



A SCALE DEVELOPMENT ON NEIGHBORHOOD CRIME IN DAVAO CITY: AN EXPLORATORY FACTOR ANALYSIS

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Abstract:

This paper aimed to develop a multidimensional framework of neighborhood crime in Davao City. The study employed a quantitative, non-experimental research design employing Exploratory Factor Analysis (EFA). A researcher-made instrument was utilized which was developed from in-depth interview of 12 selected residents, related literatures, and studies. To determine the validity of items, the researcher employed Content Validity Ratio (CVR) where ten (10) experts reviewed and validated the instrument. Item statements that passed the threshold of 0.80 were selected as part of the survey questionnaire. As a result, 43-item instrument was developed and utilized as data collection tool administered to 300 residents of Davao City as research participants. Using Exploratory Factor Analysis, 29 items remained in the model to compose the four (4) constructs after 17 rotations and iterations, therefore, making them the factors characterizing neighborhood crime in Davao City. Using thematic analysis, the factors were clustered as (1) breakdown of social control, (2) social disorder, (3) social deviance, (4) social disintegration. Revealed structures of neighborhood crime can be an aid to frame policies and strategies to augment peacekeeping efforts in suppressing crime and other forms of delinquency, to strengthen ties within the community and lastly, to create a safe and secured society.

Keywords: criminal justice, neighborhood crime, community residents, exploratory factor analysis, Philippines

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1. Introduction

Living in an unsafe neighborhood remains a significant public concern (Cho & Ho, 2018). A study conducted in the Netherlands shows that neighborhood crime affects the general feelings of unsafety of the residents, precisely their health issues (Putrik et al., 2019). Also, a recent finding revealed that a neighborhood in Queensland, Australia, with a high prevalence of crime experienced a decrease in the mental well-being of the community (Pak & Gannon, 2022). In the Philippines, Davao City Police Office reported increased crime incidents from 2019 to 2022. It has also been reported that rape, robbery, and theft are the most prevalent crimes among Davao City barangays, where most perpetrators are the victims' neighbors, relatives, and friends (Philippine National Police, 2023).

To address the social problem that may arise, examining the structure of the neighborhood can give us an understanding of the attributes that contribute to neighborhood criminality (Wang, 2021). Several studies have shown the connection of neighborhoods to a wide array of intertwined characteristics, including overpopulation, poverty, unemployment, migration, and another factor that dejected the internal and external social controls that constrain crime (Baranauskas, 2018). In the study conducted in the rural and urban counties of the United States, findings revealed that disadvantaged communities, as well as the presence of ethnic diversity, broken families, and residential instability, have higher crime rates. This implies that social disorganization variables strongly predict crime (Feng, 2021).

While a vast number of research in neighborhood crime often focused exclusively on the association between crime rates and neighborhood characteristics, relatively few studies have explored the development of measurement tools to contextualize neighborhood crimes. Only limited research about this subject can be found in the Philippine setting— far more in the locale. Apart from that, an exploratory factor study on neighborhood crime can help unravel the issue's complexity, provide insights into underlying factors, and guide evidence-based policies and interventions to reduce crime rates and improve community well-being.

Understanding the complex phenomenon of the neighborhood is one of the promising ways to tackle the persistent issue of increasing crime rates (Putrik et al., 2019). Although the cumulative evidence of these studies is impressive, it only offers limited perspective when determining factor structures of the neighborhoods and developing a multidimensional framework on Neighborhood Crime in the context of Davao City. Not to mention, only a few Criminology researchers in the Philippines use Exploratory Factor Analysis (EFA) as a methodology approach to investigating crime in-depth. Hence, this prompted the researcher to develop a scale through EFA that identifies and measures the factors contributing to neighborhood crime in Davao City.

1.1 Study Objectives

The general objective of this study is to develop a framework for factors characterizing neighborhood crime in Davao City. Specifically, it aims to achieve the following

objectives: to determine factor structures of neighborhood crime in Davao City and to develop a multidimensional framework for neighborhood crime in the Context of Davao City residents. Moreover, this research assumes that the factor structures of neighborhood crime are multidimensional and are a function of F1, F2, F3, ...n.

1.2 Framework of the Study

This study is anchored on Clifford Shaw and Henry McKay's "Social Disorganization Theory" which studies urban crime and delinquency (1942). It lists various elements that affect a community's ability to create and preserve strong social networks, including residential instability, ethnic variety, family disruption, economic status, population size or density, and closeness to urban regions. Shaw and McKay showed that delinquency was concentrated in impoverished neighborhoods near or next to centers of industry or commerce rather than occurring randomly throughout the city. These underprivileged areas had high rates of criminal activity and were constantly changing.

To exhibit the conceptual framework of this study, a schematic model demonstrating multiple measures or determinants of neighborhood crime in Davao City is shown in Figure 1. Furthermore, the measurements labelled as Factor 1... n describe the determinant factors of the latent constructs. At the center is the main variable, surrounded by the hypothesized determinants.

