

SPATIOTEMPORAL TRENDS OF REPORTED GENDER-BASED CRIMES IN PANGASINAN, PHILIPPINES FROM 2020 TO 2025

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ABSTRACT

Gender-based violence (GBV) remains a persistent public safety and human rights concern that disproportionately affects women and children. This study examined the trends and distribution of reported gender-based crimes in Pangasinan, Philippines, from 2020 to 2025, focusing on rape, violations of Republic Act No. 9262 (the Anti-Violence Against Women and Their Children Act), acts of lasciviousness, and sexual harassment. Using a descriptive trend analysis design, secondary data were obtained from police records maintained by the Women and Children Protection Desk of the Pangasinan Police Provincial Office. A total of 4,312 reported GBV incidents were recorded during the study period. Rape accounted for the highest proportion of reported cases, followed by violations of Republic Act No. 9262, acts of lasciviousness, and sexual harassment. Trend analysis revealed a significant overall decline in reported GBV incidents across six years. Spatial analysis showed that Urdaneta City, Dagupan City, and San Carlos City consistently recorded the highest numbers of reported cases, while temporal analysis indicated that most incidents were reported during the evening (PM) hours. Despite the observed downward trend, the findings demonstrate that gender-based violence remains a significant concern in Pangasinan. The study underscores the need to strengthen reporting mechanisms, enhance public awareness initiatives, and expand victim protection and support services. These findings provide an evidence base for policymakers, law enforcement agencies, and local

government units in developing targeted prevention strategies and improving interventions to reduce gender-based violence.

Keywords: *gender-based violence, crime trends, gender-based crimes*

INTRODUCTION

Gender-based violence (GBV) remains one of the most pervasive human rights violations worldwide despite decades of legal reforms and advocacy initiatives. Rooted in unequal power relations and gender inequality, GBV encompasses acts of physical, sexual, psychological, emotional, and economic violence committed against individuals based on their sex, gender identity, or sexual orientation. Although women and girls continue to be disproportionately affected, GBV also impacts men and members of the LGBTQIA+ community (UN Women, 2025).

The global burden of gender-based violence remains substantial. According to the World Health Organization and UN Women, nearly one in three women worldwide has experienced physical or sexual violence during her lifetime, with little improvement over the past decade (UN Women, 2025). The COVID-19 pandemic further intensified the problem by increasing domestic violence and exposing weaknesses in reporting systems and victim support services. Although restrictions have eased, many countries continue to face challenges in accurately documenting GBV cases because of underreporting, inconsistent data collection, and limited institutional capacity.

One of the major barriers to addressing GBV is the gap between its actual occurrence and officially reported cases. Victims frequently delay or avoid reporting due to fear of retaliation, social stigma, economic dependence, and limited access to police or support services, particularly in rural communities (Mdletshe & Makhaye, 2025; Wirtz et al., 2013). These barriers hinder timely intervention, reduce the availability of forensic and testimonial evidence, and weaken criminal justice responses. Moreover, the increasing prevalence of technology-facilitated gender-based violence has introduced new forms of abuse that challenge traditional legal and investigative frameworks.

The Philippine experience reflects these global concerns. The 2022 National Demographic and Health Survey reported that 17.5% of Filipino women aged 15–49 had experienced some form of violence (Philippine Statistics Authority, & ICF, 2022). Despite comprehensive legislation, including Republic Act No. 9262, Republic Act No. 8353, and Republic Act No. 11313, underreporting remains a persistent concern due to cultural norms such as *“hiya”*, fear of victim-blaming, and limited confidence in the justice system. Consequently, official crime statistics may underestimate the true extent of gender-based violence.

Government agencies and civil society organizations have implemented various interventions to address these issues. The Department of Social Welfare and Development, the Philippine Commission on Women, local government units, and non-government organizations provide legal assistance, psychosocial support, and protective services for survivors. However, the

effectiveness of these interventions depends largely on the availability of reliable and localized crime data to guide policy development, resource allocation, and prevention strategies.

In Pangasinan, reported gender-based crimes present a complex pattern. While regional reports indicate a decline in overall Violence Against Women and Children (VAWC) cases, rape continues to be among the most frequently reported offenses, suggesting that serious forms of gender-based violence remain prevalent. Furthermore, variations in reporting practices and record-keeping among municipalities complicate efforts to determine whether observed changes reflect actual reductions in crime or inconsistencies in reporting. These limitations restrict the ability of local governments and law enforcement agencies to identify high-risk areas and implement evidence-based interventions.

