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IMPACT OF GENTRIFICATION ON COMMUNITY DYNAMICS IN ANGELES CITY: AN ANALYSIS OF COLLECTIVE EFFICACY, CRIME RATES, AND SAFETY PERCEPTIONS

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ABSTRACT

Gentrification involves significant modernization in disadvantaged neighborhoods, transforming them into commercial hubs. In the Philippines, this process is prominent; Angeles City exemplifies this transformation due to its strategic location and infrastructure investments. Grounded on the social disorganization theory, this study investigated the impact of gentrification on community dynamics in Angeles City, focusing on collective efficacy, crime rates, and safety perceptions using cross sectional method and Pearson Moment Correlation. Mixed findings from previous studies suggest that gentrification can either weaken or strengthen community bonds and variably affect crime rates and safety perceptions. Despite the city's significant urban development and transformation, the research found no statistically significant relationships between these variables. This indicates that the changes in Angeles City do not necessarily affect crime rates or the residents' social dynamics and sense of security. The observed moderate associations between the variables appear to be due to random chance rather than reliable patterns. Given the lack of significant relationships, the study suggests that Angeles City should focus on other strategies to enhance community well-being and safety, including community engagement programs, inclusive urban planning, and enhanced safety measures. This approach can help foster a stronger, safer, and more cohesive community amidst ongoing urban development.

Keywords: Collective Efficacy, Gentrification, Neighborhood Change, Perception Of Safety, Crime Rate, Social Disorganization Theory.

I. INTRODUCTION

Gentrification entails significant changes in line with drastic modernization typically occurring in disadvantaged neighborhoods. Santos Knight Frank (2022) ascertained that gentrification has taken over major cities in the Philippines, especially Metro Manila, considering that the Philippines has a lot of disadvantaged neighborhoods. This process helps bring out the sleeping potential of such cities to become commercial districts. This concept can be applied to Angeles City which is a highly urbanized city in Pampanga. Its strategic location, coupled with its advantageous routes throughout Luzon regions, has made it a potential hub for settlement, infrastructure development, and business expansion (Medina, 2023). Angeles City's urbanization has persisted despite its devastation in the 1991 eruption of Mount Pinatubo (Angeles City, 2020). This catastrophic event resulted in the deaths of several victims, disruption of livelihood, destruction of houses, and displacement of people. Further, Angeles City was reported to have five affected barangays and approximately 14,000 families victimized (De Guzman, 2004). However, considering its accessibility, economic zone developments and infrastructure investments still persisted such as the North Luzon Expressway (NLEX), MacArthur Highway Improvement, Subic-Clark-Tarlac Expressway (SCTEX), and Clark International Airport upgrade. Alongside these, numerous residential and commercial expansions have occurred, including malls, hotels, and restaurants.

One of the effects of gentrification is either the strengthening or breaking down of collective efficacy of a community as shown in some studies. Given these findings, it is necessary to weigh the effects of the gentrification in Angeles City, considering that Angeleños can be often seen mingling with each other on the streets and they can manifest collective hospitality. This is influenced by the long-standing values and rapport among Filipinos. Teach Beyond (2020) states that a Filipino word is used to describe the bond among community members, which is "Bayanihan." This word pertains to the unity of people to accomplish great things. This aligns with collective efficacy, a unifying strategy to address social problems collectively (Smith, 2021).

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As physical changes in the neighborhoods of the locale become more evident, changes in some aspects of these areas may also follow, one of which is the impact on the city's crime rate. Studies have shown that an increase or decrease in crime can be associated with neighborhood gentrification. This, in turn, affects residents' safety perception from crime as well. Perception of safety generally refers to the individual judgment regarding the possibility of harm or loss (Canterbury, 2024). With this, the Angeleños may perceive themselves more safe or less safe depending on the kind of impact gentrification has on Angeles City.

Establishing meaningful connections between the four previously described concepts—which are also used as study variables—was the aim of this investigation. To support this purpose, some related studies were reviewed as part of the foundation of the research problem and hypotheses.

H1: There is no significant relationship between the collective efficacy and the gentrification in Angeles City.

Previous studies found opposing results in establishing the relationship between the two variables. Gibbons et al. (2019) asserted that a gentrified neighborhood yields to lower community connection. Meanwhile, Thurber (2019) proved that when gentrifiers learn the history of the neighborhood, a strong collective efficacy will still prevail.

H2: There is no significant relationship between the gentrification and the crime rate in Angeles City.

Barton et al. (2019) found no association between gentrification and shifts in total homicide cases in their 30-year study. Further, gentrification was also found having no direct relationship with crime during the period of disinvestment in the United States (Golash-Boza & Oh, 2021).

H3: There is no significant relationship between the gentrification and the perception of safety in Angeles City.

Existing studies presented varying conclusions regarding this relationship. In the study of Anguelovski et al. (2020), gentrifiers, along with gang members and tourists, were involved in social unrest and drug selling, which caused significant fear and insecurity among residents. A case study by Largent and Quimby (2020) found that the arrival of people from different nationalities led to lower crime rates and increased safety perceptions in the neighborhood.

H4: There is no significant relationship between the crime rate and the perception of safety in Angeles City.

A few studies established dissimilar correlations between the two variables. Socha (2021) found a negative relationship wherein lower crime rate yields to higher sense of security. Nakamura and Shunsuke (2020) affirmed that crime, among other related factors, causes lower perceptions of safety.

H5: There is no significant relationship between the collective efficacy and the crime rate in Angeles City.

Manick et al. (2018) was unable to find a direct positive correlation between collective efficacy and homicide clearances in their study. Meanwhile, Maxwell et al. (2018) indicated that neighborhood collective efficacy directly influences how people perceive violence, experience victimization, and the actual homicide rates in Chicago neighborhoods.