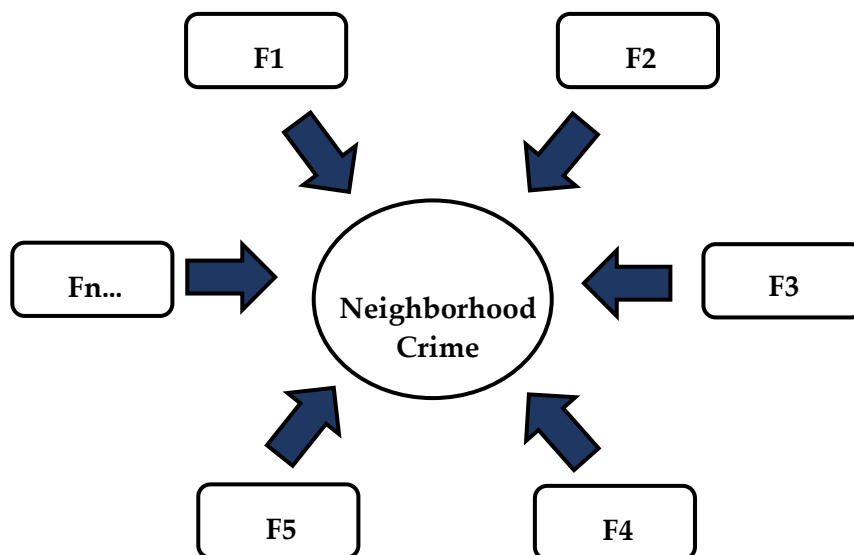


Figure 1: The conceptual framework of the study

The independent variable is neighborhood crime which operationally defines as criminal activities that occur within a specific geographic area, specifically neighborhoods or barangays of Davao City. It comprises various illegal and delinquent behaviors individuals or groups commit within a localized residential or commercial area. Numerous studies have documented that neighborhood qualities, such as poverty,

ethnic heterogeneity, residential mobility, and family disruption, are associated with neighborhood variance in crime rates (Shaw and McKay, 1942; Sampson and Groves, 1989).

2. Literature Review

Neighborhood, as defined by Berk (2005), is the area where people reside. This includes people that live close to one another that make up a community. These locations are characterized by physical or sociological traits that set them apart from others.

The concept of neighborhood contains two fundamental components: physical and psychosocial (Keller, 1968). People, space, interaction systems, shared identification, and public symbols are the neighborhood's fundamental components, to be more precise. Together, the components define neighborhoods as a group of people living in a distinguishable part of a city, who are connected by a network of official and informal relationships and who use public symbols to convey their shared identity with the neighborhood (Schwiran, 1983).

Examining the structure of the neighborhood can give us a glimpse of how crime emerged in the neighborhood. In a systematic review done by Castán Broto et al. (2018), the study found that the physical and social characteristics of neighborhoods can significantly impact crime and fear of crime. For example, neighborhoods with more street connectivity, mixed-use development, and a greater sense of community tend to have lower crime rates and lower levels of fear of crime. The study also highlights the importance of considering the perspectives of different groups within a neighborhood, such as residents, business owners, and law enforcement, in understanding the dynamics of crime.

In the study conducted by Piquero et al. (2018), neighborhood criminality can be predicted by determining social bonds and social disorganization. The researchers found that social bonds are negatively associated with criminal behavior, meaning that individuals with more robust social bonds are less likely to engage in criminal activity. In addition, they discovered that social disorganization is positively associated with criminal behavior, meaning that individuals who reside in high-level of socially disorganized community are more likely to engage in criminal activity.

Understanding the circumstantial forces in a crime-prone neighborhood provides a comprehensive idea of how social surroundings affect individual behaviors. For example, Choi et al. (2018) found out that neighborhood violence is linked to poorer levels of school safety. This emphasizes how crucial social assistance is for protecting teenagers living in high-crime areas and suggests that interventions to improve school safety should also consider ways to increase social support for students.

Browning and Bradley (2018) also found that social and physical disorders were significantly related to higher levels of localized crime, with social disorder having a more substantial effect on violent crime and physical disorder having a stronger effect on property crime. Specifically, the relationship was more decisive in low-income and

racially segregated neighborhoods compared to more affluent and racially diverse neighborhoods.

Living in a disadvantaged neighborhood, especially youth, was more likely to have negative peer influences, increasing their risk for engaging in violent behavior. Additionally, the study found that parental monitoring and supervision attenuated the relationship between negative peer influence and violent behavior, suggesting the importance of parental involvement in mitigating the impact of negative peer influences on adolescent behavior (Maynard et al., 2019).

Furthermore, it is claimed that violent crimes are associated with the interaction between the built environment and the community's social structure. In conclusion drawn by Thomas and Drawve (2018), neighborhoods with high levels of social disorganization, such as low social cohesion and limited community involvement, experienced a stronger association between neighborhood disorder and aggravated assault rates. The study also emphasized the significance of environmental design in reducing aggravated assault. Neighborhoods with effective physical security measures, such as surveillance systems and improved lighting, exhibited lower rates of aggravated assault compared to areas lacking such features.

3. Material and Methods

This section presents the research respondents, materials and instruments, design, and procedure of this study.