Despite the importance of localized crime analysis, there remains limited empirical research examining the trends and distribution of reported gender-based crimes in Pangasinan. Existing national and regional statistics provide broad overviews but offer insufficient evidence to understand provincial patterns and temporal changes. Addressing this gap is essential for evaluating the effectiveness of current policies, identifying priority areas for intervention, and strengthening local responses to gender-based violence.

Accordingly, this study examines the trends and distribution of reported gender-based crimes in Pangasinan from 2020 to 2025, focusing on rape, violations of Republic Act No. 9262, acts of lasciviousness, and sexual harassment. By generating localized evidence on the incidence and patterns of these offenses, the study seeks to provide a stronger empirical basis for policy formulation, law enforcement strategies, and victim protection programs aimed at preventing gender-based violence within the province.

This study focuses on four major categories of gender-based crimes: rape, violations of Republic Act No. 9262, also known as the Violence Against Women and Their Children Act of 2004, acts of lasciviousness, and sexual harassment. These offenses were selected because they represent the most reported forms of gender-based violence in the Philippines and are recognized as serious violations of individual rights, bodily integrity, and human dignity. Rape, defined under Republic Act No. 8353 (The Anti-Rape Law of 1997), involves sexual intercourse or sexual assault committed through force, intimidation, deprivation of reason, or other circumstances where valid consent is absent. Violations of Republic Act No. 9262 encompass physical, sexual, psychological, and economic abuse committed against women and their children within intimate or familial relationships. Acts of lasciviousness, punishable under Article 336 of the Revised Penal Code, refer to lewd acts committed against another person through force, intimidation, or when the victim is incapable of giving valid consent. Sexual harassment, as prohibited under Republic Act No. 11313 (The Safe Spaces Act) and Republic Act No. 7877 (The Anti-Sexual Harassment Act of 1995), includes unwelcome sexual conduct in workplaces, educational institutions, public spaces, and online environments. These offenses were chosen because they constitute significant indicators of gender-based violence, are consistently documented in police records, and provide a comprehensive basis for examining the temporal and geographic patterns of reported gender-based crimes in Pangasinan. Their inclusion enables the study to generate evidence that can

support crime prevention strategies, policy development, and victim protection initiatives at the provincial level.

Literature Review

Gender-based violence (GBV) remains one of the most persistent forms of violence worldwide despite decades of legal reforms and prevention initiatives. Contemporary research indicates that global trends are characterized not by a steady decline but by slow and uneven progress across countries and populations. Early international syntheses established that violence against women occurs in every region of the world and is substantially underreported, creating significant challenges for accurately estimating its prevalence (Devries et al., 2013; Watts & Zimmerman, 2002). The first global estimates of the World Health Organization further distinguished intimate partner violence from non-partner sexual violence, providing an important baseline for monitoring long-term trends (García-Moreno et al., 2013; Stöckl et al., 2021).

Subsequent evidence demonstrates that although some traditional forms of gender-based violence have declined modestly, the overall burden remains high. Sardinha et al. (2022) estimated that 27% of ever-partnered women aged 15–49 worldwide have experienced physical or sexual intimate partner violence during their lifetime, while 13% experienced violence within the previous year. Violence also begins early, with nearly one in four ever-partnered adolescent girls aged 15–19 reporting lifetime exposure to intimate partner violence, particularly in low- and lower-middle-income countries (Sardinha et al., 2022). Similarly, Borumandnia et al. (2020) found that sexual violence declined only gradually between 1993 and 2017 across 195 countries, with several low-human development countries experiencing increasing prevalence. More recent evidence indicates that although physical forms of adolescent violence have generally declined, cyberbullying and other technology-facilitated forms of abuse have increased, reflecting the evolving nature of gender-based violence in the digital era (Molcho et al., 2025). During COVID-19, multiple sources reported worsening risk and severity of violence against women and girls, including online abuse (Knaul, 2019; Bansal, 2023)

Collectively, these studies suggest that gender-based violence is changing in form rather than disappearing, with persistent regional inequalities, chronic underreporting, and the emergence of online victimization.

The literature further emphasizes that official crime statistics represent only a fraction of actual victimization. Palermo et al. (2014) reported that only about 40% of women disclose experiences of violence to anyone, while approximately 7% report incidents to formal institutions. Consequently, administrative records may underestimate the true prevalence of gender-based violence by several orders of magnitude. This limitation has important implications for crime trend research because changes in reported cases may reflect shifts in reporting behavior, institutional accessibility, or public awareness rather than actual changes in crime incidence.