H6: There is no significant relationship between the collective efficacy and the perception of safety in Angeles City.

The previous studies failed to conclude a direct relationship between the two variables. Dulin (2021) was only able to establish varying relationships between collective efficacy and perception of insecurity when applied in different areas of study. The findings of Cantora et al. (2019) were also limited to the relationship between collective efficacy and perceptions on police encounters.

II. BACKGROUND OF THE STUDY

The foundation of this study is the Social Disorganization Theory by Shaw and McKay. Social disorganization occurs when the effective social control in a society is broken down, which leads to the absence of harmony and the presence of conflict between groups (Ciobanu, 2019). As the major changes in the residential, commerce, and business aspects of Angeles City are observable, concepts like gentrification and collective efficacy can be

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tackled. These concepts are further tackled in connection with the perception of safety and crime rate. Smith (2021) emphasized that Social Disorganization Theory suggests a complex relationship between gentrification and crime over time. Initially, as gentrification progresses, the crime rate tends to rise due to the weakening of collective efficacy and informal social control attributable to demographic changes. However, with the stabilization of the population and the strengthening of informal social control, the crime rate is expected to decline. With this, the aforementioned theory is applicable to the current study because its variables are inclined toward the theory.

For decades, Angeles City has undergone several transformations due to devastation and modernization. The residents of the city themselves can discern gentrification. Gentrification challenges numerous urban revitalization initiatives in community planning and redevelopment. It has triggered conflicts with differing value systems in communities suffering from resident displacement and disruption of social networks (Epstein, 2018; Meltzer & Ghorbani, 2017 in Bernstein and Isaac, 2021). As gentrification grows in every corner of Angeles City, the state of residents' collective efficacy may be impacted by this change. Considering the place's long history, the residents are expected to have strong bonds with each other as they have known and interacted with each other for several years. Thus, it is interesting to know if these bonds are affected either positively, negatively, or at all by the emergence of new residents and businesses in their respective neighborhoods. More importantly, it must be determined if these changes will inspire collective effort among residents to address deviance and disorder in neighborhoods. Likewise, a change in a neighborhood will make the area susceptible to increased crime because new people from different backgrounds and cultures contribute to the alteration of regular social interaction patterns and the maintenance of collective efficacy (Zanhow et al., 2021).

Research Questions

The study examined how neighborhood changes in Angeles City affect the city's crime rate and the citizens' sense of overall efficacy and safety from crime.

Specifically, this study aimed to answer the following questions:

1. Is there a significant relationship between the collective efficacy and the gentrification in Angeles City?
2. Is there a significant relationship between the gentrification and the crime rate in Angeles City?
3. Is there a significant relationship between the gentrification and the perception of safety in Angeles City?
4. Is there a significant relationship between the crime rate and the perception of safety in Angeles City?
5. Is there a significant relationship between the collective efficacy and the crime rate in Angeles City?
6. Is there a significant relationship between the collective efficacy and the perception of safety in Angeles City?

Scope of the Study

The study focused on the residents of each barangay of Angeles City, Pampanga by establishing a notable link between the gentrification and their collective efficacy, perception of safety, and the crime rate. The study also focused on the past three to five years to assess the significant changes in the city. Further, taking respondents from each barangay enabled the result of the study to be generalized to the entire city. The study also tackled the number and type of crimes that were prevalent in the year 2023.

Conversely, the results of the study did not extend to the adjacent and gentrified neighborhoods outside Angeles City. In addition, the residents of Angeles City who have resided in the area for less than five years were excluded from the study. This is ensured that the respondents' inputs cover the significant changes in their neighborhoods in terms of the aspects being measured and that the study reflects long-term residents' experiences. This helped avoid skewed results from newer residents' initial impressions. Moreover, this was in line with the timeframe provided by the standard questionnaires adopted for gentrification and perception of safety. Lastly, the study did not explore in detail the displaced residents of Angeles City and their prevalent situations, as well as the cultural and racial divisions caused by gentrification which can be tackled better in a qualitative study. The study only investigated the possible impact of gentrification on social ties, security, and crime of the area, instead of focusing on the other effects of gentrification in a city.

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Significance of the Study

This study had significant benefits to the following:

Angeleños: The main beneficiaries of this study were the residents of Angeles City, also known as "Angeleños." They were at the center of the study, and the results determined the conditions they were experiencing. They were able to assess the reality of currently living in the city and how it affected them.

Community and Community Leaders: The leaders of each barangay had an opportunity to raise their concerns about the effects of the changes in their communities. The results of this study helped them have a basis on their stand when raising such concerns to the local authorities for solutions. Further, this study helped them raise awareness with their community members, which may foster unity.

Gentrifiers: This study encouraged gentrifiers to manifest compassion and sympathy towards the original and displaced residents of Angeles City. They became aware of the prevalent situations in the city caused by gentrification and learn its precious history and culture. This also allowed them to meet halfway with the original residents and foster good relationships with them (Thurber, 2019).

Displaced residents: This study also presented an opportunity to make known one of the negative effects of gentrification: the displacement of residents. Thus, this also presented an opportunity for these displaced residents to be heard and given assistance in their disadvantageous situations.

Local authorities: The local officials of Angeles City may refer to this study to formulate appropriate policies or programs to help communities and community leaders in their pursuit of maintaining harmony and affordable living conditions amidst significant changes. More importantly, they may formulate appropriate solutions to help the displaced residents. The local law enforcement may also have an opportunity to develop policing strategies to address or reduce crimes in affected areas when necessary.

Criminological research: This study became significant to the field of Criminological research because it added to the growing studies on gentrification, collective efficacy, perception of safety, and their relationships with the crime rate. Further, the study contributed to the following:

a. **Criminology students:** The students of Bachelor of Science in Criminology had an opportunity to learn about the topics and how these can apply to their personal lives and future careers.
b. **Future researchers:** Future researchers may use the related literature reviewed in this study for their review papers and references. They may also refer to the methods employed in this study as a guide to do their own research.