3.1 Study Participants

A total number of 300 residents of Davao City served as respondents to this study. The sample size was deemed adequate since 50 samples are the minimum and 384 samples are the maximum suggested sample sizes for an exploratory factor analysis (Pearson & Mundfrom, 2010). Since one of the essential elements of a neighborhood is people residing in an identifiable area (Keller, 1968), this study was conducted in Davao City, categorized as 1st class, a highly urbanized city in the Philippines. It was the largest in terms of land area and one of the most populous cities in the country. Moreover, the researcher used a stratified random sampling method based on ratio and percentage. This approach is regarded as the most time- and cost-effective probability design for samples from large geographic areas. High accessibility and objectivity from various sample groups are provided by this method (Sedgwick, 2014).

3.2 Materials and Instrument

This research utilized a researcher-made instrument extracted from literature and interviews with residents, law enforcers, barangay peacekeepers, and other experts in the field of Criminology in Davao City. Their responses served as a basis for survey questionnaire formulation and went through content and expert validation.

The validity of the survey questionnaire was measured using the Content Validity Ratio (CVR) performed by ten expert validators from Criminology and Law Enforcement. This was to ensure that the survey items were reliable and valid. Based on the content validity ratio results, only 43 items were retained out of 73. This means that 30 items were eliminated. This retained 43-item was used for the survey instrument to be distributed to 300 residents.

3.3 Design and Statistical Tools

This study employed a quantitative, non-experimental research design utilizing an Exploratory Factor Analysis (EFA) technique. Non-experimental research designs include those in which the researcher analyzes the relationship between pre-existing groups or characterizes a group. (Salkind, 2010). The EFA technique is the best research design to efficiently extract information from multivariate data (Hair et al., 1998). Using this method, the researcher clusters associated variables in an uncontrolled, natural setting to summarize the data.

The statistical tools employed in understanding the data gathered are the following: Sampling adequacy and sphericity tests, Data reduction analysis, and Factor rotation method. The researcher utilized Kaiser Meyer-Olkin to test the sampling adequacy and Bartlett's test to test the sphericity of the data collected. This was done to identify the appropriateness of the data for factor analysis (Gonick, 1993). The data reduction method using principal component analysis (PCA) was also used to extricate the factor structures of neighborhood crime in Davao City (Joliffe & Cadima, 2016). Lastly, the factor rotation method to determine which factors should be retained for rotation with the help of Percentage of Variance and Orthogonal Rotation using Direct Oblimin to establish the correlation among factors (Allen, 2017).

4. Results and Discussion

The findings and analysis of the data gathered are presented in this chapter. Results are presented in the following order: measures of sampling adequacy and sphericity, rotated component matrix, extracted factors characterizing neighborhood crime in Davao City, latent roots criterion of the extracted factors, and framework developed from the study's findings. Moreover, a discussion is provided to clarify and explain the findings.

4.1 Measures of Sampling Adequacy and Sphericity

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity are both provided in Table 1. A statistical technique called Kaiser-Meyer-Olkin (KMO) uses the value to evaluate whether the sample size is sufficient for factor analysis (Matore et al., 2019). Kaiser (1974) described that KMO with a value of $>.90$ s as marvelous, $.80$ s, meritorious, in the $.70$ s, middling, in the $.60$ s, mediocre, in the $.50$ s, miserable, and less than $.5$, unacceptable. Since the KMO score of this study garnered 0.941, this means that the sample size is marvelous, which is acceptable and well-connected; hence, factor

analysis is the most suitable method for the data set. It shows that a strong partial correlation overlaps considerably with how much information there is between the variables. Hence it makes sense to run a factor analysis in measuring the neighborhood crime in Davao City.

Table 1: Measures of Sampling Adequacy and Sphericity

Measurement		Value
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.941
Bartlett's Test of Sphericity	Approx. X^2	13603
	<i>df</i>	903
	Sig.	.000

Likewise, Bartlett's Test of Sphericity is a statistical tool that examines the total significance of all relationships in all entries on the utilized tool (Effendi et al., 2019). It contrasts the identity matrix with an observed correlation matrix. It examines whether there is any overlap between the variables that can be extracted into a few numerical elements. The degree of freedom value for the data set is 903. Bartlett's Test of Sphericity resulted in a p-value of 0.000, indicating that the set of data is not identical and hence it is deemed multivariate. Therefore, factor analysis is the most suitable technique to identify the variables that characterize neighborhood crime in Davao City. The significant statistical test 0.000 demonstrates that the correlation matrix is not an identity matrix (rejecting the null hypothesis) as shown in the table above.

4.2 Extracted Factors of Neighborhood Crime in Davao City

Presented in Table 2 are extracted factors that were retained after applying the extraction and retention techniques to characterize neighborhood crime in Davao City. Items that exceed the criteria of > 0.50 are deemed qualified. Meanwhile, factor loadings with 0.50 and below were eliminated (Lee et al., 2017). The determined underlying constructs were then subjected to thematic analysis. According to Braun and Clarke (2006), thematic analysis is a method used to determine patterns or themes within data. Thus, in this case, four latent constructs were identified: factors (1) breakdown of social control, (2) social disorder, (3) social deviance, and (4) social disintegration.

