36 – 50	121	30.3%
	18 – 35	95	23.8%
	66 years old and above	60	15%
Length of Residency	11 Years and above	172	43%
	6 – 10 Years	114	28.5%

	3 – 5 Years	94	23.5%
	1 – 2 Years	20	5.0%
Experience w/ Katarungang Pambarangay	Yes	233	58.3%
	No	167	41.8%
Category of Respondents	Residents	378	94.5%
	Barangay Officials	22	5.5%

The data shows the profile of the respondents. Frequency counts and percentages were utilized to determine the respondent classification. The data revealed that the majority of the respondents were female (53.8% or 215), with the age range of 36–50 (30.3%, or 121) and 51–65 years old (31% or 124), with the length of residency being 11 years and above (43% or 172), who experienced katarungang pang-barangay (58.3% or 233). Most of them are residents (94.5% or 378) of the total respondents.

The profile of respondents offers a comprehensive view of the community's demographic and experiential characteristics. It highlights a slight gender imbalance, balanced age representation across various life stages, and a predominance of long-term residents, reflecting a stable and deeply connected population. The data also reveals significant familiarity with Katarungang Pambarangay, emphasizing its importance as a local conflict resolution mechanism. Furthermore, the respondents are predominantly ordinary residents rather than officials, ensuring that the findings reflect the general population's perspectives.

Table 2

The respondent's assessment of the filing of complaints regarding the effectiveness of the mediation process of the katarungang pambarangay in resolving community disputes

Filing of Complaint	Mean	SD	VI
1. The complaint form is accessible in Barangay Sungay West, Tagaytay City. (<i>Ang form para sa pagrereklamo ay madaling makuha sa Barangay Sungay West, Tagaytay City.</i>)	3.56	.549	HE
2. The charge for the filing fee does not affect the complainant. (<i>Ang bayad sa paghahain ng reklamo ay hindi nakakaapekto sa nagrereklamo.</i>)	3.54	.519	HE
3. The secretary of Lupon Tagapamayapa is actively participating in assisting the complainant in filling up the complaint. (<i>Ang kalihim ng Lupon Tagapamayapa ay aktibong nakikilahok sa pagtulong sa nagrereklamo sa pagsasagot ng form para sa reklamo.</i>)	3.58	.538	HE

4. The complaint form contains clear and understandable language. (<i>Ang form para sa pagrereklamo ay naglalaman ng malinaw at naiintindihan na lengguwahe.</i>)	3.65	.492	HE
5. The complaint form contains the information and desired resolution that is required to be filled. (<i>Ang form para sa pagrereklamo ay naglalaman ng impormasyon at nais na resolusyon na kailangang mapunan.</i>)	3.55	.586	HE
Mean Assessment of the Effectiveness on Filing of Complaint	3.58	.572	HE

Table 2 shows the respondents' assessment of the Katarungang Pambarangay's mediation process's effectiveness in resolving community disputes is highly effective, with an overall mean of 3.58 and a standard deviation of .572. The indicator with the highest mean of 3.65 and a standard deviation of .492 was verbally interpreted as Highly Effective if the complaint form contained clear and understandable language. The indicator with the lowest mean of 3.54 and a standard deviation of .519 was verbally interpreted as Highly Effective. The charge for the filing fee does not affect the complainant. These findings supported by Respicio (2024), one helpful initial step in settling conflicts within the community is the barangay system. Complaints are easy to file, and the system promotes amicable resolutions. Visiting the barangay office or obtaining legal counsel for additional information or support is advised. Moreover, in addition to Respicio (2024), in the Philippines, filing fees, including miscellaneous fees, are a crucial component of the legal system. Courts and other quasi-judicial organizations effectively support administrative functions to ensure effective case administration. This means understanding the filling of complaints, which can impact highly effective.

Table 3

The respondent's assessment of the notice of hearing regarding the effectiveness of the mediation process of the katarungang pambarangay in resolving community disputes.

Notice of Hearing	Mean	SD	VI
1. The notice of hearing issued within 3 days by Barangay Sungay West provides adequate time for both the complainant and the respondents to be properly informed and prepare for the scheduled hearing. (<i>Ang Pagdinig na inisyu sa loob ng 3 araw ng Barangay Sungay West ay nagbibigay ng sapat na panahon para ang kapwa na nagrereklamo at ang mga respondent ay mabigyan ng wastong kaalaman at makapaghanda para sa nakatakdang pagdinig.</i>)	3.44	.572	HE

2. The Barangay Sungay West used a simple and understandable language in the notice of hearing. (<i>Ang Barangay Sungay West ay gumamit ng simpleng wika na madaling maintindihan sa notice of hearing.</i>)	3.45	.542	HE
3. The notice of hearing clearly outlines the consequences of not attending the mediation. (<i>Malinaw na nakasaad sa paalala ng pagdinig ang mga kahihinatnan ng hindi pagdalo sa mediation.</i>)	3.40	.601	HE
4. The Barangay Sungay West informed the complainant if the respondent cannot appear without justifiable cause, the 45 days mediation process will proceed without a respondent. (<i>Ang Barangay Sungay West ay iniinform ang nagreklamo na kung ang respondent ay hindi makakadalo nang walang sapat na dahilan, magpapatuloy ang 45-araw na proseso ng mediation kahit walang respondent.</i>)	3.37	.574	HE
5. The Barangay Sungay West informed the respondent that if the complainant cannot appear without justifiable cause the case will be dismissed. (<i>Ang Barangay Sungay West ay iniinform ang respondent na kung ang nagreklamo ay hindi makakadalo nang walang sapat na dahilan, ang kaso ay ikkansela.</i>)	3.40	.404	HE
Mean Assessment on the Notice of Hearing	3.41	.404	HE

Table 3 shows the respondent's assessment of the notice of hearing based on the scores obtained, with an overall mean of 3.41 and a standard deviation of .404. This only shows that the notice of hearing of the mediation process is highly effective. The indicator with the highest mean of 3.45 and a standard deviation of .542 was verbally interpreted as Highly Effective. Barangay Sungay West used understandable and straightforward language in the notice of hearing. These findings are supported by Miller et al. (2019). Mediators should use plain language and avoid jargon to ensure all participants comprehend the conversations. The lowest mean, 3.37, and a standard deviation of .574 are the Barangay Sungay West informing the complainant that if the respondent cannot appear without justifiable cause, the 45-day mediation process will proceed without a respondent. These findings supported by Respicio (2024), the notice of hearing plays an important role by ensuring that the respondent is informed about the issue and has a chance to participate in the mediation procedure.

Table 4

The respondents assessment of the presentation of issues and concerns of the parties regarding the effectiveness of the mediation process of the katarungang pambarangay in resolving community disputes.

Presentation of issues and concern of the parties	Mean	SD	VI
1. The mediation process maintains confidentiality to the involved parties when presented with the issue and concern. (<i>Ang proseso ng mediation ay nagtataglay ng pagiging kompidensiyal para sa mga kasangkot na partido kapag ipinakita ang isyu at concern.</i>)	3.38	.602	HE
2. The mediator treated impartially and neutrality in addressing the concern raised by both parties. (<i>Ang tagapamagitan ay nagpakita ng pagiging patas at walang kinikilingan sa pagharap sa mga di pagkakaintindihan ng magkabilang panig.</i>)	3.41	.598	HE
3. The mediator clarifies the issues and concerns of both parties during the mediation process. (<i>Nililinaw ng mediator ang mga isyu at concern ng magkabilang panig sa proseso ng mediation.</i>)	3.50	.566	HE
4. Give each party time to explain their side without interruption from the other party. (<i>Bigyan ang bawat panig ng oras na ipaliwanag ang kanilang panig nang walang panggugulo mula sa kabilang panig.</i>)	3.48	.544	HE
5. The issues presented during the mediation were communicated clearly, making it easy for all participants to understand the root causes of the conflict and looking for the solution of their disputes. (<i>Ang mga isyung inilatag sa panahon ng mediasyon ay malinaw na naiparating, na nagpadali sa pag-unawa ng lahat ng kasali sa mga pinagmumulan ng hidwaan at humahanp ng solusyon sa di pagkakaintindihan.</i>)	3.48	.583	HE
Mean assessment on the presentation of issues and concerns	3.45	.394	HE

Table 4 showed that the respondents' assessment of the presentation of issues and concerns of the parties based on the scores obtained, an overall mean of 3.45 and a standard deviation of .394, was interpreted as highly effective. The indicator with the highest mean of 3.50 and a standard deviation of .566 was verbally interpreted as Highly Effective because the mediator clarifies both parties' issues and concerns during the mediation process. These findings, supported by May (2024), assert that by fostering open communication and locating the underlying issues, mediation helps resolve conflicts. The lowest mean of 3.38 and a standard deviation of .602 is the mediation process that maintains confidentiality to the involved parties when presented with the issue and concern. Confidentiality is essential to the ability of barangay chairpersons to resolve disputes because it develops confidence and promotes honest communication between parties in disagreement (Jacinto et al., 2023). These factors work together to create a system that encourages honest communication, equity, and amicable dispute settlement, making it an important community tool.