Theoretical Framework

The theory that lays the foundation for this study is the Social Disorganization Theory by Clifford Shaw and Henry McKay. Social disorganization happens when the effective social control in a society is broken down which leads to the absence of harmony and the presence of conflict between groups (Ciobanu, 2019). Meanwhile, DeCesare (2021) reiterated the factors making a community socially disorganized as identified by Shaw and McKay. These factors are "low socioeconomic status (SES), high ethnic and racial heterogeneity, and high residential turnover" (DeCesare, 2021, p. 22). The presence of these factors in a community prevents it from becoming socially organized which in turn would result in an increased crime rate. This best describes what the study aimed to explore. Applying this to Angeles City, the socioeconomic status of the residents was analyzed through determining their capability to afford the increasing costs in their areas, move into another dwelling within the area, or rent in apartments. Meanwhile, the metric of ethnic diversity was determining the fluctuation of newcomers arriving in the communities, whether the people share the same values or not, and whether the long-term and new residents generally get along with each other or not given their different origins. Regarding the turnover of residential properties, the respondents were questioned about whether or not people in their neighborhood are "flipping," or purchasing and renovating homes before renting or selling them. Collectively, these factors affect crime rate and perception of safety of the neighborhood to a certain degree, but not significantly. Addressing the gaps in the study of Bernstein and Isaac (2021), Thurber (2019), Golash-Boza and Oh (2021), Nakamura and Shunsuke (2020), Zanhow et al. (2021), among others, enabled the researchers of the current study to employ more neighborhoods, more respondents, explore the socioeconomic

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aspect of the city, and include all types of prevalent crimes in the city, respectively. This also allowed for the study to expand the application of the Social Disogranization Theory in Angeles City.

Conceptual Framework

The function of the conceptual framework is to organize the salient concepts of the study that summarize the focus and the path taken by the study (Shikalepo, 2020). With this understanding, this section elaborates the paradigm of the study which shows the relationship between the four main variables that this study will revolve around (see Figure 1 below): (a) collective efficacy, (b) gentrification, (c) crime rate, and (d) perception of safety from crime. The relationships between these four variables focus on the following hypotheses based on the introduction and the literature review: (1) there is no significant relationship between the collective efficacy and the gentrification in Angeles City; (2) there is no significant relationship between the gentrification and the crime rate in Angeles City; (3) there is no significant relationship between the gentrification and the perception of safety in Angeles City; (4) there is no significant relationship between the crime rate and the perception of safety in Angeles City; (5) there is no significant relationship between the collective efficacy and the crime rate in Angeles City; and (6) there is no significant relationship between the collective efficacy and the perception of safety in Angeles City.

Paradigm of the Study

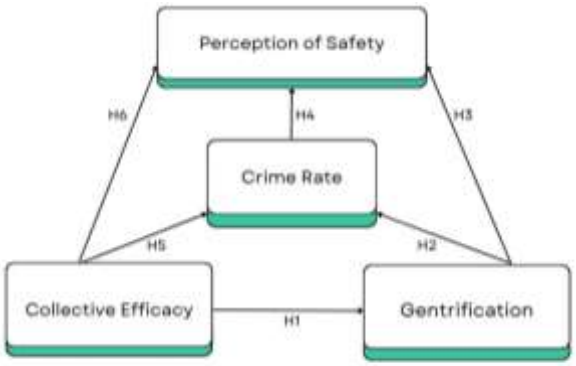

FIGURE 1. PARADIGM OF THE STUDY

III. METHODS

Study Design

Based on the research questions, the appropriate design for this study is a cross-sectional. In the current study, data collection started by identifying the sample size with the combination of the researchers' discretion in choosing the specific people as respondents. The sample size was determined using the Raosoft calculator and a percentage calculator, where the census data of Angeles City was entered for processing. Upon knowing the specific respondents, they were given informed consents which was included in the questionnaire. The questionnaire consisted of three different set of questions combined to accommodate the three variables of the study which are collective efficacy, gentrification, and perception of safety. The researchers assisted the respondents in answering the questionnaire. On the other hand, the statistical analysis for the data was Pearson Moment Correlation.

Locale of the Study

The entirety of this study was conducted in Angeles City. Each barangay had a representative sample size, specifically determining how many people were needed as respondents in those areas. Due to its ongoing developmental transformations, the researchers selected Angeles City as the focal point for this study. The city is experiencing significant growth, evidenced by the establishment of new businesses such as restaurants, hotels, and various other enterprises. The influx of migrants in the city was an important factor that was considered as well. This surge in development has led to noticeable gentrification across multiple barangays. This was also essential in determining the effect of gentrification on the collective efficacy of Angeleños and their safety perception from crime based on the status of the crime in the area.

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Study Participants and Sample Size

This study's respondents came from the 33 barangays of Angeles City, Pampanga. According to the city census, there is a total population of 462,928 in all 33 barangays. The sampling technique for this study was Cluster Sampling under Non-Probability Sampling. The Non-Probability Sampling was used due to the geographical size of the area of study which requires a Cluster Sampling. This sampling technique also enables the researchers to collect responses faster and in a cost-effective manner (Laerd, n.d.). Wang et al. (2020) studied the mental health problems of cancer patients during COVID-19 that were admitted to Sun Yat-sen University Cancer Center. This is one of the largest cancer centers in China. Considering that they were studying subjects from a specific area, they used Cluster Sampling. With this, the Cluster Sample was more inclined with this study because it divides the population based on geography. In line with this, the researchers first divided Angeles City into its barangays; then, they gathered samples from all barangays to achieve generalization. The Raosoft calculator was utilized to calculate the total sample size by entering the necessary information such as a margin of error of 5%, confidence level of 95%, the actual population size of Angeles City, and the response distribution of 50%. Thus, the recommended sample size based on this population was 384. Using further this information, the population percentage of each barangay based on the census data was calculated with their respective population to get the sample size for each area. The table below shows each barangay's specific population, population percentage, and sample size.