Factor 1 was labeled Breakdown of Social Control (nine items, accounting for 17.6% of the total variance). The items on this scale embodied the weakening or absence of social institutions and mechanisms that regulate social behavior and maintain social order. The scale largely depicted the lack of peacekeeping efforts of police, barangay (community) leaders, and neighbors to prevent and control neighborhood crime. In fact, the highest loading on this factor included: Q41 indifference of barangay/community leaders on the peace and order situation of their jurisdiction (.832), Q36 seldom police patrol (.786), and Q43 absence of police outposts (.751). This extracted factor also concurred with the Social Control theory, which suggested that societies with weak social control mechanisms and bonds, like low levels of social cohesion, informal social control,

and lack of enforcement, were more likely to experience high levels of crime (Hirschi, 1969).

Factor 2 was labeled Social Disorder (seven items, accounting for 16.8% of the total variance). The theme of this scale described those disorders in the neighborhood that contributed to neighborhood crime. As defined by Gracia (2014), the social disorder can be characterized by people acting out in the community, such as those who are intoxicated or high on drugs, drug dealing, aggressive argumentation, conflict, and fighting, loitering, gang activity, and street prostitution. Thus, this matched the items which have the highest loading for this factor, such as Q42 drunken neighbors who cause disturbance to the neighborhood (.611), Q30 existence of juvenile gangs that initiate street crimes and violence (.609), Q35 disagreement and conflict among neighbors (.556). The identified factor also reinforced the Broken Windows theory by James Wilson and George Kelling (1982), emphasizing that social and physical disorders can create an environment that encourages serious crime. For instance, conflict, altercation, drunk people, street delinquency, people loitering, and street prostitution contribute to neighborhood crime. In a field experiment conducted by MacDonald et al. (2019), graffiti stickers were placed on 11 abandoned buildings in low-income neighborhoods of New York. The findings suggested that visible signs of the disorder can lead to increased crime and social disorder.

Table 2: Extracted Factors Characterizing Neighborhood Crime in Davao City

Item	Extracted Dimensions	Loading
Factor 1 – Breakdown of Social Control		
41	The indifference of barangay/community leaders to the peace and order situation of their jurisdiction.	0.832
36	Seldom police patrol.	0.786
43	Absence of police outposts.	0.751
31	Lenient enforcement of both police and barangay enforcers.	0.678
11	Existence of business establishments that promote alcoholism and smoking to the community members.	0.662
16	Neighbors who are unwilling to engage in coordinated efforts in crime prevention.	0.634
26	Neighbors who engaged in illegal gambling activities.	0.634
21	Absence of organized neighborhood watch in the community.	0.623
2	Neighbors who do not care about the peace and order situation of their neighborhood.	0.514
Factor 2 – Social disorder		
42	Drunken neighbors who cause disturbance to the neighborhood.	0.611
30	Existence of juvenile gangs that initiate street crimes and violence.	0.609
40	Feeling unsafe when walking in slum areas.	0.581
35	Disagreement and conflict among neighbors.	0.556
25	Weak security in the neighborhood due to poor physical measures.	0.545
10	Physical assaults and threats by a drunkard or drug addict.	0.542
33	Presence of business establishments that become crime hot spots.	0.512
Factor 3 – Social Deviance		
22	Troublesome children and disrespectful adults.	0.716

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7	Adults who set a negative model for children.	0.686
27	Businesses that boost crimes to proliferate.	0.669
12	Juveniles who engage in delinquent activities.	0.661
17	Undisciplined and unsupervised parenting.	0.647
32	Incompetence and ineffectiveness in crime prevention and control of community leaders.	0.548
	Factor 4 – Social Disintegration	
24	Feeling unsafe towards unfamiliar people having drinking sessions on the streets.	0.626
19	Feeling unsafe around transient neighbors due to a lack of familiarity and attachment.	0.615
14	Neighbors who are strangers and cannot be trusted.	0.612
9	Increased resident population, which corresponds to delinquent/crime incidents.	0.565
39	Families who push a child to become delinquent.	0.533
34	Adults who tolerate the delinquent behavior of children in the neighborhood.	0.532
29	Loosened family ties.	0.518

Factor 3 was labeled Social Deviance (six items, accounting for 13.9% of the total variance). Items depicted on this scale are behaviors, actions, and characters not conforming to accepted norms. As defined by Clinard & Meier (2011), social deviance is behavior that violates a group or society's standards of conduct or expectations. It encompassed non-criminal behavior that is considered socially unacceptable. For instance, Q7 adults who set a negative model to children (.686), businesses that boost crimes to proliferate (.669), undisciplined and unsupervised parenting (.647), incompetence and ineffectiveness of barangay tanods (.548) are all examples of social deviance. In the study conducted by Biemann et al. (2018), it underscores the importance of promoting positive parenting practices in reducing neighborhood crime and promoting healthy adolescent development.