Table 5

The respondent's assessment of the Role of Mediator of the parties regarding the effectiveness of the mediation process of the katarungang pambarangay in resolving community disputes.

Role of Mediator	Mean	SD	VI
1. The mediator explains the mediation process and objectives to reaching the mutually agreeable settlement. <i>(Ang mediator ay ipinapaliwanag ang proseso at layunin ng mediation upang makamit ang kasunduan.)</i>	3.26	.644	HE
2. The mediator assists both parties to resolve conflicts by providing support and encouraging open communication. <i>(Ang mediator ay tinutulungan ang magkabilang panig na lutasin ang mga alitan sa pamamagitan ng pagbibigay ng suporta at paghikayat sa bukas na komunikasyon.)</i>	3.36	.535	HE
3. The mediator promotes transparency when conducting the mediation process while presenting their issues and concerns. <i>(Ang mediator ay nagsusulong ng transparency sa pagsasagawa ng proseso ng mediation habang ipinapakita ang mga isyu at concern ng magkabilang panig.)</i>	3.41	.568	HE
4. The mediator assists both parties and helps them find the solution within 15 days. <i>(Ang mediator ay tinutulungan ang parehong panig at tinutulungan silang makahanap ng solusyon sa loob ng 15 araw.)</i>	3.45	.594	HE
5. The mediator effectively summarizes the issue to make it easier for both parties to understand the main concerns. <i>(Epektibong inilalahad ng mediator ang mga isyu upang mas madaling maintindihan ng magkabilang panig ang mga pangunahing alalahanin.)</i>	3.52	.556	HE
Mean assessment on the role of mediator	3.38	.411	HE

Table 5 shows the respondent's assessment of the role of the mediator based on the scores obtained; an overall mean of 3.38 and standard deviation of .411 was interpreted as highly effective. The indicator with the highest mean of 3.52 and a standard deviation of .556 was verbally interpreted as Highly Effective. The mediator effectively summarizes the issue to make it easier for both parties to understand the main concerns; these findings supported the study of Lupao and Alejandro (2022). This raises questions about Lupon's capability to serve as a mediator, leading the parties' conversation and discussion until an agreement is obtained, as well as their ability to test the limit of their tolerance for the disputants' offensive attitudes and their need for empathy in order to comprehend their emotions. The lowest mean of 3.26 and a standard deviation of .644 was verbally interpreted as Highly Effective if the mediator

explained the mediation process and objectives to reach a mutually agreeable settlement. Cabuyao et al. (2022) supported these findings that the Lupong Tagapamayapa has been highly effective as a community-based mediation group in resolving conflicts within the barangay. They suggest building trust and confidence in the Lupon members by encouraging them to attend seminars and training programs that enhance their skills and efficiency in handling disputes.

Table 6

The respondents assessment of the Amicable Settlement of the parties regarding the effectiveness of the mediation process of the katarungang pambarangay in resolving community disputes.

Amicable Settlement	Mean	SD	VI
1. The amicable settlement details were communicated in a clear and understandable language, ensuring both parties' consent and acceptance. <i>(Ang mga detalye ng amicable settlement ay ipinaliwanag sa isang malinaw at madaling maintindihang wika, tinitiyak ang pagsang-ayon at pagtanggap ng parehong panig.)</i>	3.43	.712	HE
2. The amicable settlement should put into writing the terms and conditions in the language that is known by both parties. <i>(Ang amicable settlement ay dapat isulat ang sa pepel at kondisyon sa wika na parehong nauunawaan ng magkabilang panig.)</i>	3.42	.678	HE
3. Effective mediation requires specific skills in negotiation, conflict resolution, and active listening. <i>(Ang mabisang mediasyon ay nangangailangan ng mga partikular na kasanayan sa negosasyon, paglutas ng salungatan, at aktibong pakikinig.)</i>	3.49	.641	HE
4. The mediator creates a conducive and respectful environment for discussions, facilitating an amicable resolution. <i>(Ang mediator ay lumilikha ng isang maayos at magalang na kapaligiran para sa talakayan, na tumutulong sa pag-abot ng isang mapayapang resolusyon.)</i>	3.48	.641	HE
5. Amicable settlement facilitates peaceful dispute resolution, fostering positive relationships for future interactions between parties involved. <i>(Pinapadali ng mapayapang pag-areglo ang mapayapang pagresolba sa hindi pagkakaunawaan, na nagpapatibay ng mga positibong ugnayan para sa mga pakikipag-ugnayan sa hinaharap sa pagitan ng mga kasangkot na partido.)</i>	3.51	.633	HE
Mean assessment on settlement	3.47	.540	HE
Mean	3.46	.324	HE

Table 6 shows the respondents' assessment of the amicable settlement based on the scores obtained; an overall mean of 3.47 and a standard deviation of .540 was interpreted as highly effective. The indicator with the highest mean of 3.51 and a standard deviation of .633 was verbally interpreted as Highly Effective is the amicable settlement that facilitates peaceful dispute resolution, fostering positive relationships for future interactions between parties involved. The lowest mean of 3.42 and standard deviation of .678 were interpreted as Highly Effective the amicable settlement should put into writing the terms and conditions in the language that both parties know. Documenting an amicable settlement in writing is essential. These findings, supported by Killip (2021), emphasize that all amicable settlements must be written in a language familiar to both parties, signed by them, and witnessed by the Lupon or pangkat chairman and also according to Section 5 of the Presidential Decree No. 1508, form of settlement, all amicable settlements must be in writing, signed by both parties and confirmed by the barangay captain or the Pangkat chairman, whichever is appropriate. They must also be in a language or dialect that all parties know. When the contesting parties do not speak the same language or dialect, the settlement will be written in the languages and dialects they are familiar with.

V. DISCUSSION

The study evaluation suggests that Barangay Sungay West has taken practical steps to make it easier for the community members. Resolving issues such as filing fees may improve accessibility and encourage greater participation in the mediation process. Also, this study demonstrates that Barangay Sungay West is dedicated to maintaining openness and readiness throughout its mediation procedure. Improving how procedural consequences are communicated could improve trust and participation in these sessions even more. This highlights how well Barangay Sungay West handles delicate matters during mediation. Participants would feel safer if confidentiality procedures were strengthened, increasing openness and trust. The role of the mediator is strengthened regarding the importance of impartiality and facilitation abilities in the mediation process in Barangay Sungay West. The barangay improved the conflict resolution structure by encouraging more participation and inclusivity. The study highlights how Barangay Sungay West promoted cooperation and consensus during mediation. The barangay can preserve long-term confidence and transparency in its dispute resolution procedures by emphasizing the completeness and clarity

of settlement paperwork, thus reinforcing its position as a trustworthy and efficient mediator in local conflicts.

The barangay might increase the effectiveness and trust in its conflict-resolution framework by putting strategies into place to increase awareness, improve transparency, fortify confidentiality, and training for mediators. These suggestions highlight the community's dedication to developing an equitable and prosperous mediation process that resolves conflicts amicably. Also, the study demonstrates that the best way to resolve conflicts in Barangay Sungay West involves citizens and barangay officials. When hearing notices are issued on time, complaints are filed accurately, and mediators guarantee impartiality and open communication, dispute resolution is more successful. When both parties work together and have a mutual understanding, this method frequently results in amicable outcomes. According to the respondents, the system might be improved by raising community awareness, upgrading mediation training, and expediting case settlements. The community's continued commitment to ensuring these recommendations demonstrate fair, effective, and reliable conflict resolution.

To improve barangay mediation, the barangay should cover filing fees for low-income complainants and post clear guidelines. Officials should remind parties about mediation schedules and ensure confidentiality by having mediators sign agreements and store records securely. The mediation process should be clearly explained, with written session summaries provided. Mediators must ensure both parties fully understand the settlement terms, offering assistance if needed. Finally, feedback should be collected after each session to improve the process, with Lupon members ensuring objectivity and honesty. These steps will make mediation more accessible, fair, and effective.

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Status of Tourist Safety in Tagaytay City: A Qualitative Approach

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I. ABSTRACT

Tourist safety has become a growing concern in the global tourism industry, especially in popular destinations like Tagaytay City, Philippines, which attracts millions of visitors annually. As tourism continues to rise, ensuring travelers' safety is key to any destination's long-term success. Tourists are more likely to choose places where they feel secure and well-protected. This study looks into the role of the local community in helping keep tourists safe in Barangay Sungay East, Tagaytay City, where issues like overcharging, theft, and other safety risks are commonly reported. Using a qualitative descriptive approach, the research gathered insights through Focus Group Discussions (FGDs) with residents, Barangay officials, Tourist Police, and tourists. Participants were chosen on purpose to reflect a variety of relevant experiences and perspectives. The findings reveal that while visible security presence and community efforts help create a sense of safety, challenges remain, particularly in making safety personnel more visible and preparing for unexpected threats like natural disasters. The study points to the need for better communication with tourists, more substantial involvement from the local community, and continuous improvements to safety measures. It also highlights the importance of regularly training safety personnel to respond effectively in emergencies. Ultimately, the study concludes that keeping tourists safe requires teamwork. Building a safe and welcoming environment depends on the cooperation of all stakeholders—local government, tourism agencies, law enforcement, and the community—working together to support a sustainable and secure tourism experience.