Table 1:

Sample Sizes of Each Barangay in Angeles City

Barangay	Population	Percentage	Sample Size
Agapito del Rosario	2,556	0.30%	3
Amsic	16,953	3.66%	14
Anunas	26,063	5.63%	22
Balibago	42,274	9.15%	36
Capaya	12,602	2.72%	10
Claro M. Recto	5,149	1.11%	4
Cuayan	15,046	3.25%	12
Cutcut	28,296	6.11%	23
Cutud	24,821	5.36%	21
Lourdes North West	10,054	2.17%	8
Lourdes Sur	4,879	1.05%	4
Lourdes Sur East	3,639	0.79%	3
Malabanias	29,841	6.45%	25
Margot	12,229	2.64%	10
Mining	5,265	1.14%	4
Ninoy Aquino	11,337	2.45%	9
Pampang	24,653	5.33%	20
Pandan	23,928	5.17%	20
Pulung Cacutud	25,385	5.48%	21
Pulung Maragul	20,675	4.47%	17
Pulungbulu	13,025	2.81%	11

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Salapungan	5,298	1.14%	4
San Jose	7,187	1.55%	6
San Nicolas	4,811	1.04%	4
Santa Teresita	9,164	1.98%	8
Santa Trinidad	6,208	1.34%	5
Santo Cristo	4,060	0.88%	3
Santo Domingo	18,672	4.03%	15
Santo Rosario	5,835	1.26%	5
Sapalibutad	14,280	3.08%	12
Sapangbato	13,912	3.01%	12
Tabun	13,656	2.95%	11
Virgen Delos Remedios	1,175	0.50%	2
Angeles City (Total)	**462,928**	**100%**	**384**

Inclusion and Exclusion Criteria

The respondents met a few characteristics to be qualified to participate. For the first criterion, the respondent were 18 years of age or above. While the researchers recognize that minors might have unique perspectives and may express a desire to participate, they must adhere to standard protocols in research. Firstly, minors are not legally permitted to consent to participate without a guardian present. Secondly, including respondents who are not yet of legal age could compromise the validity and reliability of this study's data. Therefore, to maintain the survey's standards and uphold ethical research practices, minors were not permitted to participate. For the second criterion, the respondent belonged to any gender, race, marital status, and educational attainment. This ensured generalization of the results. For the third criterion, the respondent were official residents of Angeles City. This ensured that the data gathered leans towards the study's goal of applying the research problem to Angeles City. A barangay identification card was required to verify the respondent's official residency in Angeles City. When the barangay ID was unavailable, a voter's identification card or any other valid identification which indicates the address of the respondent was the alternative used.

The exclusion criteria, which prohibits an individual from being a respondent of this study, provides that the individual has not lived in Angeles City for at least five years. This is in accordance with the standard questionnaire for gentrification and perception of safety formulated by Hirsch, Grunwald, Miles, and Michael (2021) and Su and Li (2016), respectively.

Research Instruments

The Collective Efficacy Scale by Sampson, Raudenbush, and Earls (1997) was utilized to measure the collective efficacy variable. The questionnaire was derived from their study, "Neighborhoods and violent crime: A multilevel study of collective efficacy." The questionnaire was a 4-point scale consisting of ten comprehensible questions. The ten questions were divided into two parts. The first part consisted of questions that determine neighborhood social control and compassion. The choices include (1) "very unlikely," (2) "unlikely," (3) "likely," and (4) "very likely." The second part consisted of questions that determine compassion, trust, and harmony among residents. The choices include (1) "strongly disagree," (2) "disagree," (3) "agree," and (4) "strongly agree." Questions 9 and 10 were reverse-coded.

The PACER scale by Hirsch et al. (2021) was utilized to measure the gentrification variable. The questionnaire was derived from their study entitled "Development of an instrument to measure perceived gentrification for health research: Perceptions about changes in environments and residents (PACER)." The questionnaire was a 4-point scale consisting of 19 comprehensible questions. The questions were divided into two parts. The first

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part required the respondent to think about the changes in their neighborhood in the past three to five years or the current changes they perceive. The questions pertain to the establishment of new businesses and stores, the inflation of housing prices, the construction of new buildings and amenities, and the state of the relationship between the old and new neighbors. The choices for this part were (1) "strongly disagree," (2) "disagree," (3) "Agree," and (4) "strongly agree." The second part consisted of questions focusing on the affordability of residential places and feelings about the neighborhood changes. The choices for this part were the same as the choices in the first part. Questions 4, 15, and 18 were reverse-coded.

The questionnaire utilized in the study by Su and Li (2016) entitled "The Relationship between Gentrification and Sense of Security in Harlem" was adopted to measure the perception of safety variable. Specifically, the second part of the aforementioned questionnaire was adopted to measure the given variable. It was a 4-point scale composed of three questions separated by different choices. The first question refered to the feeling of security while walking alone at night. The choices were (1) "very dangerous," (2) "dangerous," (3) "safe," and (4) "very safe." The second question refered to the perception of leaving belongings unattended in public places. The choices were (1) "I have to grab my things/put them on my lap even when I am eating," (2) "I would take all my things with me," (3) "I sometimes feel safe to leave my belongings on my seat," and (4) "I always feel safe to leave my belongings on my seat." The last question referred to the neighborhood's state of being safe in the last five years, as perceived by the respondents. The choices were (1) "A lot more dangerous," (2) "More dangerous," (3) "Safer," and (4) "A lot safer."