Factor 4 was labeled Social Disintegration (seven items, accounting for 13.6% of the total variance). The items loading onto this scale portrayed that neighborhood tends to disintegrate over time due to weakening interconnection. As defined by Bursik (1988), social disintegration is a notion that refers to the collapse of social cohesion and the diminishing of social bonds within a community. It is often associated with factors such as urban decay and the breakdown of family structures. This was also expressed in items Q9 feeling unsafe around transient neighbors due to lack of familiarity and attachment (.615), Q14, neighbors who are strangers and cannot be trusted (.612), Q29, loosened family ties (.518). Further, this finding was also aligned with the collective efficacy theory by Robert Sampson et al. (1999). When community members do not work together, they can create a society in which criminal behavior is expected to occur.

4.3 Latent Roots Criterion of the Extracted Factors

Presented in Table 3 was the latent root criterion showing that only four (4) dimensions characterizing neighborhood crime in Davao City can be rooted out from the data set submitted for factor analysis after 17 iterations. These are determined factor structures: (1) breakdown of social control, with initialized eigenvalue of 17.234 and a variance of

17.6; (2) social disorder, with initialized eigenvalue of 2.014 and a variance of 16.8; (3) social deviance, with initialized eigenvalue of 1.197 and a variance of 13.9; and (4) social disintegration with initialized eigenvalue of 1.094 and a variance of 13.6.

Table 3: Latent Roots Criterion of the Extracted Factors

Factors	Initialized Eigenvalue	Percentage of Variance	Cumulative Variance %
Breakdown of Social Control	17.234	17.6	17.6
Social Disorder	2.014	16.8	34.4
Social Deviance	1.197	13.9	48.3
Social Disintegration	1.094	13.6	62

4.4 Multidimensional Framework on Neighborhood Crime

A thematic framework shown in Figure 2 depicts the four (4) dimensions characterizing neighborhood crime in Davao City. These factors include the breakdown of social control, social disorder, social influence, and social disintegration. The researcher thematically analyzed these factor structures to identify the best constructs that best explain the clustered components. These four measures significantly influence neighborhood crime. The framework also provides a schematic illustration of the measurement tool being developed. Future researchers can use the scale to further study neighborhood crime using other research designs or techniques or another unit of analysis to test its effectiveness and validity.

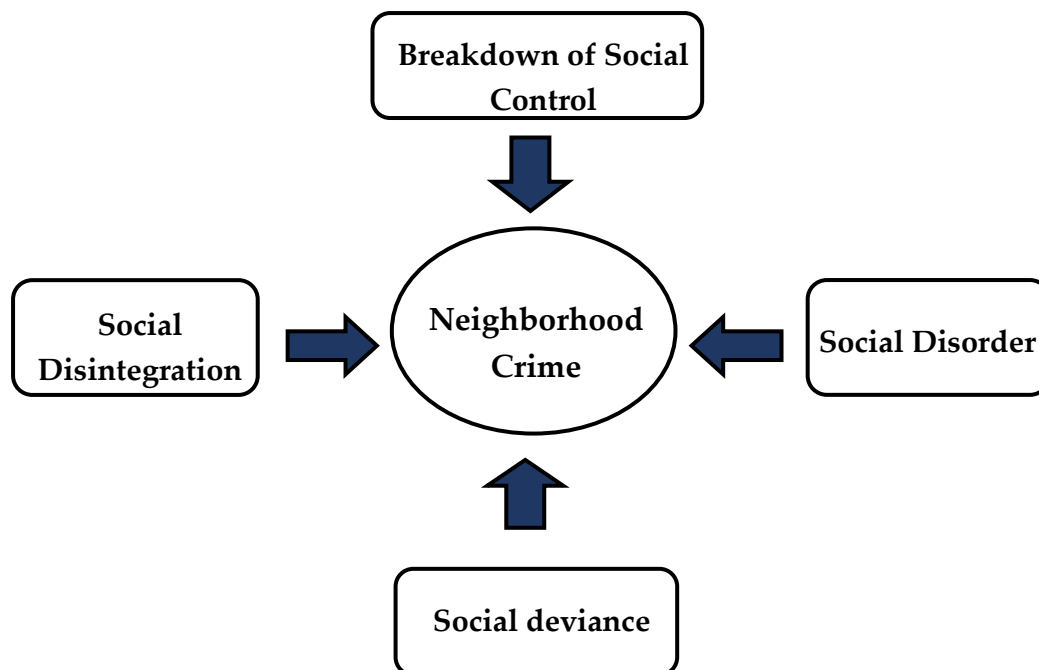


Figure 2: Thematic Framework on Neighborhood Crime

5. Recommendations

Based on the findings, it is recommended that various beneficiaries may utilize the tool. Since one dimension found in the study includes the breakdown of social control, policy-making authorities may consider the measurements found and the scale developed when devising initiatives that might strengthen local official and informal controls.

Moreover, the law enforcement sector may also use the instrument to evaluate their performance and gauge community-level participation. They may also further strengthen their police-community relations programs by facilitating regular dialogue and community engagement, increasing police visibility, and building community-based outposts.

It is also recommended that urban planners use this study's framework in designing neighborhoods free from physical and social disorders or that promote natural surveillance. This means that people are more likely to watch and report suspicious activities that cause disturbance in the neighborhood. This can be achieved through features such as well-lit streets, public CCTV, transforming abandoned buildings into functional public areas, etc., that can alleviate the problem of physical and social disorder. They may also promote social cohesion by designing public spaces, such as parks or community centers, that encourage social interaction.