Keywords: *Tourist Safety, Community Relations, Barangay Sungay East, Qualitative Research, Focus Group Discussions*

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II. INTRODUCTION

The UN World Tourism Organization (2016) has defined a tourist as any visitor to a destination other than his or her usual residence for a stay not exceeding one year for leisure, business, or other purposes. From here, the general purposes of travel, like leisure and business travel, are outlined. Local tourists travel within their society or immediate area but are still within the country's boundary. They typically visit nearby places, activities, and events and typically go there to enjoy or relax. Similarly, National tourists, or domestic tourists, are tourists who travel within their own country but may travel to other states or regions. They travel for different purposes, like leisure, business, or cultural activities, and may even stay overnight in another place. The number of people traveling increases yearly, so tourism is an on-rising trend. Narwat (2024) reports that "the global tourism market size reached a robust compound annual growth rate (CAGR) of 4.2% over the past five years". The growth in the number of tourists visiting a country or a particular locality contributes to its income and poses a risk to the security of tourists.

Tourist safety is now a significant threat to tourism, influencing tourists' choices and how destination marketers adapt to attract and retain tourists. With continuous mobility towards traveling globally, tourists' safety and protection are at the center of concerns, ranging from crime and health hazards to natural calamities and political unrest. Safety, as it has been argued by Chen et al. (2022), is a significant concern for tourists during such activities.

Safety is the most important factor that impacts tourists' intentions to travel to particular destinations and engage in such activities. Safety perception significantly impacts traveling behavior because potential tourists tend to assess the risks involved in and around the destination they plan to visit before deciding to travel. Depending on the words of the tourism sector, issues such as terrorism, pandemics, and natural disasters have been on the agenda for the past several years. These have fueled calls for modifying safety processes and structures by researchers and practitioners. Social media and instant communication have made the question of tourist safety more relevant than ever, with information being spread almost in seconds, which can influence the public's perception and traveling behavior in real-time.

Tagaytay City is one of the top destination areas in the Philippines because of its stunning scenery, nice weather, and high elevation. It has more than 6.5 million same-day visitor arrivals for the fourth quarter of 2023. Barangay Sungay East in Tagaytay has the most significant number of tourist spots, like Tagaytay Picnic Grove and Our Lady of Manaog, and it is considered the most important area tourists visit. The tourist is greeted with several

problems, such as visitor safety and security concerns like overcharging, cheating, eve-teasing, and robbery. As the local government unit, the barangay is responsible for making our locals' and guests' interactions clean, healthy, accessible, and, most importantly, safe.

Through effective community relations, this study aims to assess tourist safety conducted by the local Barangay in Sungay East, Tagaytay City. Specifically, this study aims to answer the questions:

1. What is the current status of tourist safety in Barangay Sungay East?
2. What challenges does the local Barangay encounter in safeguarding the safety of tourists?
3. What actions does the local Barangay undertake to ensure the safety of tourists?
4. Based on the findings, what measures can be proposed to enhance the local Barangay's approach to tourist safety through community relations?

This study examines the assessment of tourist safety by the local Barangay in Sungay East, Tagaytay City, focusing on effective community relations. The research will collect data from key stakeholders, including Barangay officials, tourist police, and tourists visiting major attractions in the area.

The study's primary goal is to evaluate safety strategies, identify potential risks, and understand the challenges local officials face in ensuring the safety of tourists. Interviews will be conducted to gather qualitative data.

However, the study is limited to tourist safety issues and the actions taken by Barangay officials in Sungay East. Broader municipal or national policies, as well as unrelated community matters, fall outside the scope of this research. Additionally, financial and time constraints restrict the study to the second semester of the 2023–2024 academic year and the first semester of 2024–2025 within the researchers' available resources. Despite these limitations, the study aims to provide actionable insights and recommendations to improve tourist safety and enhance community relations in the area.

Researchers like Pierre Bourdieu and Robert Putnam suggest that social capital theory focuses on networks, norms, and trust as foundations to enable cooperation among individuals in communities. More social capital in Barangay Sungay East can significantly promote tourist safety through improved communication between residents, barangay officials, and tourism police. High cohesiveness in the community ensures the practical propagation of safety and enables collective actions such as safety campaigns and information programs. This research assesses existing social networks, community norms, and levels of trust to identify areas of

shortage and areas to increase tourist safety. Leverage through social capital can improve Sungay East as a safer and more welcoming place for tourists.

III. METHODS

The study aimed to investigate the processes and measures of the Sungay East barangay in assessing tourist safety. The qualitative descriptive design was utilized to gather descriptive data from the participants about their real-life experiences. It was a sufficient research design to understand who was involved, what happened, and where these incidents occurred.

Purposive sampling was applied in enrolling participants with the appropriate experience and skills. They were tourist police, barangay officials, and foreign and local tourists at Sungay East, Tagaytay City. Participants were chosen based on their knowledge and familiarity with tourist safety issues.

The information was collected through Focus Group Discussions (FGDs), in which free interaction and exchange of convergent and divergent views were facilitated. An open-ended interview guide was used to guide the discussion. FGDs were conducted comfortably to allow for transparent and honest responses. Each of the sessions was tape-recorded and transcribed.

Before collecting data, the researchers obtained the head of the respective department's permission and ensured that all participants had provided their informed consent. The process was per the ethics and carried out systematically for credibility and reliability.

Thematic analysis was used in data interpretation, in line with Creswell and Poth's Data Analysis Spiral. The process involved data organization, theme identification, meaning interpretation, and reporting findings. The analysis allowed the researchers to make meaningful inferences about the dominant safety practices and perceptions in Sungay East.

IV. RESULTS

Problem 1. What is the current status of tourist safety in Barangay Sungay East?

Theme 1: Police visibility with strong service orientation

Police visibility with strong service orientation is the most important aspect of tourist safety. Participant 1 is an excerpt that shows that the Civilian Security Unit (CSU) is doing proactive monitoring, which creates trust among visitors. Participant 2 says there are many visible security personnel, so tourists feel safe. Participant 3 mentioned the collaboration of several security groups, including Tourist Police, CSU, barangay officials, and BPATs, that show a community-wide approach to safety. Participant 4 captured an individual's reassurance, reflecting confidence in security measures due to the noticeable police presence.

Overall, this theme underscores that police visibility is essential for creating a welcoming and secure environment for tourists. According to a study by Vermeulen, S. (2019), Amsterdam's police maintain a visible presence in key tourist areas, such as the city's central districts, popular museums, and transportation hubs. Officers patrol on foot or by bicycle and engage with tourists in a friendly, service-oriented manner, helping with directions and addressing concerns. This approach helps deter crime while fostering trust and cooperation between the police and the public.

Police visibility combined with strong service orientation significantly contributes to the safety of tourists. It prevents crime through deterrence, builds trust and cooperation between tourists and law enforcement, enhances the response to incidents, and fosters a general sense of security that encourages tourism. By ensuring that officers are not only present but also approachable and helpful, police can maintain a safer environment for both residents and visitors.

Table 1

Theme 1. Police Visibility with strong service orientation.

Participant	Excerpt	Translation	Theme
Participant 1	<i>Opo, kase may mga CSU naman na nakamonitor sa safety ng mga turista.</i>	There are CSU personnel monitoring the safety of the tourists.	Theme 1. Police Visibility with strong service orientation.
Participant 2	<i>Oo naman po, marami akong security personnel na Nakita dito.</i>	I saw a lot of security personnel here.	
Participant 3	<i>Ligtas dito sa Sungay East lalong lalo na para sa mga turista. Andito kaming mga Tourist Police kasana ang mga miyembro ng Civilian Security Unit at ang mga force multiplier natin, ang Barangay, ang mga BPATs natin.</i>	It's safe here in Sungay East, especially for tourists. We have Tourist Police here, along with the members of the Civilian Security Unit and our force multipliers, the Barangay, and our BPATs.	

Participant 4 *Actually, I never encountered such things. There are so many police here so I think there would be no problem.* Actually, I’ve never encountered such things. There are so many police here, so I think there won’t be any problem.

Evidence Below is the photograph taken showing the presence of uniformed personnel in Barangay Sungay East, Tagaytay City. It plays a key role in deterring crime, reassuring the public, and fostering a sense of security.

Theme 2: Tagaytay City's Picnic Groove Remains the Top Tourist Destination.

The theme highlights its continuing popularity among the tourists. Participant 1 shows that many visitors return multiple times, indicating a strong affinity for the area. Participant 2 elaborates on its appeal, mentioning cleanliness, beauty, and safety as key factors that encourage bonding and recreational activities. While Participant 3 and Participant 4 reveal that other attractions may not attract the same frequency of visits, they affirm that the Picnic Groove stands out due to its favorable conditions. During the interview, participants can answer the questions based on their experiences. The researchers observed that participants’ emotions indicate satisfaction with the safety measures implemented by the local authorities.