The data was electronically gathered from the Angeles City Police Office to assess the crime rate in Angeles City. This office is responsible for recording every reported crime in the area. One of their responsibilities is to store these records properly and responsibly. Thus, they are the primary source of crime data in Angeles City. The data gathered was from the year 2023, indicating the type of crimes, as well as the number of cases solved and cleared. These data were calculated per 100,000 people to get the actual crime rate and the average.

The researchers have sent an email to each of the authors of the three respective questionnaires for collective efficacy, gentrification, and perception of safety to ensure that they are given the right to use these questionnaires for their data collection.

Specific Procedures

The design of this study is a cross-sectional method, which requires that the data collection method is in the form of surveys. The data collection instruments were adopted from existing studies authored by other researchers. Thus, they are understood to have undergone validity and reliability assessment and pilot testing, which eliminate the possibility of errors with the instruments and, in return, allowed these instruments to be used for the entire data collection of this study. Following the computed number of respondents per barangay of Angeles City, the researchers asked for those who are long-term residents and vendors as respondents within each barangay while considering the inclusion and exclusion criteria of the study. This recruitment was naturally followed by the reading and explaining of the informed consent containing the intentions of the researchers, respect for the autonomy of the respondents, the benefits obtained from the study, the assurance of non-maleficence on the part of the respondents, and the privacy and confidentiality of the information gathered in a language they understood. The respondents were asked if they indeed understood the terms and if they had no disagreements. Afterward, the questionnaires were administered to the participating respondents. They had the freedom to read the questionnaires by themselves or ask for the assistance of the researchers. The questionnaires had Filipino translations for ease of understanding. The extent of the researchers' assistance was only limited to explaining questions they found complex and reading the questions entirely for some respondents who required it. The researchers also reiterated to the respondents that they can withdraw from participating if they sense discomfort or grave risk while answering the questions. Since the researchers were present during the data collection, they ensured the quality of the respondents' data inputs by verifying their completeness and accuracy to meet the standard protocols. The completed questionnaires were compiled in a secured envelope entrusted to the care and responsibility of the researcher leading this study. Most importantly, documentation of the data collection process was conducted to ensure transparency, replicability, and accountability. The respondents were asked for their permission to be photographed while answering the questionnaires. Upon meeting the target number of respondents, which is 384, the data from the questionnaires

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were converted into computerized data through the utilization of "Statistical Package for the Social Sciences" (SPSS).

Ethical Considerations

To ensure the protection of the respondents, they were given informed consent before the data collection. The informed consent emphasized that the research adheres to the ethical principles of research. The procedure involved having the respondent read the consent or with their preference; the researchers read and elaborated the consent to the respondents in a language they understood (i.e., English or Filipino). At the end of the consent process, the respondents were asked if they understood all aspects of the process and agree to participate in the survey. The right of the respondents to desist from participating in the study at any time was emphasized every time. The inputs of the respondents on the questionnaires were a testament to their willingness to participate.

To ensure that the information provided by the respondents remains confidential, the completed questionnaires were stored in a secured envelope handled by the leader for safekeeping. At the end of each data collection day, the completed questionnaires were immediately encoded in the SPSS software to secure and back up the data properly. The only people with access to the physical and digital copies of the completed questionnaires were the three researchers for this study and their adviser. This is to maintain that the data collected were utilized for research purposes only. The data were kept until the whole research paper was completed and approved.

To ensure that the risks to respondents are minimized, the researchers had the respondents answer the questionnaires in a shaded and comfortable environment free from distractions and undue risks. The respondents also had the freedom to choose where they were most comfortable completing the questionnaires. The questionnaire on the perception of safety contains questions that assess the safety of the respondents' neighborhoods. Thus, they may face psychological distress if they were victimized in accordance with the specific situations posed by the questions. With this, the researchers assured the respondents that the purpose of such questions is only to determine the level of safety their neighborhoods have and not specifically target the details of their security or insecurity experiences. They also ensured that they may withdraw from the study due to this reason. The researchers were prepared to give support system to triggered respondents, but fortunately, no one faced distress. Regarding social risks, the questionnaires all pertain to the social changes and relationships experienced by the respondents; thus, they were asked to weigh these aspects with their emotions. This was not as risky because the required answers were not sensitive and did not necessarily pose harm.

To ensure that the benefits of the study are maximized, the researchers continuously assured the respondents that the study contributes greatly to them as residents of Angeles City as the results and interpretation of this study can be utilized for possible future social improvements and policies. This opens doors for an opportunity to address the residents' concerns with the growing gentrification process in their neighborhoods and its effects on their collective efficacy, safety, and crime rate. It also contributes to the Criminological research community, which can also be utilized by future researchers in Angeles City. Considering these, the participation of the respondents greatly helped in completing the research and attaining the aforementioned benefits, thereby outweighing the potential risks they may face.

To ensure fairness among the respondents, the selection was based on the inclusion and exclusion criteria provided for this study. Once respondents were chosen upon meeting the inclusion criteria and upon ensuring that they did not fall under the exclusion criteria, the researchers were obliged to specifically choose the respondents through their discretion while avoiding bias and subjectivity. The long-term residents and vendors of the city were chosen as they were considered to give more insightful inputs and they readily meet the criteria. Even vulnerable residents such as the elderly, persons with disabilities, or members of marginalized groups had an equal chance of being selected if they meet the criteria. Therefore, the researchers had the responsibility to employ extra care in handling such vulnerable respondents by thoroughly assisting them in reading and answering the informed consent and questionnaires, accommodating their concerns with the survey, attending to their personal needs while answering the survey, and acknowledge their perspective with respect and enthusiasm.