It is also recommended that the effectiveness of the neighborhood crime measuring instrument should be confirmed and validated by another criminological research. In addition, future researchers may use this to carry out further studies on neighborhood crime using confirmatory factor analysis or other research methodologies, so that other respondents can make use of the findings of this study. They can also use the tool created by the researcher exactly as is, or they can make any necessary changes to bring it into conformity with the goals and purposes of their study. The scale may be further refined and enhanced by use.

6. Conclusion

The study has provided valuable insights into understanding neighborhood crime. Using exploratory factor analysis, the researcher concluded that there are factor structures of neighborhood crime in Davao City, hence multidimensional. The four (4) factors established are a breakdown of social control, social disorder, social deviance, and social disintegration, illustrated in a thematic framework. The generated measures formed part of the measurement tool for neighborhood crime.

The results of the study also supported the anchor theory of Clifford Shaw and Henry McKay's Social Disorganization (1942), which argues that neighborhoods tend to have higher crime rates when there is a lack of social control. In addition, the breakdown of social structures such as family, community, and social networks may lead to a lack of cohesion and social control, making them more vulnerable to crime. It also argues that visible decay can reinforce perceptions of social disorganization and contribute to a sense

of hopelessness, powerlessness, and social exclusion among residents. Therefore, the extracted factor structures, such as the breakdown of social control, social disorder, social deviance, and social disintegration, sustained and further reinforced the theory of Social Disorganization.

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References

- Allen, M. (2017). *The SAGE Encyclopedia of Communication Research Methods*. SAGE Publications, Inc.
- Baranauskas, A. J. (2018). *The social construction of neighborhood crime by the news media*. Retrieved from ProQuest Central: <https://www.proquest.com/dissertations-theses/social-construction-neighborhood-crime-news-media/docview/2036377970/se-2>
- Biemann, T. K.-C. (2018). Parents as Role Models for Adolescent Substance Use and Delinquency: A Systematic Review. *Psychology of Addictive Behavior*.
- Braun, V. &. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77–101.
- Browning, C. R. (2018). Neighborhood Disorder and Localized Crime: The Implications of Social and Physical Disorder on Levels and Patterns of Crime. *Justice Quarterly*, 35(5), 831–861. doi:10.1080/07418825.2017.1381839.
- Bursik, R. J. (1988). Social disorganization and theories of crime and delinquency: Problems and prospects. *Criminology*, 26(4), 519-551.
- Castán Broto, V. A. (2018). The Relationship between Neighborhood Structure, Crime, and Fear of Crime: A Systematic Review. *Journal of Planning Literature*. *Journal of Planning Literature*, 33(3), 228–244. <https://doi.org/10.1177/0885412218760088>.
- Cho, W., & Ho, A. (2018). Does neighborhood crime matter? A multi-year survey study on perceptions of race, victimization, and public safety. *International Journal of Law, Crime, and Justice*, pp. 13–26. Retrieved from <https://www.sciencedirect.com/science/article/pii/S1756061618301587>
- Choi, S. S. (2018). Neighborhood crime and school safety: Examining the moderating role of social support. *Journal of Interpersonal Violence*, 33(3), 419–438. doi 10.1177/0886260515583347.
- Clinard, M. B. (2011). *Sociology of Deviant Behavior*. Cengage Learning.
- Effendi, M. M. (2019). Exploratory Factor Analysis (EFA) for Adversity Quotient (AQ) Instrument among Youth. *Journal of Critical Reviews*.