These themes illustrate how effective security measures and attractive destinations contribute to a thriving tourism sector, creating enjoyable experiences that encourage repeat visits. According to Aguirre and Mendoza (2020), maintaining safety in popular tourist spots such as Picnic Grove involves enhancing police visibility, utilizing community policing strategies, and implementing crime prevention measures, such as increased patrols and surveillance systems, to ensure the well-being of tourists.

Table 2
Theme 2. Tagaytay City's Picnic Groove remains the top tourist destination.

Participant	Excerpt	Translation	Theme
Participant 1	<i>Sa lifetime ko mga three or four times nakapunta sa Tagaytay.</i>	In my lifetime, I visited maybe three or four times.	Theme 2. Tagaytay City’s Picnic Groove remains the top tourist destination.

Participant 2 *Oo naman, Maganda dito, maayos ang lugar, malinis, at higit sa lahat ay ligtas kaya Magandang bumisita dito tuwing weekend para magbonding, gumawa ng mga recreational activities at kung ano-ano pa.* Of course, it's beautiful here. The place is well-maintained, clean, and above all, safe. It's a good place to visit every weekend to bond, do recreational activities, and so on.

Participant 3 *Picnic Groove yes, Manaog hindi po. Pedeng twice a year kung may pagkakataon.* Picnic Grove, yes. Manaog, no. Maybe twice a year if I have the chance.

Participant 4 *Oo naman po, siguro mga once a year* Yes, maybe once a year.

Evidence According to the Provincial Tourism Office, 268,065 tourists went to Tagaytay for an overnight trip from October to December 2023, which indicates that Tagaytay City's Picnic Groove remains the top tourist destination. In fact, according to the latest statistics of the Department of Tourism in Tagaytay City, it had more than 6.5 million same-day visitor arrivals. It became the top local government unit for tourism in Cavite province.

Problem 2. What challenges does the local Barangay encounter in safeguarding the safety of tourists?

Theme 1: Slippery Roads During the Rainy Season

This theme indicates safety hazards due to heavy rain that deforms the road and makes it slippery, as observed by Participants 1 and 2. Slippery roads during rainy seasons present a significant challenge for local barangays in ensuring the safety of tourists. These conditions increase the likelihood of accidents, particularly for tourists who may not be familiar with the area. For instance, in a study by Rengifo and Peñaloza (2020), areas with poor road infrastructure were shown to have higher accident rates during the rainy season, particularly in tourist-heavy regions. Local authorities are responsible for mitigating these dangers; failure to address this risk could be seen as negligence, leaving the barangay vulnerable to liability and exposing tourists to unnecessary harm.

The local barangay is responsible for ensuring safety, particularly in tourist destinations. The barangay officials must create an atmosphere of responsibility among the residents and business sectors for public safety. Initiatives to engage the community in programs such as neighborhood watch or creating public awareness on road safety fall under the criminological concept of social control and can decrease accidents and crime. The

barangay can create a safer environment for visitors by addressing both the environmental hazards and the criminological factors that make tourists more susceptible to crime. This proactive approach ensures that tourists remain safe from physical harm and secure from potential criminal threats during the rainy season.

Table 3
Theme 1. Slippery roads during the rainy season.

Participant	Excerpt	Translation	Theme
Participant 1	<i>Minor lang, gaya ng kapag may heavy rain nadedeform and lupa at nadudulas ang mga turista.</i>	Usually minor, like when heavy rain causes the ground to deform and tourists slip.	Theme 1. Slippery roads during the rainy season.
Participant 2	<i>P2. Parang hindi naman, wala akong alam na nacompromised ang safety ng isang turista sa tuwing bibisita ako dito pero isang beses may natumba dahil nadulas habang pababa sa picnic area noong umulan.</i>	It doesn't seem like it. I'm not aware of any tourist's safety being compromised whenever I visit here except one time when someone fell off the ground when going down the picnic area while raining.	
Evidence	Below is a photograph that shows the condition of certain areas in Picnic Groove that get slippery during rainy seasons.		

Theme 2: Minor Car Bumps

The theme points out issues associated with parking. Participant 1 and Participant 2 agree that minor car accidents result from bumping into each other. Minor car bumps might appear seemingly less severe, but they present an ongoing challenge for local barangays in ensuring the safety of tourists. These incidents, often resulting in property damage or minor injuries, can create a series of safety and security concerns in Sungay East, Tagaytay City. Minor car bumps are very insignificant. However, they can cause outcomes that escalate from safety to more significant crimes.

A minor car accident can become a source of increased crime as it puts the tourist area at high risk in high-traffic tourist areas. The accidents may occur in remote or less monitored areas in the barangay. For instance, a tourist involved in a minor car bump may be distracted by the incident, leaving them open to theft or other opportunistic crimes, like assault or robbery.

According to Sison et al. (2019), the relationship between road infrastructure, traffic safety, and tourism in a popular tourist area is that the influx of tourists leads to increased traffic congestion, which, in turn, contributes to minor accidents and road bumps. The study emphasized the need for better traffic management systems and infrastructure improvements in tourist destinations to enhance both the safety of visitors and residents.

Minor car bumps can also lead to disputes between drivers or drivers and pedestrians, which may escalate into larger conflicts or even violent incidents. At times, people might want to escape after a minor collision, resulting in "hit and run" offenses that will worsen safety issues among visitors. This criminological study can use the routine activities theory, which claims that crime results if a motivated offender encounters an accessible target and that target has inadequate guardianship (Cohen & Felson, 1979). In cases where the incident happens in a dimly lit or less patrolled area, tourists may not find adequate care, and they are likely to be exposed to crime.

Local barangays have an important role in preventing these by ensuring that road safety measures do not leave room for minor accidents and subsequently do the right thing when a problem arises. Although minor car bumps are less severe than other traffic incidents, they challenge barangays to protect tourists. By addressing the root causes of accidents, reducing opportunities for crime, and providing adequate safety measures, the barangay Sungay East can create a safer environment for tourists, thereby reducing the risks of accidents and criminal activity in tourist-heavy areas.

Table 4

Theme 2. Minor car bumps.

Participant	Excerpt	Translation	Theme
Participant 1	<i>Minsan naman mga minor na nangyayari gaya ng nagkakabanggaan ang mga sasakyan sa parking.</i>	Sometimes, there are minor incidents like cars bumping into each other in the parking area. These are promptly addressed by the authorities.	Theme 2. Minor car bumps.
Participant 2	<i>Minor, siguro nagkabanggaan lang yung sasakyan ng mga nagpaparking.</i>	Usually minor, like when heavy rain causes the ground to deform and tourists slip.	
Evidence	During the interview, the participants said that “ <i>Minsan naman mga minor na nangyayari gaya ng nagkakabanggaan ang mga sasakyan sa parking</i> ” which implies that but they present an ongoing challenge for local barangays in ensuring the safety of tourists. Below is a photograph that shows minor car bumps that happened in the parking lot of Sungay East, Tagaytay City.		

Theme 3: Limited Direction Signages

Theme 3 points to navigation issues among tourists in Sungay East, Tagaytay City. According to Participant 1, inadequate signs are placed to guide these tourists, making it hard to navigate. The lack of directional signage may pose a significant problem for the safety of the tourists as they are more prone to confusion, misdirection, and risks. Inadequate signage can be considered an environmental risk factor that puts tourists in situations where they become more susceptible to crime or even accidents. The absence of clear signs may lead tourists to dangerous areas where they can become the target of criminals through theft, fraud, or even physical attacks. Furthermore, without clear signs guiding them toward safety in case of an emergency, the tourists may fail to find the way out, the safety zone, or help.

Recent studies have emphasized that inadequate signage can lead to higher risks for tourists, not only in terms of physical harm but also criminal victimization. A study by Schneider et al. (2021) highlights how insufficient wayfinding and safety signage in tourist destinations can create confusion, making visitors more vulnerable to crimes such as theft and assault. These themes collectively show the barangay's challenges in ensuring tourist safety, highlighting areas for infrastructure improvement and better visitor support.

Table 5

Theme 3. Limited direction signages.

Participant	Excerpt	Translation	Theme
Participant 1	<i>yung pagaassist lang talaga sa mga turista, sa traffic, sa mga turistang nagtatanong tanong kung saan yung way, ganon yun lang.</i>	There are those who assist tourists, with traffic, and help tourists who are asking for directions. It's just that.	Theme 3. Limited direction signages.
Participant 2	<i>Wala, parang hindi ko napansin na may ganyan pero nakikita ko naman sila na nagaassist sa mga turistang nagtatanong.</i>	None, I don't think I've noticed anything like that but I see them assisting those tourists who are asking for directions.	
Evidence	Below is a photograph that shows the lack of limited direction signage which may pose a great problem for the safety of the tourists.		

Problem 3. What actions does the local Barangay undertake to ensure the safety of tourists?

Theme 1: Coordinating Among Concerned Residents

Theme 1 highlights the barangay Sungay East's effective collaboration with the community to promote tourist safety, as noted in Participant 1 and Participant 2. Coordinating among concerned residents and the actions taken by the local barangay are crucial in safeguarding the safety of tourists. This can be understood through community policing, collective efficacy, and situational crime prevention. By fostering a collaborative approach between residents, authorities, and tourism stakeholders, the community can effectively reduce opportunities for crime and create a safer environment for visitors.