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(Peer-Reviewed, Open Access, Fully Refereed International Journal)
Volume:07/Issue:01/January-2025 Impact Factor- 8.187 www.irjmets.com

To ensure integrity in the research process, the ethical principles were regularly monitored until the completion of the survey and the research itself. The researchers and their adviser were the only people accessing the gathered data. They were also responsible for the storage and processing of such data. To address possible issues, the respondents were given the opportunity to contact the researchers through the provided email address in the informed consent. Finally, to completely observe the integrity of the research, every action taken by the researchers, from administering the informed consent and questionnaires to processing the data, wre well-documented through photographs.

Statistical Analysis of Data

The Pearson Moment Correlation is the statistical analysis utilized for this study to determine the significant relationship between collective efficacy, gentrification, perception of safety, and crime rate. The SPSS software was utilized to accomplish this. A significance level of 0.05 was maintained to determine the statistical significance of these respective relationships. The data gathered from the questionnaires were processed by determining the means, verbal interpretations, standard deviations, and variances for thorough analysis. The correlation for each research problem was also generated. A reliability analysis using SPSS was done to make sure the questionnaire was reliable, and the results showed an acceptable coefficient of Cronbach's Alpha of 0.75. The correlations were processed through interpretation to discover the degree of relationship between the four variables. Those with p-values less than 0.05 were considered statistically significant. Ultimately, these interpretations were linked to the findings of existing literature to conclude definitely about the study's results.

IV. RESULTS AND DISCUSSION

Table 2:

Collective Efficacy

Collective Efficacy	Mean	Verbal Interpretation	Std. Deviation	Variance
Children were skipping school and hanging out on a street corner.	2.99	Likely	1.25	1.55
Children were spray-painting graffiti on a local building.	2.59	Likely	1.23	1.51
Children were showing disrespect to an adult.	2.79	Likely	1.24	1.53
A fight broke out in front of their house.	2.51	Likely	1.26	1.59
The fire station closest to their home was threatened with budget cuts	2.57	Likely	1.27	1.60
People around here are willing to help their neighbors.	3.08	Strongly Agree	1.11	1.22
This is a close-knit neighborhood.	2.80	Agree	1.17	1.37
People in this neighborhood can be trusted.	2.70	Agree	1.17	1.36
People in this neighborhood generally get along with each other.	2.89	Agree	1.04	1.08
People in this neighborhood share the same values.	2.89	Agree	1.11	1.22
Average	2.78	Agree	1.18	1.40

The table examines neighborhood residents' perceptions of collective efficacy, covering social disorder and community cohesion. It shows that residents view issues like school skipping, graffiti, and fights as likely occurrences, with mean scores between 2.51 and 2.99. The most frequently perceived issue is school skipping

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Volume:07/Issue:01/January-2025 Impact Factor- 8.187 www.irjmets.com

(2.99), while fights are less commonly perceived (2.51). On the positive side, statements about community cohesion and mutual trust received mean scores from 2.70 to 3.08, indicating agreement that the neighborhood is supportive and trustworthy, with "People around here are willing to help their neighbors" scoring highest (3.08). The data also reveals moderate variability in perceptions, with standard deviations from 1.04 to 1.27. Overall, the average score of 2.78 reflects a generally positive view of collective efficacy, despite some concerns about social disorder, underscoring the neighborhood's strong social capital and mutual support.

Table 3:

Gentrification

Gentrification	Mean	Verbal Interpretation	Std. Deviation	Variance
New businesses are opening.	3.13	Strongly Agree	1.05	1.10
Long-standing businesses are being replaced by different businesses.	2.83	Agree	0.90	0.80
More expensive or fancier grocery stores are opening.	3.03	Strongly Agree	1.00	0.99
The cost of housing has decreased (i.e. renting or buying	1.96	Disagree	1.01	1.02
Construction of new buildings on vacant lots or to replace old buildings.	3.01	Strongly Agree	0.96	0.92
Construction of new or improved resources such as parks, bike lanes, transit, or sidewalks	2.88	Agree	0.92	0.85
People are “flipping” properties, buying and fixing them up to rent or sell.	2.81	Agree	1.00	1.00
Changes are leading to tension or conflict between me and my neighbors.	2.58	Agree	1.02	1.03
New people are moving into my neighborhood.	2.74	Agree	1.01	1.02
If I had to move right now, I could afford to move to a similar house or apartment within my neighborhood	2.54	Agree	1.10	1.22
I feel welcome in most new businesses in my neighborhood.	2.52	Agree	1.00	1.01
I feel the personality of my neighborhood has changed	2.93	Agree	0.99	0.98
I trust people moving into my neighborhood	2.60	Agree	0.95	0.89
I feel good about the changes happening in my neighborhood	3.01	Strongly Agree	0.95	0.91
I am not afraid of being pushed or forced out of my neighborhood	2.32	Agree	0.96	0.92
I would support changes to my neighborhood (e.g. new stores, sidewalks, parks) even if the changes make it more expensive for me to live here.	2.94	Agree	0.95	0.90
Changes in my neighborhood are meant for people like me.	2.79	Agree	0.96	0.93
Changes happening in my neighborhood do not	2.29	Agree	0.97	0.94

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Volume:07/Issue:01/January-2025 Impact Factor- 8.187 www.irjmets.com

make me feel unsure that I will stay here.				
I feel I have a say in what changes occur in my neighborhood.	2.74	Agree	1.08	1.17
Average	2.72	Agree	0.99	0.98

The table explores residents' perceptions and experiences of gentrification in their neighborhood, highlighting various aspects such as new businesses, housing affordability, and community dynamics. With an average mean score of 2.72, the data indicates overall agreement with gentrification-related changes, suggesting a generally positive or neutral perception among residents. High mean scores for statements about new businesses (3.13), new buildings (3.01), and positive feelings about neighborhood changes (3.01) reflect a favorable outlook. However, lower mean scores for statements about tension or conflict (2.58), feeling pushed out (2.32), and uncertainty about staying (2.29) indicate mixed or neutral perceptions on these issues. The variability in responses, as shown by the standard deviation and variance, suggests diverse experiences and attitudes toward gentrification. This nuanced understanding is essential for policymakers and stakeholders to address residents' needs and concerns amid neighborhood changes.