- Feng, S. Q. (2021). *Variants of social disorganization: A comparison of community characteristic measures on crime between urban and rural counties in the United States*. Retrieved from ProQuest Central: <https://www.proquest.com/dissertations-theses/variants-social-disorganization-comparison/docview/2641514897/se-2>
- Gonick, L. (1993). *The Cartoon Guide to Statistics*. Harper Perennial.
- Gracia, E. (2014). Neighborhood Disorder. *Encyclopedia of Quality of Life and Well-Being Research*, https://doi.org/10.1007/978-94-007-0753-5_275.
- Hair, J. F. (1998). *Multivariate data analysis (5th ed.)*. Prentice Hall.
- Hirschi, T. (1969). *Causes of delinquency*. Berkeley: University of California Press.
- Kaiser, H. F. (1974). *A second-generation is a little jiffy*. *Psychometrika*, 35(4), 401-415.
- Keller, S. (1968). *The Urban Neighborhood*. New York: Random House.
- MacDonald, J. K. (2019). The Broken Windows Theory and Social Disorder: Evidence from a Field Experiment in New York City. *Journal of Research in Crime and Delinquency*, 56(3), 413–442. doi:10.1177/0022427818773314.
- Maynard, B. R.-W. (2019). The Role of Negative Peer Influence in the Relationship Between Neighborhood Disadvantage and Adolescent Violent Behavior. *Journal of Youth and Adolescence*, 48(1), 96-109. doi:10.1007/s10964-018-0891-6.
- Pak, A., & Gannon, B. (2022). The effect of neighborhood and spatial crime rates. *Empirical Economics*.
- Pearson, R. A. (2010). The recommended sample size for conducting exploratory factor analysis on dichotomous data. *Journal of Modern Applied Statistical Methods*, 9(2), 5.
- Philippine National Police, D. (2023). *Crime Rate Level Davao City*. Davao City: Philippine National Police.
- Piquero, N. P. (2018). Social Control and Crime: An Examination of the Role of Social Bonds and Social Disorganization in Predicting Crime. *Justice Quarterly*, 35(6), 959-984. doi 10.1080/07418825.2017.1363757.
- Putrik, P., Amelsvoort, L., & Mujakovic, S. (2019). Assessing the role of criminality in neighborhood safety feelings and self-reported health: results from a cross-sectional study in a Dutch municipality. *BMC Public Health*.
- Salkind, N. (2010). Non-experimental design. *Encyclopedia of Research Design*.
- Sampson, R. (2010). Collective Efficacy Theory. *Encyclopedia of Criminological Theory*, <https://doi.org/10.4135/9781412959193>.
- Sampson, R. J. (1989). Community structure and crime: Testing social-disorganization theory. *American Journal of Sociology*, 4(4), 774–802.
- Schwiran, K. P. (1983). Models of Neighborhood Change. *Ann. Rev. Social.*
- Sedgwick, P. (2014). *Stratified cluster sampling*. f7016.
- Shaw, C. M. (1942). *Juvenile delinquency and urban areas: A study of rates of delinquents in relation to differential characteristics of local communities in American cities*. University of Chicago Press.
- Thomas, S. D. (2018). Examining interactive effects of characteristics of the social and physical environment on aggravated assault. *Journal of Criminal Justice*, Vo; 57, pp. 88-89. <https://doi.org/10.1016/j.jcrimjus.2018.04.002>.

- Wang, X. (2021). *The effects of reported crime and neighborhood context on citizens' perceptions of neighborhood crime and disorder in Houston*. Retrieved from ProQuest Central: <https://www.proquest.com/dissertations-theses/effects-reported-crime-neighborhood-context-on/docview/2572559680/se-2>
- Wilson, J. K. (1982). Broken windows: The police and neighborhood safety. *The Atlantic Monthly*, 249(3), 29–38.

Appendix

A. Content Validity Ratio

Item	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Expert 6	Expert 7	Expert 8	Expert 9	Expert 10	Total	CVR	Interpretation
1	1	1	1	1	1	1	1	1	1	1	10	1	Retained
2	1	0	1	0	1	1	1	1	1	1	8	0.6	Discarded
3	0	1	1	1	1	0	1	1	1	1	8	0.6	Discarded
4	1	1	1	1	1	0	1	1	0	1	8	0.6	Discarded
5	1	1	1	1	0	0	1	1	1	1	8	0.6	Discarded
6	1	1	1	1	1	1	1	1	1	1	10	1	Retained
7	1	1	1	1	1	1	1	1	1	1	10	1	Retained
8	1	1	0	1	0	1	1	1	1	1	8	0.6	Discarded
9	1	0	1	1	1	1	1	1	1	1	9	0.8	Retained
10	1	1	1	1	1	1	1	1	1	1	10	1	Retained
11	0	0	1	1	1	0	1	1	0	0	5	0	Discarded
12	1	0	1	0	1	1	0	0	0	1	5	0	Discarded
13	0	0	0	1	0	0	1	0	0	1	3	-0.4	Discarded
14	0	1	0	1	1	0	0	1	0	1	5	0	Discarded
15	0	0	0	1	0	1	0	0	1	0	3	-0.4	Discarded
16	1	0	1	1	1	1	1	1	0	1	8	0.6	Discarded
17	1	1	1	0	0	1	1	0	1	0	6	0.2	Discarded
18	1	1	1	1	1	1	1	1	1	1	10	1	Retained
19	1	1	1	1	1	1	1	0	1	1	9	0.8	Retained
20	1	1	0	1	1	0	1	1	1	1	8	0.6	Discarded
21	1	1	0	1	1	1	1	1	1	1	9	0.8	Retained
22	0	1	1	1	0	1	1	1	1	1	8	0.6	Discarded
23	1	1	1	0	1	1	1	1	1	1	9	0.8	Retained
24	1	1	1	1	1	1	1	1	1	1	10	1	Retained
25	1	1	1	1	0	1	0	1	1	1	8	0.6	Discarded
26	1	1	0	1	1	0	0	0	1	0	5	0	Discarded
27	1	1	1	1	1	1	1	1	1	1	10	1	Retained
28	1	1	1	0	1	0	1	0	0	1	6	0.2	Discarded
29	0	1	1	1	1	1	1	1	1	1	9	0.8	Retained
30	1	1	1	1	1	1	1	1	1	1	10	1	Retained
31	1	0	1	1	1	1	1	1	1	1	9	0.8	Retained
32	1	1	0	1	0	1	0	1	1	1	7	0.4	Discarded
33	1	1	1	1	1	0	1	1	1	1	9	0.8	Retained
34	0	1	1	0	1	1	1	1	1	1	8	0.6	Discarded
35	1	1	1	1	1	1	1	1	1	1	10	1	Retained
36	1	1	1	1	1	1	1	1	1	1	10	1	Retained
37	0	0	1	1	0	0	1	1	1	1	6	0.2	Discarded
38	1	1	0	0	1	1	0	1	1	0	6	0.2	Discarded
39	1	1	1	1	1	1	1	1	1	1	10	1	Retained
40	1	1	1	1	1	1	1	1	1	1	10	1	Retained
41	1	1	1	1	1	1	1	1	1	1	10	1	Retained
42	1	1	1	1	1	1	1	1	1	1	10	1	Retained
43	1	1	1	0	1	1	1	1	1	1	9	0.8	Retained
44	1	1	1	1	0	1	1	1	1	1	9	0.8	Retained
45	1	0	1	1	1	0	1	1	0	0	6	0.2	Discarded
46	1	1	1	1	1	1	1	1	1	1	10	1	Retained
47	1	1	1	1	1	1	1	1	1	1	10	1	Retained
48	1	1	1	1	1	1	1	1	1	1	10	1	Retained
49	1	1	1	1	1	0	1	0	1	1	8	0.6	Discarded
50	1	1	1	1	1	1	1	1	1	1	10	1	Retained
51	1	1	1	1	1	1	1	1	1	1	10	1	Retained
52	1	1	1	1	1	1	0	1	1	1	9	0.8	Retained
53	1	1	1	1	1	1	1	1	1	1	10	1	Retained
54	1	1	1	1	1	1	1	1	1	1	10	1	Retained
55	1	1	1	1	1	1	1	1	1	1	10	1	Retained
56	1	1	1	1	0	1	1	1	1	1	9	0.8	Retained
57	1	1	1	1	1	1	1	1	1	1	10	1	Retained
58	1	1	1	1	1	1	1	1	1	1	10	1	Retained
59	1	1	1	1	1	1	1	1	1	1	10	1	Retained
60	1	1	1	1	1	1	1	1	1	1	10	1	Retained
61	0	1	1	0	1	1	1	1	1	1	8	0.6	Discarded
62	1	1	1	0	1	0	1	1	1	1	8	0.6	Discarded
63	1	1	1	1	1	1	1	1	1	1	10	1	Retained
64	1	1	1	1	1	1	1	1	1	1	10	1	Retained
65	1	1	1	1	1	1	1	1	1	1	10	1	Retained
66	0	0	1	0	0	0	0	0	1	1	3	-0.4	Discarded
67	1	1	0	1	0	1	1	1	1	1	8	0.6	Retained
68	0	1	1	1	1	1	1	1	1	0	8	0.6	Discarded
69	0	1	0	1	1	1	1	1	1	1	8	0.6	Discarded
70	1	1	0	1	1	0	1	1	1	1	8	0.6	Discarded
71	1	1	1	1	1	1	1	1	1	1	10	1	Retained
72	1	1	0	1	0	0	0	1	1	1	6	0.2	Discarded
73	1	1	1	1	1	1	1	1	1	1	10	1	Retained