Coordination between local communities and local authorities is critical in managing tourist safety. According to a study by Mihaila et al. (2023), community-based safety initiatives that involve residents and authorities, such as barangay officials, can help mitigate crime risks in tourist areas. By implementing proactive safety measures like neighborhood watch programs, emergency response coordination, and clear communication between residents and tourists, the local barangay can create an environment where residents and visitors feel secure. This coordination reduces crime opportunities and improves the overall safety experience for tourists, fostering positive perceptions and sustaining tourism.

Table 6
Theme 1. Coordinating among concerned residents.

Participant	Excerpt	Translation	Theme
Participant 1	<i>Maayos naman ang barangay dito sa Sungay East. Napromote naman nila ang tourist safety sa pamamagitan ng pakikipag ugnayan sa komunidad.</i>	The barangay here in Sungay East is doing well. They promote tourist safety through their interaction with the community.	Theme 1. Coordinating among concerned residents.
Participant 2	<i>hindi naman magiging ganto kaayos ang Sungay East kung hindi maayos ang pakikipag ugnayan nila sa kumunidad.</i>	Sungay East wouldn't be this organized if they didn't have good communication with the community.	
Evidence	The researchers observe that the barangay officials of Barangay Sungay East are good at coordinating with their residents. They have an annual gathering to disseminate important information.		

Theme 2: Law-Abiding Community Residents

Theme 2 emphasizes the compliance and friendliness of locals in Barangay Sungay East. Participant 1 indicates that residents follow laws, contributing to a safe environment,

while Participant 2 describes the community as welcoming and accommodating. Law-abiding community residents play a crucial role in maintaining safety and order.

According to social control theory, individuals are more likely to adhere to societal norms and laws when integrated into their community and have strong social bonds. Residents who uphold these values help to deter crime by being vigilant and reporting suspicious activities, ultimately contributing to a safer environment for all, including tourists.

To ensure the safety of visitors, barangays often implement various measures, such as neighborhood watch programs where residents collaborate to monitor and report criminal activities and the presence of barangay Tanods, CSU, and tourist police who patrol areas frequented by tourists. These actions work with public awareness campaigns, educating residents and tourists about safety protocols and potential threats, such as petty theft or scams.

Table 7
Theme 2. Law-abiding community residents.

Participant	Excerpt	Translation	Theme
Participant 1	<i>Sa tingin ko wala naman po dahil sumusunod naman ang mga tao sa batas at mga regulation dito sa Sungay East.</i>	I think there's no problem because people follow the laws and regulations here in Sungay East.	Theme 2. Law-abiding community residents.
Participant 2	<i>Yes, we are safe here. The people are nice and friendly and also very accommodating.</i>	Yes, we are safe here. The people are nice and friendly, and also very accommodating.	
Evidence	Prior to the interview with the participants, the researchers were able to take a tour in Barangay Sungay East, they noticed how the individuals acted accordingly and followed the laws. Additionally, their statements show that Sungay East has law-abiding residents. This emphasizes the compliance and friendliness of locals in Barangay Sungay East.		

Theme 3: Sustain Best Practices for Safety

The theme "Sustain Best Practices for Safety" emphasizes the importance of maintaining safety in key tourist areas in Sungay East, like Picnic Groove and Manaog, as these locations rely heavily on their reputation for safety to attract visitors. Participant 1 highlights that safety is a primary factor in drawing tourists, and this idea underscores the direct correlation between a secure environment and the continued flow of visitors to these attractions. Tourists seek destinations where they feel safe to relax, explore, and enjoy activities

without fear of crime or accidents. This makes it crucial for local authorities to adopt and sustain best practices that ensure the safety of these popular areas, such as regular security patrols, clear safety guidelines, and emergency response systems.

Participant 3 further emphasizes that leadership responsibility rests on the barangay, the local governing body, to take proactive steps to safeguard residents and visitors. Effective leadership in this context involves not only the implementation of safety measures but also the continuous evaluation and improvement of these practices. According to Salazar and Dizon (2023), barangay leadership is a key factor in the success of these initiatives, with local leaders taking responsibility for maintaining peace and order in high-traffic tourist areas.

Collectively, these themes present how community involvement, responsiveness to legislation, and dedication to safe practices will provide an environment that tourists would be attracted to in Sungay East.

Table 8
Theme 3. Sustain best practices for safety.

Participant	Excerpt	Translation	Theme
Participant 1	<i>maraming turista ang dadayo sa amin kapag ligtas ang Picnic Groove at Manaog kaya talagang mine-maintain namin ang kaligtasan namin dito. Safe sila pagpasok ng Picnic hanggang paglabas.</i>	We can increase tourism here in Sungay East. More tourists will come if Picnic Grove and Manaog are safe, so we really maintain safety here. They're safe from the time they enter the Picnic area until they leave.	Theme 3. Sustain best practices for safety.
Participant 2	<i>I think it is important to keep the security of the community and tourists here in this place.</i>	I think it is important to keep the security of the community and tourists here in this place.	
Participant 3	<i>Mahalaga ang tungkulin ng barangay. Sila ang isa sa dapat laging nangunguna sa mga ganitong usapin. Malaking factor sila sa pagpromote ng tourist safety dito sa Sungay East lalo na at ang lugar na ito ay dinarayo ng napakaraming turista</i>	The barangay's role is important. They should be at the forefront of these issues. They are a major factor in promoting tourist safety here in Sungay East, especially since this place is visited by many tourists.	
Evidence	Participants 1, 2, and 3 stated that maintaining the barangay's practices to ensure tourists' safety is important. During the interview, participants were able to answer the questions based on their experience.		

V. DISCUSSION

The study finds Barangay Sungay East a safe and favorite tourist destination in Tagaytay because of successful security arrangements and visible policing. Visibility of the Civilian Security Unit (CSU), Barangay Police Auxiliary Teams (BPATs), and friendliness create confidence and enhance tourists' perception of safety. There are challenges, however. Rainy seasons and slippery roads are a significant risk, mainly to foreign tourists unfamiliar with the terrain. Poor road infrastructure increases the risk of accidents, as Rengifo and Peñaloza (2020) found. Minor car bumps, particularly in parking lots, pose a safety risk because they could lead to more aggressive encounters, challenging the routine activity theory attributes. Poor signage also exposes tourists to the risk of being easy targets for robbery or assault, as Schneider et al. (2021) found. To counter this, an improved wayfinding system is required to enable safety and the tourist experience. Community participation becomes vital to improving safety. Coordination of residents, local government, and businesses improves crime prevention. Consistent effort in locations such as Picnic Grove and Manaog, supplemented by good barangay leadership and routine patrol, is vital to sustaining a safe and welcoming tourist space. These findings emphasize the importance of minimizing both environmental menace and criminogenic risk to ensure the sustained expansion of tourism in Barangay Sungay East.

This study is limited to Barangay Sungay East and cannot be generalizable to other tourist spots in Tagaytay or the Philippines. It is primarily qualitative data with no statistics and no direct tourist feedback that can introduce more layers of safety perceptions. Seasonal problems, such as peak tourist periods and weather-related problems, were noted but not studied at length. Future research must use larger geographic locations, quantitative data, and tourist feedback to create a larger picture of understanding tourist safety.

To promote tourist safety in Barangay Sungay East, the barangay should ensure road upkeep, especially during the rainy season, to reduce travel risks. Better parking control, including allocated parking spots and clear roads, will reduce minor accidents. Additional direction signs and reevaluating existing signs will enhance tourist navigation. The involvement of the people through safety workshops and programs will enhance shared accountability. Regular safety checks in tourist destinations will make procedures effective and responsive to new dangers.

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**ENHANCING DISASTER RESILIENCE: ASSESSING BARANGAY SILANG
CROSSING EAST DRRM COMMITTEE'S OPERATIONAL CAPABILITIES
THROUGH A MIXED METHOD APPROACH**

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I. ABSTRACT

These days, both natural and man-made disasters are happening more often, and they can disrupt people's lives. That is why it is so important for communities to have solid disaster plans in place. This study focuses on how well the DRRM Committee in Barangay Silang Crossing East is doing when preparing for, responding to, and recovering from disasters. Tagaytay City may be known for its beautiful views and tourism, but it is also no stranger to typhoons, earthquakes, and volcanic eruptions. With more people moving in and more buildings increasing, the risks only increase. To understand how ready the barangay is, the researchers use numbers and real-life stories from the community. The researchers will also analyze SWOT to see what the committee is doing well and where to improve. The Disaster Resilience Theory guides the study, which says communities recover better when they have good planning, enough resources, and strong teamwork. The researchers will also take a closer look at the people living in the barangay and how they work with local officials. Ultimately, the researchers hope this research helps the community become stronger, safer, and better prepared for whatever comes next.

Keywords: Disaster, Resilience, Preparedness, Response, Recovery, DRRM (Disaster Risk Reduction and Management), Community, SWOT analysis.