Given these limitations, trend analysis has become an essential approach for understanding gender-based crime. Crime trend analysis examines changes in the frequency, distribution, and

temporal patterns of crime, allowing researchers and law enforcement agencies to identify emerging patterns, evaluate intervention strategies, and allocate resources more effectively. Dau et al. (2023) demonstrated that systematic analyses of police records can identify recurring temporal clusters of criminal activity and support evidence-based policing. The United Nations Population Fund (2024) and the World Health Organization (2024) similarly argue that continuous monitoring of gender-based violence is necessary for identifying vulnerable populations, evaluating prevention programs, and informing policy decisions.

The Philippine literature reflects many of these global patterns while highlighting unique challenges in interpreting crime statistics. Police records indicate that reported cases of violence against women increased substantially from 8,011 cases in 2006 to 40,220 cases in 2017, following a significant upward trend (Deguma, 2018). However, Deguma (2018) cautioned that this increase should not be interpreted solely as a rise in victimization because improvements in reporting mechanisms, expanded legal protections, and persistent underreporting may simultaneously influence recorded crime statistics. Legislative developments, including Republic Act No. 9262 and subsequent gender-responsive policies, have likewise altered reporting practices and case processing, complicating the interpretation of long-term trends (Valdez et al., 2022; Pitao-Honor, 2026).

The COVID-19 pandemic further demonstrated the importance of interpreting crime trends within their social context. Valdez et al. (2022) reported that while police-recorded cases of violence against women declined by 27.2% during the pandemic, internet searches related to violence against women increased by 63%, suggesting that mobility restrictions limited victims' ability to seek formal assistance rather than indicating a genuine decline in violence. Similar findings have been reported internationally, where lockdowns, economic hardship, service disruptions, and prolonged household confinement increased vulnerability to gender-based violence while simultaneously reducing opportunities for reporting (Aborisade & Sholeye, 2022; Ostadtaghizadeh et al., 2023). These findings underscore that fluctuations in police statistics should be interpreted cautiously, particularly during periods of social disruption.

Recent nationally representative evidence indicates that intimate partner violence remains a significant concern in the Philippines. Analysis of the Philippine Demographic and Health Survey showed that nearly one-fourth of women had experienced intimate partner violence, with emotional violence being the most common form, followed by physical and sexual violence (Yoshioka et al., 2020). Despite the presence of Violence Against Women (VAW) desks in most barangays, help-seeking from formal authorities remains low, and implementation challenges persist in documentation, referral systems, evidence collection, and case monitoring (Pitao-Honor, 2026). Furthermore, Chen et al. (2025) found widening disparities in intimate partner violence among certain population groups, suggesting that improvements have not been experienced equally across communities. These studies consistently identify harmful gender norms, economic dependence, childhood exposure to violence, controlling relationships, and alcohol use as major determinants of intimate partner violence and related health outcomes (Abramsky et al., 2011; Grose et al., 2020; Palma et al., 2025; Yoshioka et al., 2020).

Although international and Philippine studies have substantially advanced the understanding of gender-based violence, important gaps remain. Existing research primarily focuses on prevalence, risk factors, victimization, and legal responses, while relatively few studies examine longitudinal trends in officially reported gender-based crimes at the provincial level. Moreover, inconsistencies in reporting systems, variations in police documentation, and persistent underreporting continue to limit the interpretation of administrative crime statistics. In Pangasinan, empirical evidence describing temporal changes in reported rape, violations of Republic Act No. 9262, acts of lasciviousness, and sexual harassment remains limited. Consequently, localized trend analyses are needed to determine whether observed changes reflect actual shifts in crime patterns or differences in reporting practices and institutional capacity.

The present study addresses this gap by examining the trends and distribution of reported gender-based crimes in Pangasinan from 2020 to 2025 using official police records. Through a longitudinal analysis of reported incidents, the study contributes localized empirical evidence that can support crime prevention strategies, resource allocation, policy formulation, and future research on gender-based violence in the Philippines.

Significance of the Study

The study is important because it will provide evidence-based data about the reported incidence of gender-based crimes in Pangasinan from 2020 to 2025. The information from the study may lead to a better understanding of the frequency and geographic distribution of rape, the crimes listed under Republic Act No. 9262, acts of lasciviousness and sexual harassment in Pangasinan.

For the Pangasinan Provincial Police Office, this information will help identify the locations and times of greatest incidence of these crimes so that they can make better use of their manpower and resources. Local Government Units will use the study results to assist them in developing targeted ordinances related to gender-based crime, prevention programs, and community safety initiatives. The Provincial Social Welfare and Development Office may apply these data to develop intervention programs and/or support services to meet the needs of their affected communities.