B. Rotated Component Matrix

Item Statement		Factor 1	Factor 2	Factor 3	Factor 4
Q41	Indifference of barangay/community leaders on the peace and order situation of their jurisdiction.	0.832			
Q36	Seldom police patrol.	0.786			
Q43	Absence of police outposts.	0.751			
Q31	lenient enforcement of both police and barangay enforcers.	0.678			
Q11	Existence of business establishments that promote alcoholism and smoking to the community members.	0.662			
Q16	Neighbors who are unwilling to engage in coordinated efforts in crime prevention.	0.634			
Q26	<i>Neighbors who engaged in illegal gambling activities.</i>	0.634			
Q21	Absence of organized neighborhood watch in the community.	0.623			
Q2	Neighbors who do not care about the peace and order situation of their neighborhood.	0.514			
Q42	Drunken neighbors who cause disturbance to the neighborhood.		0.611		
Q30	Existence of juvenile gangs that initiate street crimes and violence.		0.609		
Q40	Feeling unsafe when walking in slum areas.		0.581		
Q35	disagreement and conflict among neighbors.		0.556		
Q25	Weak security in the neighborhood due to poor physical measures.		0.545		
Q10	Physical assaults and threats by a drunkard or drug addict.		0.542		
Q33	Presence of business establishments that become crime hot spots.		0.512		
Q22	Troublesome children and disrespectful adults.			0.716	
Q7	Adults who set a negative model for children.			0.686	
Q27	Businesses that boost crimes to proliferate.			0.669	
Q12	Juveniles who engage in delinquent activities.			0.661	
Q17	Undisciplined and unsupervised parenting.			0.647	
Q32	Incompetence and ineffectiveness in crime prevention and control of community leaders			0.548	
Q24	Feeling unsafe towards unfamiliar people having drinking sessions on the streets.				0.626
Q19	Feeling unsafe around transient neighbors due to a lack of familiarity and attachment.				0.615
Q14	Neighbors who are strangers and cannot be trusted.				0.612
Q9	Increased resident population, which corresponds to delinquent/crime incidents.				0.565
Q39	families who push a child to become delinquent.				0.533
Q34	Adults who tolerate the delinquent behavior of children in the neighborhood.				0.532
Q29	Loosened family ties.				0.518

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