II. INTRODUCTION

Today, both natural and man-made disasters are happening more often and can cause serious problems. That is why communities need to have firm disaster plans. This study examines how well the Disaster Risk Reduction and Management (DRRM) Committee in Barangay Silang Crossing East performs. The researchers used numbers and personal stories (a mixed-method approach) to understand their strengths and where to improve. Tagaytay City tends to experience natural calamities such as volcanic eruptions, typhoons, and earthquakes. This is due to its area and rapid increase in population and structures. Tagaytay may be famous for its lovely scenery and tourism, but it is also prone to disasters at a high rate.

Due to this, the DRRM committee in every barangay (village) has a great responsibility to make people safe and assist them in recovering from disaster. Barangay Silang Crossing East has established a DRRM committee to plan for emergencies. However, the researchers also need to determine how prepared they are. This study examined how effectively they plan, respond, and recover from disasters. The researchers also analyzed SWOTs to determine their strengths, weaknesses, opportunities, and threats. The objective is to assist them in improving and being better prepared. This barangay was selected for research because it frequently experiences disasters. Previous experiences have indicated that the region requires effective disaster plans. By examining what they are currently doing, the researchers can provide recommendations to enable them to be better prepared. The research employs the Disaster Resilience Theory of Norris and others (2008). According to this theory, resilient communities can bounce back from disasters. They require adequate planning, resources, and collaboration among various groups to bounce back well.

The researchers also need to know about the residents of the barangay, their dwellings, and how cooperative they are with the local government and other organizations. This made the researchers realize how ready the barangay was. Enhancing disaster preparedness can also deter crime. If a community is well-prepared and well-organized, there is less disarray and fewer crimes before and after disasters. Ultimately, this research hopes to assist Barangay Silang Crossing East in enhancing its disaster plans, creating a more resilient and secure community, and being better prepared for future disasters. Better disaster planning also means resources are used more effectively, supporting stronger community policing and better communication between residents and authorities. Understanding how these factors influence crime can help prepare for and manage the aftermath of disasters, ultimately making the community safer and more resilient against natural and human threats.

III. METHODS

The study employs a methodological approach, integrating a mixed-method approach to comprehensively evaluate the DRRM committee's operational capabilities. According to K Hammerberg (2016), Qualitative and quantitative research methods are often juxtaposed as representing two different world views. In quantitative circles, qualitative research is commonly viewed with suspicion and considered lightweight because it involves small samples that may not be representative of the broader population, it is seen as not objective, and the results are assessed as biased by the researchers' own experiences or opinions. In qualitative circles, quantitative research can be dismissed as over-simplifying individual experience in the cause of generalization, failing to acknowledge researcher biases and expectations in research design, and requiring guesswork to understand the human meaning of aggregate data.

This approach combines quantitative and qualitative research methods to provide a comprehensive understanding of the operational capabilities of the committee and the effectiveness of their disaster risk reduction and management strategies.

Quantitative Research: Surveys and structured questionnaires can be used to collect quantitative data on specific operational competencies, such as the frequency of risk assessments, the level of community engagement, the effectiveness of training programs, and resource management practices. Quantitative data can provide numerical insights into the strengths and weaknesses of the DRRM Committee's operational capabilities.

Qualitative Research: In-depth interviews, focus group discussions, and observations can be employed to gather qualitative data on stakeholders' perceptions, experiences, and suggestions related to the operational competencies of the DRRM Committee. Qualitative data can offer rich insights into the context, challenges, and opportunities for enhancing disaster resilience and preparedness in the community.

Document Analysis: Reviewing existing documents, reports, and policies related to disaster risk reduction and management in Barangay Silang Crossing East can provide additional context and background information for the study. Document analysis can help understand the current framework, strategies, and challenges the DRRM Committee faces.

By utilizing a mixed-methods approach, researchers can triangulate data from multiple sources, validate findings, and gain a comprehensive understanding of the operational competencies of the DRRM Committee. This approach allows for a more robust analysis and

interpretation of the data, leading to actionable recommendations for enhancing disaster resilience and management practices in the community.

Interview our data-gathering procedure to allow the participants to express their experiences. The researcher constructed a questionnaire checklist, which the professor of the subject validated, and then the questionnaire checklist was distributed. The researcher conducts the research in Barangay Silang, Crossing East, through interviews. The researcher explains to the respondents the importance of responding to the study about risk and disaster. The researcher clarifies some terms for the respondents so they can answer the questionnaire with full knowledge and responsibility as the subject of the study. In this study, the researcher's goal is to determine the risk and disaster reduction of Barangay Silang Crossing East. After the respondents answered the questionnaire, the researcher collected and tallied the data for interpretation.

IV. RESULT

This portion discusses the covers and the presentation, analysis and interpretation gathered by the researchers. The data was presented in the tables to clearly illustrate answers to the researcher's questions. The data were gathered through a survey questionnaire and presented following the arrangement of the research problems of the study.

Problem no. 1. What is the demographic profile of the respondents in the following term of:

- Age:
- Gender:
- Years and service; and
- Educational attainment

Table 1
The Profile of the respondents.

Profile		Frequency	Percentage
Age	21 – 30	19	27.1%
	31 – 40	29	41.4%
	41 – 50	12	17.1%
	51 years old and above	10	14.3%
Gender	Male	39	55.7%
	Female	31	44.3%
Civil Status	Single	17	24.3%
	Married	47	67.1%
	Separated	6	8.6%
Educational Attainment	Elementary Graduate	11	15.7%
	High School Level	20	28.6%

	High School Graduate	1	1.4%
	College Level	13	18.6%
	College Graduate	25	35.7%
N		70	

Table 1 is the profile of the respondents. Frequency count and percentage were utilized to determine the profile distribution of the respondents. The data revealed that most respondents were 21 – 30 and 31 – 40 with a frequency of 19 or 27.1% and 29 or 41.4%, primarily male, married at 39 or 55.7%, and 47 or 67.1%, respectively. In terms of instructional historical past, the maximum contributors had been both on the high college level or had finished college, accounting for 20 (28.6%) and 25 (35.7%) of the entire respondents, respectively.

Participants have been chosen based on their age and ability to understand and assess the consequences of numerous screw-ups and examine the performance and resilience of Disaster Risk Reduction and Management (DRRM) Committees. As Paton et al. (2006) mentioned, people with a sure degree of adulthood and existence tend to grasp the complexities of disaster influences higher, the workings of emergency management bodies, and how groups withstand crises. Age performs a key role in assessing practical DRRM tasks, since older individuals often have lived through past disasters, giving them significant views on the strengths and gaps in preparedness and response systems. Additionally, research has shown that faculties are crucial players in advancing catastrophe danger discount and control, as supported by Rogayan et al. (2022) findings.

SOP 2. What is the level of effectiveness of DRRM as perceived by the respondents in terms of:

- 1.1: Mitigating.
- 1:2 Preparedness.
- 2:3 Prevention; and
- 2:4 Response

Table 2

Level of effectiveness of DRRM as perceived by the respondents in terms

Mitigating	Mean	SD	VI
1. To what degree does the Barangay Silang Crossing East BDRRM Committee implement strategies for mitigating disaster risks in the community? (Sa anong antasang Barangaysilang Crossing East Bdrmm Committee aynagpapatupad ng mgastratehiya para sa pagpapagaanngmga panganib sa sakuna sa komunidad).	3.50	.584	VHLE
2. How effective are the current disaster preparedness programs of the Barangay in mitigating the impact of natural calamities on residents? (Gaano kabisa ang kasalukuyang disaster preparedness programs ng Barangay sa pag- iwas sa epektong natural calamities samga residente?)	3.33	.583	VHLE
3. How well does the BDRRM Committee coordinate with local agencies in mitigating potential hazards before disasters occur? (Gaano kahusay ang pakikipag ugnayan ng BDRRM Committee sa mga lokal na a hensya sa pagpapagaanngmgapotensyalna panganib bago mangyari angmga sakuna?)	3.21	.759	HLE
4. In what ways does the BDRRM Committee engage with local stakeholders to enhance collaboration in mitigating disaster risks?(anong mga paraan ang nakikipag ugnayanang BDRRM Committee samga lokalna stakeholder upang mapahusay ang pakikipagtulungan sa pagbawas n g mga panganib sa kalamidad?)	3.26	.716	VHLE
5. How satisfied are community members with the BDRRM Committee’s efforts to mitigate disaster-related challenges in Barangay Silang Crossing East?/ (Gaano ba kakuntento ang mga mamamayan sa pagsisikap ng BDRRM Committee na maibsan ang mga hamon na may kinalaman sa kalamidad sa Barangay Silang Crossing East?)	3.46	.674	VHLE
Perceived level of effectiveness of DRRM in Mitigating	3.35	.442	VHLE
1. How would you rate the availability of essential disaster preparedness resources (e.g., emergency kits) for the Barangay Silang Crossing East BDRRM Committee? (Paano mo i- rate ang pagkakaroon ng mahahalagang mapagkukunan ng paghahanda sa sakuna (hal., Mga emergency kit) para sa barangay Silang Crossing East Bdrmm Committee?)	3.50	.608	VHLE
2.	3.39	.644	VHLE