Victims and advocates may use the empirical evidence in this study to promote stronger victim protection mechanisms and support systems for survivors. Future researchers in the fields of criminology, sociology, and gender studies may use this study as a reference point for future investigations on gender-based crime. The researchers who conducted the study view it as an opportunity to contribute to the existing body of knowledge and support the creation of related policies and/or programs to reduce the incidence of gender-based crime.

Objectives of the Study

This study aims to analyze the reported gender-based crimes in Pangasinan. Specifically, it aims to: (1) determine the frequency and distribution of reported gender-based crimes in Pangasinan from 2020 to 2025; (2) determine the trend of reported gender-based crimes in Pangasinan over the study period; (3) identify the cities and municipalities in Pangasinan that emerge as hotspots

of gender-based crimes based on the frequency of reported cases; and (4) investigate the patterns of gender-based crimes in terms of commission.

METHODS

Study Design

This study employed a descriptive longitudinal research design using retrospective trend analysis. Specifically, the study examines the frequency, distribution, and temporal trends of reported gender-based crimes in Pangasinan from 2020 to 2025.

The longitudinal component enables the analysis of changes in reported crime over six years, allowing the identification of increasing, decreasing, or stable trends. By utilizing archival police records, the study provides an empirical assessment of reported cases of rape, violations of Republic Act No. 9262, acts of lasciviousness, and sexual harassment across municipalities in Pangasinan.

Population and Source of Data

The study utilized secondary data obtained from the Women and Children Protection Desk (WCPD) of the Pangasinan Police Provincial Office. The dataset consisted of all officially recorded cases of rape, violations of Republic Act No. 9262, acts of lasciviousness, and sexual harassment reported between January 1, 2020, and December 31, 2025.

The unit of analysis was the individual recorded case. Since the objective was to examine provincial crime trends comprehensively, all eligible cases recorded during the study period were included. Consequently, no sampling procedure was employed because the study analyzed the complete population of recorded incidents rather than a representative subset.

Data Gathering Instrument

Data were extracted using a researcher-developed data extraction matrix designed to systematically record the variables required for analysis. The matrix included the date of occurrence, crime classification, municipality or city of occurrence, age of the victim, relationship between the victim and the offender, and other relevant information available in the official police records. Before data collection, the instrument underwent content validation by experts in criminology and statistics to ensure that the variables were appropriate, complete, and aligned with the objectives of the study.

Data Gathering Procedure

Upon securing approval from the Pangasinan Police Provincial Office, the researcher accessed the official crime records maintained by the Women and Children Protection Desk. Relevant information from each eligible case was extracted using the validated data extraction matrix. The extracted data were reviewed for completeness and consistency before being encoded into a statistical database for analysis. Only cases officially recorded during the study period were included in the dataset.

Statistical Treatment of Data

The collected data were analyzed using descriptive and trend analysis techniques appropriate to the research objectives. For the first objective, frequency counts and percentage distributions were used to determine the incidence and distribution of reported gender-based crimes according to offense category. For the second objective, time-series trend analysis using simple linear regression was employed to examine changes in the number of reported cases from 2020 to 2025. The regression trend line was used to determine whether reported cases exhibited an increasing, decreasing, or stable pattern over the study period. For the third objective, rank ordering was used to identify municipalities with the highest and lowest numbers of reported gender-based crimes. For the fourth objective, frequency distributions and rank ordering were likewise used to determine the temporal occurrence of reported incidents according to month and year, allowing the identification of periods with relatively higher reported crime incidence.

Ethical Considerations

Considering the sensitive nature of gender-based crimes, the study strictly adhered to established ethical standards for archival research and data privacy. Permission to access police records was obtained from the Pangasinan Police Provincial Office before data collection commenced. All personal identifiers, including names, addresses, and contact information of victims and offenders, were excluded from the extracted dataset. Each case was assigned a unique identification code solely for data management and analysis.

The researcher complied with the provisions of the Data Privacy Act of 2012 (Republic Act No. 10173) and any confidentiality requirements imposed by the Pangasinan Police Provincial Office. Electronic data files were stored in password-protected storage devices accessible only to the researcher, while printed records were kept in a secure location. All data were reported only in aggregate form to ensure that no individual victim, offender, or specific case could be identified. Because the study relied exclusively on archival police records, no direct interaction with victims, witnesses, or offenders occurred, thereby eliminating the risk of psychological harm or traumatization associated with primary data collection.

RESULTS AND DISCUSSION

This section presents and discusses the findings of the study on the trends and distribution of reported gender-based crimes in Pangasinan from 2020 to 2025. The presentation of results follows the sequence of the research objectives, beginning with the frequency and distribution of reported cases by offense type, followed by trend analysis, geographic distribution, and temporal occurrence.