Table 4:

Perception of Safety

Perception of Safety	Mean	Verbal Interpretation	Std. Deviation	Variance
How do you feel in terms of safety while walking alone after dark (e.g. after 10 pm)?	3.02	Very Safe	1.14	1.31
How do you feel leaving your bag on the table to pick up your food at a restaurant/go to the bathroom?	3.01	I always feel safe to leave my belongings on my seat	1.19	1.41
Do you think your neighborhood has become safer or less safe in the last 5 years?	2.67	Safer	1.20	1.44
Average	2.90	Safer	1.18	1.38

The table provides insights into residents' perceptions of neighborhood safety across various scenarios, from walking alone at night to leaving belongings unattended in public. The average mean score of 2.90 suggests that residents generally feel safer in their neighborhood compared to previous years. High mean scores indicate a strong sense of safety in specific scenarios, such as walking alone after dark (3.02) and leaving belongings unattended in public spaces (3.01), reflecting confidence and trust in the neighborhood's safety. Residents' varied opinions are shown in the assessments of how neighborhood safety has changed over the previous five years, which had a mean score of 2.67 and higher standard deviation and variance. Overall, the data portrays a positive perception of neighborhood safety, but highlights the need to consider individual experiences when assessing and improving community well-being.

Table 5:

Crime Rate, 2023

Types of Crimes	Crime Rate
Against Person	19.01
Against Property	41.03
Non-Index Crime	43.42
Traffic Incidents	76.91
Special Laws	185.74

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Volume:07/Issue:01/January-2025 Impact Factor- 8.187 www.irjmets.com

Average	73.22

The table presents crime rates across various categories, showing that crimes against persons occur at a rate of 19.01 per 100,000 people, property crimes at 41.03, non-index crimes at 43.42, traffic incidents at 76.91, and crimes related to special laws at 185.74, resulting in an overall average crime rate of 73.22. The high rate of special law violations and traffic incidents highlights the need for targeted enforcement and preventive measures in these areas, while maintaining lower rates of personal and property crimes requires sustained investment in community policing and crime prevention programs. These insights underscore the importance of data-driven strategies to enhance community safety and well-being.

Table 6:

Relationship between collective efficacy and gentrification

Correlations			
		Collective Efficacy	Gentrification
	Pearson Correlation	1	.440
	Sig. (2-tailed)		.176
	Sum of Squares and Cross-products	.318	.256
	Covariance	.032	.026
	Pearson Correlation	.440	1
	Sig. (2-tailed)	.176	
	Sum of Squares and Cross-products	.256	1.605
	Covariance	.026	.089

The table presents correlation data between collective efficacy and gentrification, including Pearson correlation coefficients, significance levels, sum of squares and cross-products, and covariance. The Pearson correlation coefficient is 0.440, indicating a moderate positive relationship, suggesting that as collective efficacy increases, gentrification also tends to increase. Yet, there is no statistical significance in the connection because the significance level (p-value) of 0.176 is higher than the generally accepted cutoff of 0.05. Thus, we cannot confidently assert a meaningful relationship between collective efficacy and gentrification based on this data alone. Descriptive statistics provide additional context about the variability and co-variation of the two variables. Collective efficacy has a sum of squares and cross-products of 0.318, while gentrification has 1.605, indicating greater variation for gentrification. The covariance is 0.026, and the coefficient of variation between the two variables is 0.256, indicating a weak but positive link. According to a 2017-study by Steinmetz-Wood et al., there is stronger sense of community among residents when there is gentrification. This was opposed by Gibbons et al. (2019) and Bernstein & Isaac (2021), stating that gentrifying a neighborhood decrease neighborhood community connection. Meanwhile, the present data shows a moderate positive relationship between collective efficacy and gentrification, supporting the findings of Steinmetz-Wood et al. (2017); however, this cannot be concluded as statistically significant.

Table 7:

Relationship between gentrification and crime rate

Correlations			
		Crime Rate	**Gentrification**
	Pearson Correlation	1	-.041
	Sig. (2-tailed)		.948

e-ISSN: 2582-5208
International Research Journal of Modernization in Engineering Technology and Science
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Volume:07/Issue:01/January-2025 Impact Factor- 8.187 www.irjmets.com

The correlation table examines the relationship between crime rate and gentrification. The Pearson correlation coefficient between crime rate and gentrification is -0.041, indicating a very weak negative correlation. This suggests that as gentrification increases, crime rates tend to slightly decrease; however, the relationship is minimal. Significantly, the significance value (Sig. 2-tailed) is 0.948, which is significantly higher than the typical statistical significance threshold of 0.05. The high p-value suggests that there may not be a true underlying relationship and that the observed correlation is not statistically significant. According to the study of MacDonald and Stokes (2020) and Ellen, Horn, and Reed (2019), there is a reduction of crimes in neighborhoods that undergo redevelopment and fluctuations of migrants. On the contrary, Barton, Valasik, Brault, and Tita (2019) and Golash-Boza & Oh (2021) found no association between gentrification and crime in their respective studies. Meanwhile, the current study suggests that the negative correlation between the two variables aligns with the findings of MacDonald and Stokes (2020) and Ellen, Horn, and Reed (2019), but it is not statistically significant.