3. How effective do you find the training programs in enhancing the preparedness of members within the Barangay Silang Crossing East BDRRM Committee? (Gaano ka epektibo ang mga programa sa pagsasanay sa pagpapahusay ng kahandaan ng mga miyembro sa loob ng Barangay Silang Crossing East BDRRM Committee?)			
4. How effective is the collaboration between the Barangay Silang CrossingEast BDRRM Committee and local government units/agencies in securing resources for disaster preparedness? (Gaano kabisa ang pagtutulongan ng BarangaySilang Crossing East BDRRM Committee at ngmga local government units/agencies sapag-secure ng resources para sa disaster preparedness?)	3.47	.557	VHLE
5. How would you assess the involvement of local stakeholders (e.g., NGOs) in supporting the preparedness initiatives of the Barangay Silang Crossing East BDRRM Committee? (Paano mo tatayain ang pakikilahok ng mga lokal na stakeholder (hal., NGO) sa pagsuporta sa mga hakbangin sa paghahanda ng Barangay Silang Crossing East BDRRM Committee?)	3.27	.721	VHLE
6. How well-prepared does the Barangay Silang Crossing East BDRRMCommittee appear to be in responding to natural disasters (e.g., typhoons)? (Gaano kahandaang Barangay Silang Crossing East BDRRM Committee sa pagtugon samga natural na kalamidad (hal., bagyo)?)	3.44	.651	VHLE
Perceived level of effectiveness of DRRM in Preparedness	3.41	.438	VHLE
1. How effective is the BDRRM committee in identifying and prioritizing high- risk areas within Barangay Silang Crossing East to avoid the impact of disaster? (Gaano kabisa ang pagtukoy at pag priyoridad ng komite ng BDRRM sa mga lugar na may mataas na peligro saloob ng Barangay Silang Crossing East upang maiwasan ang epektong kalamidad?)	3.51	.558	VHLE
2. How efficient is the BDRRM committee in conducting public awareness campaigns focused on disaster prevention and risk reduction within the community? (Gaano bakaepektibo ang BDRRM committee sa pagsasagawa ng public awareness campaigns nanakatuon sa disaster prevention at risk reduction sa loob ng komunidad?)	3.30	.688	VHLE
3. How well does the BDRRM committee collaborate with local organizations to implement preventive measures against potential hazards in Barangay Silang Crossing East? (Gaano kahusay ang pakikipagtulangng BDRRM committee sa mga lokal na organisasyon para maipatupad ang preventive	3.43	.650	VHLE

measures laban samga posibleng panganib sa Barangay Silang Crossing East?)			
4. How effective is the BDRRM committee in ensuring that disaster prevention protocols are regularly updated and accessible to all barangay residents? (Gaano ba kaepektibo ang BDRRM committee sa pagtiyak na regular na updated at accessible salamat ng barangay residents ang disaster prevention protocols?)	3.43	.693	VHLE
5. How efficiently does the BDRRM committee use its resources to strengthen the barangay's infrastructure and environment to minimize disaster risks? (Gaano bakahusayang paggamit ng BDRRM committee ng kanilang resources para palakasin ang imprastruktura at kapaligiran ng barangay para mabawasan ang panganib na dulot ng kalamidad?)	3.39	.644	VHLE
Perceived level of effectiveness of DRRM in Prevention	3.41	.455	VHLE
1. How effectively does the BDRRM Committee coordinate its response efforts during disaster events in Barangay Silang Crossing East? (Gaano kaepektibo ang koordinasyon ng BDRRM Committee sa kanilang pagtugon tuwing may mga kaganapan sa kalamidadsa Barangay Silang Crossing East?)	3.57	.527	VHLE
2. To what extent does the BDRRM Committee utilize trained volunteers to enhance response efforts during emergencies? (Hanggang saan ginagamit ng BDRRM Committee ang mga trained volunteer para mapahusay ang mga pagsisikap sa pagtugon sa panahon ng emergency?)	3.43	.604	VHLE
3. How well does the BDRRM Committee communicate with community members during disaster response situations to provide timely updates and instructions? (Gaano kahusay ang pakikipagugnayang BDRRM Committee sa mga miyembro ng komunidad sa panahon ng mga sitwasyon ng pagtugon sa kalamidadupang magbigayng napapanahong mga update at tagubilin?)	3.39	.644	VHLE
4. How prepared is the BDRRM Committee to mobilize resources and personnel swiftly in response to a disaster in Barangay Silang Crossing East?(Gaano kahanda ang BDRRM Committee na mabilis na mapakilos ang mga resources at personnel sapagtugon sa kalamidad sa Barangay Silang Crossing East?)	3.46	.695	VHLE
5. To what degree does the BDRRM Committee evaluate its response performance after a disaster to improve future operations? (Sa anong antas sinusuri ng BDRRM Committee ang pagganap ng pagtugon nito pagkatapos ng isang kalamidadupang mapabuti ang mga operasyon sahinaharap?)	3.31	.692	VHLE
Perceived level of effectiveness of DRRM in Response	3.43	.422	VHLE

Perceived level of effectiveness of DRRM as perceived by respondents	3.40	.374	VHLE
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Legend:

- 3.25 – 4.00 = Very High Level of Effectiveness
- 2.50 – 3.24 = High Level of Effectiveness
- 1.75 – 2.49 = Low Level of Effectiveness
- 1.00 – 1.74 = Very Low Level of Effectiveness

The table shows how effective the Barangay Silang Crossing East BDRRM (Barangay Disaster Risk Reduction and Management) Committee is in dealing with disaster risks. It looks at four key areas: mitigation, preparedness, prevention, and response to disasters. Respondents rated the Committee's effectiveness for each area, using scores ranging from 1 (not efficient) to 4 (highly efficient). The mean score (average rating) and standard deviation (how much responses vary) are also shown. The ratings are mostly high, indicating that people think the BDRRM Committee is doing a good job managing disaster risks.

The Committee received the highest mean in mitigating with a score of 3.50 and a standard deviation of .584 for its community-wide disaster risk mitigation efforts. This shows the community believes the Committee can help decrease risks before disasters occur.

The BDRRM Committee is expected to excel in early warning systems, disaster preparedness education, and other risk-reduction strategies. According to Pelling (2011), implementing early mitigation techniques is essential in minimizing the impact of failures by addressing capacity dangers before they boost. In this context, theariseork's belief of the Barangay's catastrophe preparedness is pondered inside the mean rating of 3.50 (SD = 0.608) for the supply of emergency assets such as disaster kits. This indicates a well-known consensus that the Barangay is nicely prepared to deal with crises efficiently. Ensuring that good enough substances are handy is essential for efficient disaster reactions. This favorable rating implies that the Barangay Committee has taken tremendous steps to ensure readiness. The United Nations Office for Disaster Risk Reduction (UNDRR, 2017) underscores the importance of aid availability in catastrophe preparedness and effective reaction.

In phrases of prevention, the Committee acquired its maximum average score of three.51 (SD = 0.558), especially in identifying and prioritizing regions inside the Barangay most at hazard. This indicates a proactive approach in recognizing and addressing vulnerabilities, permitting extra targeted and green allocation of assets. Wisner et al. (2004) aid this by highlighting the importance of danger mapping as a device for pinpointing excessive-hazard zones, which in turn aids communities in enforcing targeted preventive moves.

Furthermore, the reaction factor garnered the best universal suggest rating of three.57 (SD = zero.527), suggesting sturdy coordination and collaboration during disaster events. This reflects the network's self-belief in the Committee's capacity to efficiently manage and prepare emergency response efforts. Effective coordination is critical for saving lives and reducing damage during a disaster. This shows that the Barangay is prepared and well-organized in emergency scenarios. Supporting Literature: According to Cutter (2006), excellent coordination between response agencies and the community is critical for minimizing disaster impacts and ensuring quick recovery. The results show that the Barangay Silang Crossing East BDRRM Committee effectively manages disaster risks in all areas, including mitigation, readiness, prevention, and response. This indicates that the community is well-prepared. The Committee is actively striving to reduce hazards. The high grades imply a strong disaster management system that enables the barangay to recover faster and mitigate the harmful consequences of calamities. The Committee's proactive efforts in mitigation, resource planning, prevention, and response demonstrate that it significantly contributes to community resilience.

SOP 3. Is there a significant difference in the perceived level of effectiveness of DRRM when group according to their profile.

Table 3

Independent sample t-test between male and female perception on the level of effectiveness of DRRM

Group	Mean	SD	T	Df	P-Value	Decision
Male	3.34	.374				
Female	3.48	.366				
t-test			1.55	68	.126	Accept Null

Legend: P-Value < .05 Reject Null Hypothesis

Table 3 is the independent sample t-test between male and female perception on the level of effectiveness of DRRM. The data shows no significant difference in the level of effectiveness of DRRM as perceived by male and female respondents [T(68) = 1.55, p = .126].

The result of the independent sample t-test in Table 3 indicates no significant difference in the perceived effectiveness of DRRM (Disaster Risk Reduction and Management) between male and female respondents. With a p-value of 0.126, which is greater than the conventional significance level of 0.05, we fail to reject the null hypothesis.