Frequency of Gender Based Crimes

Table 1.

Frequency Distribution of Reported Gender-Based Crimes by Municipality and Offense Type in Pangasinan (2020–2025)

YEAR	Reported Gender-Based Violence Crimes				
	ACTS OF LASCIVIOUSNESS	VAWC	RAPE	SEXUAL HARASSMENT	TOTAL
2020	143	389	382	5.00	919
2021	146	363	355	1.00	865
2022	132	241	292	1.00	666
2023	140	175	295	5.00	615
2024	154	182	355	1.00	692
2025	131	150	272	2.00	555

The statistics for Gender Based Violence (GBV) crimes captured in Pangasinan between 2020 and 2025 verified a continued significant amount of concern regarding GBV-related crimes despite having laws and awareness campaigns. Breakdown of the reported GBV incidents was as follows, from most common to least common: Rape (1,951 cases; 45.25%); Republic Act 9262 (RA9262-Violence Against Women and Their Children) (1,500 cases; 34.79%); Acts of Lasciviousness (846 cases; 19.62%); Sexual Harassment (15 cases; 0.35%). Reported GBV cases in Pangasinan from 2020 were 919, which decreased to 555 cases in 2025; there was a slight increase in 2024. This decrease can be attributed to improved governmental/policing strategies of intervention, specifically: (1) increased awareness; (2) development of victim-centric program models; (3) Development of better reporting mechanisms; (4) Development of and implementation of protective policy/ordinances.

However, this decline in reported GBV cases does not necessarily translate into a true decline in GBV offenses. This decline may reflect “data silence” (where victims report GBV offenses but the paperwork is not filed) due to fear and stigma of reporting, potential retaliation from the attacker, issues accessing reporting, or lack of faith in the institutional process. Rape was reported as the most common crime due to its having a “formal legal definition,” being classified as a serious crime, and its association with the need for medical assessment, police investigation, and forensic testing creates an opportunity for a greater chance of appearing in official records. Meanwhile, other forms of GBV, such as emotional abuse, coercive control, psychological abuse, economic abuse, and sexual harassment in public spaces, tend to be under-reported or misclassified.

Trend of Gender Based Crimes

Figure 1 presents the graph of the reported GBV cases as a whole and per crime category.

Figure 1

Visual Trend of Gender-Based Violence Crimes in Pangasinan from 2020 to 2025

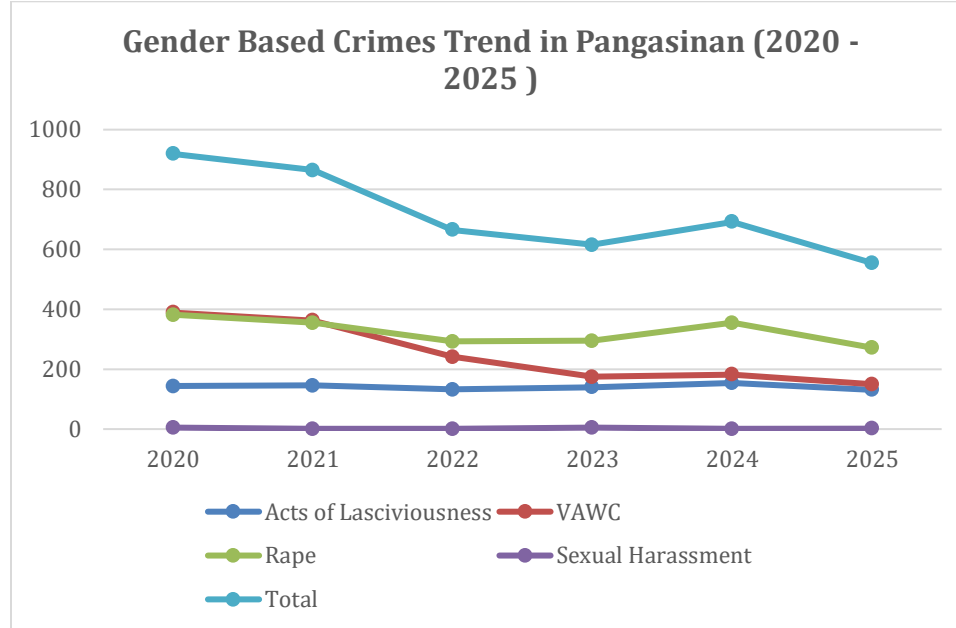


Figure 1 illustrates the annual trend of reported gender-based crimes in Pangasinan from 2020 to 2025. Overall, the total number of reported cases exhibited a generally declining trend, decreasing from 920 cases in 2020 to 552 cases in 2025, despite a slight increase observed in 2024. Among the offense categories, rape consistently recorded the highest number of reported cases throughout the study period, followed by violations of Republic Act No. 9262 (VAWC), acts of lasciviousness, and sexual harassment. While most offense categories demonstrated an overall downward trend, year-to-year fluctuations were evident, particularly in rape and VAWC cases. In contrast, sexual harassment remained the least frequently reported offense during the six years. These findings indicate that although reported gender-based crimes generally declined over time, the persistence of annual fluctuations suggests that gender-based violence continues to pose a significant concern in Pangasinan.