Table 8:

Relationship between gentrification and perception of safety

Correlations			
		Perception of Safety	Gentrification
	Pearson Correlation	1	-.038
	Sig. (2-tailed)		.962
	Sum of Squares and Cross-products	.079	-.010
	Covariance	.026	-.003
	Pearson Correlation	-.038	1
	Sig. (2-tailed)	.962	
	Sum of Squares and Cross-products	-.010	1.605
	Covariance	-.003	.089

The provided correlation data examines the relationship between neighborhood safety perceptions and gentrification levels. The Pearson correlation coefficient of -0.038 indicates a very weak negative correlation, suggesting a slight tendency for gentrification levels to decrease as safety perceptions increase, and vice versa. With a p-value of 0.962, this correlation is not highly relevant, meaning that random fluctuation instead of a real connection between the variables could be the cause of the apparent relationship. Descriptive statistics reveal that the variation in safety perception scores is relatively small compared to the variation in gentrification levels. The covariance of -0.003 suggests a minimal tendency for these variables to change in opposite directions. These findings are in agreement with the studies of Anguelovski et al. (2020), Largent and Quimby (2020) and in contradiction with the study of Oscilowicz et al. (2020). However, given the p-value of the current findings, this cannot be considered as statistically significant.

Table 9:

Relationship between crime rate and perception of safety

Correlations			
		Crime Rate	Perception of Safety
	Pearson Correlation	1	-.274

e-ISSN: 2582-5208
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Volume:07/Issue:01/January-2025 Impact Factor- 8.187 www.irjmets.com

	Sig. (2-tailed)		.726

The correlation table looks into the linkage between the apparent degree of security and the crime rate. There is a weak negative association, as indicated by the Pearson correlation coefficient of -0.274, between the impression of safety and the crime rate. This implies that there is a minor negative correlation between feelings of safety and rising crime rates, however the correlation is not very strong. The negative sign implies an inverse relationship, which aligns with the general expectation that higher crime rates are associated with lower perceptions of safety. Nevertheless, this association is not statistically significant, as indicated by the significance value (Sig. 2-tailed) of 0.726, which is far higher than the conventional cutoff of 0.05. Thus, the observed relationship could be due to random variation rather than an actual association. These findings are in consonance with the findings of Socha (2021), Ogneva-Himmelberger et al. (2019), Nakamura and Shunsuke (2020) and Lim et al. (2020); however, the current study findings are not statistically significant, thereby concluding that the inverse relationship between the two variables may be random.

Table 10:

Relationship between collective efficacy and crime rate

Correlations			
		Crime Rate	Collective Efficacy
	Pearson Correlation	1	-.576
	Sig. (2-tailed)		.310

The correlation table examines the relationship between crime rate and collective efficacy, revealing a Pearson correlation coefficient of -0.576. This shows a somewhat negative association, indicating that lower crime rates are linked to higher levels of community collective efficacy. The negative sign of the correlation coefficient is consistent with theoretical expectations, as collective efficacy typically correlates with reduced crime rates. However, this link is not statistically significant at the traditional threshold of 0.05, according to the statistical significance (Sig. 2-tailed) of 0.310. Because of this, even though the negative association is quite high, it might just be the result of chance rather than a consistent pattern. The inverse relationship between collective efficacy and crime rate agrees with Kochel and Weisburd (2018), while Zanhow et al. (2021) and Maxwell et al. (2018) found positive correlation between the two variables, but the current finding does not definitively conclude the relationship due to statistical insignificance. Therefore, this finding is more inclined toward the study of Manick et al. (2018) who found no direct positive correlation between the two variables.

Table 11:

Relationship between collective efficacy and perception of safety

Correlations			
		Collective Efficacy	Perception of Safety
	Pearson Correlation	1	.019
	Sig. (2-tailed)		.981
	Sum of Squares and Cross-products	.318	.002
	Covariance	.032	.001
	Pearson Correlation	.019	1
	Sig. (2-tailed)	.981	

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Volume:07/Issue:01/January-2025 Impact Factor- 8.187 www.irjmets.com

	Sum of Squares and Cross-products	.002	.079
	Covariance	.001	.026

The correlation data looks at the relationship between perceptions of safety in a community and collective efficacy, two important concepts in studying the social dynamics and general well-being of neighborhoods. The Pearson correlation coefficient is 0.019, indicating a very weak positive correlation between these variables. This implies almost no discernible relationship between collective efficacy and perception of safety. Furthermore, the p-value of 0.981 significantly surpasses the significance level of 0.05, indicating that the observed connection is more likely the result of chance than of a real association. Descriptive statistics show the sum of squares and cross-products for collective efficacy at 0.318, indicating total variation in collective efficacy scores, while for perception of safety, it is only 0.002, showing minimal variation in safety perception scores. The covariance between the two variables is 0.032, suggesting a slight tendency for them to change together, though this relationship is weak. Existing studies do not present direct relationships between the two variables. Dulin (2021) and Wasileski et al. (2019) found that collective efficacy have positive correlations with perception of insecurity and police perceptions, respectively. These studies do not directly support the current findings.

V. CONCLUSION

The correlation analyses examined six relationships within the context of community dynamics and well-being. Firstly, the correlation between collective efficacy and gentrification revealed a moderate positive relationship, but lacks statistical significance, suggesting caution in assuming a direct link between the two. Secondly, the correlation between gentrification and crime rate indicated a minimal and statistically insignificant relationship, urging more comprehensive research to understand their interplay. Thirdly, the correlation between gentrification and perception of safety yielded a very weak and insignificant result. Fourthly, the review on crime rate and perception of safety suggested a weak negative relationship, but lacked statistical significance, underscoring the need for more nuanced exploration. Fifthly, the correlation between crime rate and collective efficacy revealed a moderate negative relationship, yet lacked statistical significance, indicating the complexity of their dynamics. Lastly, the relationship between collective efficacy and perception of safety showed a very weak and statistically insignificant positive correlation. These findings collectively underscore the need for comprehensive research methodologies to inform effective community development and urban planning strategies.

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