The average scores for males and females were close, with males at 3.34 and females at 3.48, indicating that both groups held comparable opinions regarding implementing DRRM in Barangay Silang Crossing East. Due to the absence of a significant difference, it seems that, in this context, gender does not influence individuals' perceptions of how effective disaster management systems are. Both men and women are likely to recognize the effectiveness of the community's DRRM programs, as their experiences, expectations, and involvement levels are similar.

The findings from Table 3 suggest that gender does not significantly affect the perceived effectiveness of DRRM in Barangay Silang Crossing East. This implies that the disaster management initiatives in the area are effectively engaging the entire community, regardless of gender, and providing resources and support that meet the needs of all residents equally.

The growing emphasis on gender-inclusive disaster management, which aims to provide equal preparedness and support for both men and women in disaster situations, corresponds with the observed similarities in perceptions. Further studies could investigate factors like age, education level, or previous disaster experiences to understand better how various demographic groups perceive the effectiveness of DRRM initiatives. Inclusive Approaches in Disaster Management: The Sendai Framework for Disaster Risk Reduction (2015-2030) emphasizes the importance of inclusive disaster risk management, calling for equal involvement of all community members, regardless of gender. The framework stresses that disaster preparedness and response efforts should be tailored to meet men's and women's needs. However, it also acknowledges that well-designed systems can achieve consensus in perceptions, as all members benefit from the collective preparedness efforts.

Table 3.1
ANOVA table for the perceived difference in the level of effectiveness of DRRM

Category	Sum of squares	Df	f	Significance	Decision	
Age	Between Groups (Position)	.443	3	1.058	.373	Accept Null
	Within Groups	9.219	66			
Civil Status	Between Groups	.472	2	1.722	.187	Accept Null
	Within Groups	9.190	67			

Educational Attainment	Between Groups	1.902	3	5.393	.002	Reject Null
	Within Groups	7.760	66			
Total			70			

Legend: P-value < .05 Reject Null Hypothesis

A one-way ANOVA was conducted to determine the difference in the level of effectiveness of DRRM as perceived by the respondents. The data shows that there is no significant difference in age and civil status, [F(3, 66) = 1.058, p = .373]; [F(3, 66) = 1.722, p = .187] since the p-value is greater than .05, therefore the null hypothesis is accepted, there is no significant difference in the perceived level of effectiveness of DRRM. While the educational attainment, [F(3, 66) = 5.393, p = .002], since the p-value is less than .05, the null hypothesis is rejected. There is a significant difference in the perception of the level of effectiveness when grouped according to educational attainment.

Table 3.2

Post-Hoc test scheffe method

Educational Attainment		Mean Difference	Significance	V.I.
Elementary Graduate	High School Level	.0465	.988	Reject Null
	College Level	.0448	.991	Accept Null
	College Graduate	.377	.033	Reject Null
High School Level	College Level	.001	1.0	Accept Null
	College Graduate	.330	.022	Reject Null
College Level	College Graduate	.332	.046	Reject Null

Table 3.3

Descriptive table of educational attainment

Educational Attainment	Mean	SD	V.I.
Elementary Graduate	3.559	.299	VHLE
High School Level	3.512	.331	VHLE
College Level	3.514	.194	VHLE
College Graduate	3.182	.422	HLE

Legend:

3.25 – 4.00 = Very High Level of Effectiveness

2.50 – 3.24 = High Level of Effectiveness

1.75 – 2.49 = Low Level of Effectiveness

1.00 – 1.74 = Very Low Level of Effectiveness

The Post hoc test Sheffe method was conducted to determine which educational attainment significantly differed. The data revealed that the perception of College graduates about the effectiveness of DRRM is significantly different from the elementary graduate, high school, and college levels. The college graduates perceived it as highly effective, while the rest perceived it as very highly effective.

Perception and Education in Disaster Preparedness How people view the effectiveness of disaster hazard discount and management (DRRM) programs appears closely tied to their level of training. Those with extra advanced educational backgrounds frequently approach those packages with a greater analytical or critical attitude. College graduates, for instance, usually have greater exposure to research, records, and theories associated with disaster reactions. As a result, they may decide an application's achievement based on established fashions and criteria instead of relying best on non-public enjoyment.

Evaluating Impact on At-Risk Groups Socioeconomic situations—including schooling, recognition, and disaster vulnerability—affect how organizations understand and benefit from DRRM efforts. For these packages to serve at-chance populations, it is important to apprehend how schooling tiers form public belief. This consciousness can manual extra inclusive guidelines that bridge gaps in access and information. Survey records, for instance, suggest that even as most respondents rated DRRM applications as "Very Highly Effective," university-knowledgeable individuals were slightly extra reserved, rating them as merely "Highly Effective." This subtle distinction underlines how schooling may affect expectations and evaluations of catastrophe-related projects.

By way of Haque et al. (2012), research supports this idea, displaying that people with better training tend to be more knowledgeable and more prepared, which can also make them extra discerning. As a result, they could discover shortcomings others overlook, which can bring about more critical value determinations.

Recommendations Based on Findings The findings propose several methods the Barangay Silang Crossing East BDRRM Committee should use to boost its disaster preparedness efforts. One key technique involves tailoring programs using age groups—specifically in adults over 40, whose preparedness wishes may vary. It is additionally vital to maintain gender balance in all making plans and response activities to make sure that support systems paintings equally nicely for all of us.

Education-centered interventions must mirror the various mastering backgrounds of community contributors. For college-level education, sessions can include analytical and

theoretical views, even as extra practical, hands-on schooling should be designed for those with much less formal schooling. Community workshops should prioritize center survival abilities, including emergency planning, fundamental first resources, and how to put together a go-bag.

Clear and on-hand verbal exchange is any other priority. Disaster signals and academic content should be distributed through multiple channels—texts, social media, and face-to-face sessions—and presented in plain language, supported by visuals, wherever wished. Regular feedback periods after disaster events can help refine destiny strategies, ensuring the voices of all network members are heard.

Partnerships with neighborhood groups, NGOs, and colleges can assist in amplifying education options and improve admission to vital sources. Finally, ensuring the truthful distribution of emergency substances and shelters and training volunteers throughout all instructional ranges can help construct a more resilient and organized neighborhood populace.

V. DISCUSSION

This research finds that disaster risk community engagement is somewhat uneven, with the need for outreach to the vulnerable. Improved infrastructure, in particular evacuation shelters and resource management, requires serious attention as maintenance and upgrading. Coordination exists primarily with local government units and non-governmental organizations; however, it is disorganized without clear communication channels. Other constraints include financial ones, which stress the need for sustainable funding for continued preparedness programs. Data collection and risk assessment also require improvement for better disaster response planning.

From these insights, the study identifies strengthening several critical existing capacities for the DRRM committee. These should include strengthening inclusivity by guaranteeing the representation of different social groups of different ages, genders, and educational levels- those capacities that create fair and well-informed decision-making. Rural and Urban views must be considered in addressing preparedness and resource allocation gaps.

Other mitigative schemes the committee is encouraged to consider include upholding flood management systems and constructing.

Aijecting the issues fully mentions disaster-resilience improvement measures for Barangay Silang Crossing East. Diversity perspectives inside the DRRM committee assist in making consensus decisions more reflective of all residents' needs. Specialists from both urban and rural disaster responses must be involved in order to be able to formulate strategies that shall apply fitly to the different barriers present in distinct areas of the Barangay.

Any effort toward long-term risk reduction- such as developing flood management systems and constructing earthquake-resistant infrastructure- will contribute toward minimizing losses from impending disasters. Community cooperation, including periodic education programs and preparedness exercises, will enhance local capacity in responding to emergencies.

Routine evaluations and measures of community feedback enable the committee to adjust strategies according to changing circumstances appropriately. Special provisions in disaster planning should cover gender-related interests, providing support equitably to both men and women. Whatever initiatives are undertaken in the field of education should not marginalize the low-literacy groups so that each member of that community can participate in preparing for disasters.

Experience-driven expertise from the field gleaned from the local, knowledgeable elders will facilitate the generation of feasible and sustainable solutions. Sustaining external partnerships and the momentum of improving Barangay Silang Crossing East needs commitment.

Implementing an Effective Early Warning: An effective alerting system must be set up to alert the residents possibly under threat quickly. A timely warning will allow the community to respond effectively, including considering ways to evacuate if needed.

Conducting Regular Disaster Simulation: Every year, disaster preparedness exercises should be conducted at least once or twice, with the whole public community participating. Such simulations will help local government officials and residents better understand coordination and preparedness for real emergencies.

Improving Communication Networks: The barangay's communication network should be enhanced by acquiring reliable equipment such as two-way radios and mobile apps. This is instrumental in ensuring a smooth flow of information before, during, and post-disaster events.

Establish a Sustainable Funding Mechanism: Create a sustainable funding regime to enable the continuation of different activities related to disaster preparedness. Such partnerships can include local business partnerships, government grants, and fundraising within the community.

Set Up for Systematic Review of Disasters: Make a mechanism to debrief any emergency response after every disaster. Community members' comments, back-end officials, and other stakeholders will feed into the plans to improve disaster preparedness overall.

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