Table 2

Model Fit Statistics for the Linear Regression Analysis of Trends in Reported Gender-Based Crimes in Pangasinan, 2020–2025

Model of Fit Measures	Model	<i>R</i>	<i>R</i> ²
Gender-Based Violence Crimes (Overall)	1	0.892	0.796
Rape	1	0.659	0.434
VAWC	1	0.942	0.887
Acts Of Lasciviousness	1	0.172	0.0295
Sexual Harassment	1	0.298	0.0886

Table 2 presents the model fit statistics for the linear regression analyses conducted to examine the trends of reported gender-based crimes (GBV) in Pangasinan from 2020 to 2025. The strength of the linear relationship between time and the number of reported cases is represented by the correlation coefficient (R), while the coefficient of determination (R^2) indicates the proportion of variation in reported cases explained by the linear trend.

The overall model for Total Gender-Based Crimes demonstrated a strong linear fit ($R = 0.892$), with an R^2 value of 0.796, indicating that approximately 79.6% of the variation in the total number of reported gender-based crimes over the study period is explained by the linear trend. This suggests that the incidence of total reported gender-based crimes followed a relatively consistent temporal pattern.

Among the individual offense categories, Violence Against Women and Children (VAWC) exhibited the strongest model fit ($R = 0.942$, $R^2 = 0.887$). This indicates that 88.7% of the variation in reported VAWC cases can be explained by the linear trend, reflecting a highly consistent trend over time.

The model for Rape showed a moderately strong linear relationship ($R = 0.659$), with an R^2 value of 0.434, suggesting that approximately 43.4% of the variation in reported rape cases is explained by the regression model. This indicates a moderate temporal trend, although a considerable proportion of the variation may be attributed to factors other than time.

In contrast, Acts of Lasciviousness ($R = 0.172$, $R^2 = 0.0295$) and Sexual Harassment ($R = 0.298$, $R^2 = 0.0886$) demonstrated weak model fit. The regression models explained only 2.95% and 8.86% of the variation in reported cases, respectively, indicating that these offenses did not exhibit a strong linear trend during the study period. Instead, their annual frequencies appear to fluctuate irregularly, suggesting that factors other than the passage of time may better explain the observed variations.

Overall, the model fit statistics indicate that linear regression adequately describes the temporal trends for Total Gender-Based Crimes and VAWC, while the trends for Rape, Acts of Lasciviousness, and Sexual Harassment are less consistently explained by a linear model. These findings imply that although some categories display predictable long-term patterns, others may require more complex analytical approaches or longer observation periods to fully capture their temporal behavior.

Table 3 presents the regression coefficients of the linear regression models used to examine the trends in reported gender-based crimes (GBV) in Pangasinan from 2020 to 2025. The intercept represents the estimated number of reported cases at the baseline, while the regression coefficient for Year indicates the average annual change in the number of reported cases. The statistical significance of each trend was assessed using the t -test, with corresponding p -values.

Table 3

Regression Coefficients of the Linear Trend Models for Reported Gender-Based Crimes by Offense Type in Pangasinan, 2020–2025

Model Coefficients	Predictor	Estimate	SE	t	p
Gender-Based Violence Crimes (Overall)	Intercept	138826.5	35000.6	3.97	0.017
	YEAR	-68.3	17.3	-3.95	0.017
Rape	Intercept	31934	18045.19	1.77	0.151
	YEAR	-15.6	8.92	-1.75	0.155
VAWC	Intercept	104495.4	18612.57	5.61	0.005
	YEAR	-51.5	9.2	-5.6	0.005
Acts Of Lasciviousness	Intercept	1759	4642.32	0.379	0.724
	YEAR	-0.8	2.3	-0.349	0.745
Sexual Harassment	Intercept	638.143	1019.063	0.626	0.565
	YEAR	-0.314	0.504	-0.624	0.567

The regression model for Total Gender-Based Crimes revealed a statistically significant negative trend ($\beta = -68.3$, $t = -3.95$, $p = .017$). This indicates that the total number of reported gender-based crimes decreased by an average of approximately 68 cases per year during the study period. The statistically significant negative coefficient suggests a consistent downward trend in overall reported gender-based crimes from 2020 to 2025.

Similarly, Violence Against Women and Children (VAWC) demonstrated a statistically significant declining trend ($\beta = -51.5$, $t = -5.60$, $p = .005$). The model indicates that reported VAWC cases decreased by an average of approximately 52 cases annually, suggesting a sustained reduction throughout the study period.

In contrast, the regression models for Rape, Acts of Lasciviousness, and Sexual Harassment did not demonstrate statistically significant temporal trends. Although the estimated regression coefficients were negative for rape ($\beta = -15.6$), acts of lasciviousness ($\beta = -0.8$), and sexual harassment ($\beta = -0.314$), their corresponding p -values (.155, .745, and .567, respectively) exceeded the .05 level of significance. These findings indicate that the observed year-to-year changes in these offenses were not sufficiently consistent to conclude the presence of a significant linear trend over the study period.

Overall, the regression analysis indicates that only Total Gender-Based Crimes and VAWC exhibited statistically significant declining trends between 2020 and 2025. Conversely, the trends for Rape, Acts of Lasciviousness, and Sexual Harassment were characterized by relatively stable or irregular fluctuations that were not statistically associated with the passage of time.

Gender-Based Crimes Hotspots

Table 4

Frequency Distribution of Reported Gender-Based Crimes by Municipality and Offense Type in Pangasinan (2020–2025)

City/Municipality	Rape	VAWC	Acts of Lasciviousness	Sexual Harassment	Total	Rank
Urdaneta City	41	188	134	1	364	1
Dagupan City	89	110	114	2	315	2
San Carlos City	59	89	103	1	252	3
San Nicolas	6	3	18	0	27	4
Mabini	6	7	14	0	27	46
Urbiztondo	4	6	13	0	23	47
Santo Tomas	4	10	2	0	16	48

Table 4 illustrates that the geographic distribution of reported gender-based crimes in Pangasinan reveals notable disparities across municipalities and cities. Urban centers recorded the highest number of reported cases, with Urdaneta City (364 cases), Dagupan City (315 cases), and San Carlos City (252 cases) accounting for the largest volumes. Among the municipalities, Malasiqui (136 cases), Rosales (132 cases), and Mangaldan (130 cases) reported the highest frequencies. In contrast, Santo Tomas (16 cases), Urbiztondo (23 cases), San Nicolas (27 cases), and Mabini (27 cases) recorded the fewest reported incidents.

The higher concentration of reported gender-based crimes in urban areas may be attributed to larger populations, greater social interaction, and better access to law enforcement and victim support services, all of which increase opportunities for reporting. These findings are consistent with Social Disorganization Theory and Hotspot Theory, which suggest that crime tends to cluster in densely populated areas where social and environmental conditions facilitate both crime occurrence and crime reporting.

Conversely, the relatively low number of reported cases in rural municipalities should not be interpreted as evidence of lower levels of gender-based violence. Limited access to police and legal services, fear of stigma, concerns about confidentiality, and cultural barriers may discourage victims from reporting incidents. Consequently, differences in reported crime across municipalities likely reflect not only variations in the actual occurrence of gender-based violence but also disparities in reporting practices, institutional accessibility, and community attitudes. These findings underscore the need for targeted interventions in high-incidence areas while strengthening reporting mechanisms, victim support services, and community awareness programs in rural municipalities to reduce underreporting and improve access to justice.

Hourly Distribution of Reported Gender-Based Crime Cases (2020–2025)

Table 5

Distribution of Gender-Based Crime Cases by Time of Commission (Daytime vs. Nighttime), 2020–2025

Hour (AM)	Frequency	Hour (PM)	Frequency
12:00 AM	158	12:00 PM	167
01:00 AM	186	01:00 PM	170
02:00 AM	144	02:00 PM	159
03:00 AM	135	03:00 PM	175
04:00 AM	111	04:00 PM	166
05:00 AM	70	05:00 PM	136
06:00 AM	102	06:00 PM	173
07:00 AM	110	07:00 PM	202
08:00 AM	278	08:00 PM	263
09:00 AM	276	09:00 PM	250
10:00 AM	194	10:00 PM	299
11:00 AM	170	11:00 PM	218

The temporal distribution of reported gender-based crimes in Pangasinan indicates that incidents occur more frequently during the afternoon, evening, and nighttime, when individuals are engaged in routine activities such as work, school, travel, and social interactions. The higher incidence during nighttime may be associated with reduced visibility, decreased public surveillance, and fewer capable guardians, creating greater opportunities for crime.

The findings highlight the importance of strengthening situational crime prevention measures during high-risk periods. Existing initiatives, such as increased police visibility, patrol operations, barangay watch programs, and public awareness campaigns, should be complemented by improved street lighting, enhanced community-based surveillance, and accessible reporting mechanisms, including dedicated hotlines and mobile reporting platforms. These measures may reduce opportunities for offending while encouraging victims to report gender-based crimes promptly.

CONCLUSIONS AND RECOMMENDATIONS

This study analyzed the trends and distribution of documented gender-based offenses in Pangasinan from 2020 to 2025 utilizing official police records. The study identified 4,312 instances of gender-based crimes, with rape constituting the majority, followed by violations of Republic Act No. 9262 (Violence Against Women and Their Children Act), acts of lasciviousness, and sexual harassment. Despite a general decline in the total number of reported incidents over six years, annual fluctuations suggest that gender-based crimes continue to be a significant public safety and criminal justice issue in the province.

The research further illustrated that the distribution of recorded gender-based offenses differs by kind of crime, municipality, and temporal context. Urban centers documented the highest incidence of reported cases, but numerous municipalities constantly appeared as geographic hotspots. Temporal analysis also revealed intervals when reported instances were more frequent, indicating that gender-based crimes display discernible spatial and temporal trends. These findings underscore the significance of police records and trend analysis in comprehending the dynamics of gender-based crime and in facilitating evidence-based crime prevention and resource allocation.

The study enhances the current literature by offering localized empirical evidence on the trends and distribution of reported gender-based crimes in Pangasinan, thereby addressing the scarcity of provincial-level analysis in the Philippines. The results may aid law enforcement agencies, local government entities, and policymakers in formulating targeted interventions, enhancing crime prevention tactics, and augmenting victim care services based on discerned trends and high-risk zones.

The findings must be considered in the context of specific constraints. The analysis depended solely on legally documented police records, which may not accurately represent the true incidence of gender-based offenses due to underreporting, delays in reporting, and inconsistencies in recording processes among towns. Thus, the findings reflect trends in reported events rather than the overall prevalence of gender-based violence in the province.

Based on the findings of the study, the following recommendations are proposed: (1) The Pangasinan Police Provincial Office should further strengthen its crime reporting and records management system by standardizing documentation procedures, improving data quality, and enhancing inter-agency data sharing to support more accurate crime monitoring and trend analysis. (2) Local Government Units (LGUs), the Philippine National Police, and partner agencies should prioritize prevention and victim assistance programs in municipalities identified as high-incidence areas. Community education campaigns, gender-sensitive policing, and accessible reporting mechanisms should be expanded to encourage reporting and improve access to support services. (3) Barangay Violence Against Women (VAW) Desks and community-based support systems should be strengthened through continuous capacity-building, standardized case documentation, and closer coordination with law enforcement and social welfare agencies, particularly in rural communities where underreporting may be more pronounced. (4) Policy makers and program implementers may utilize the findings of this study in designing evidence-based interventions, allocating resources, and evaluating the effectiveness of existing gender-based violence prevention programs at the provincial and municipal levels. (5) Future researchers are encouraged to examine factors influencing the reporting of gender-based crimes, including socioeconomic conditions, institutional capacity, and victim help-seeking behavior. Future studies may also incorporate qualitative methods or victimization surveys to complement police records and provide a more comprehensive assessment of the prevalence and underlying causes of gender-based violence in Pangasinan.

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DECLARATION ON THE USE OF AI TOOLS

The researchers declare that Artificial Intelligence (AI) tools were utilized solely as assistive technologies during the preparation of this manuscript. These tools were used to enhance the organization, clarity, and quality of the writing while maintaining the researchers' full responsibility for the study's intellectual content, analysis, interpretation, and conclusions.

Specifically, ChatGPT was used to assist in organizing ideas, improving the structure of discussions, and refining the language and academic writing of the manuscript. Consensus AI was utilized to search for relevant scholarly literature and facilitate the consolidation of related references. QuillBot was used to assist in paraphrasing selected passages to improve readability while preserving the original meaning, and Grammarly was employed to review grammar, spelling, punctuation, and writing mechanics.

All AI-generated suggestions were carefully evaluated, verified, and revised by the researchers. The researchers independently selected the literature, interpreted the findings, performed the analyses, and prepared the final manuscript. Every cited source was reviewed from its original publication to ensure the accuracy of the information presented. The researchers assume full responsibility for the authenticity, integrity, and originality of this work and affirm that the use of AI tools did not replace their scholarly judgment or academic responsibility.

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