

### **SOCIAL SCIENCES & HUMANITIES**

Journal homepage: http://www.pertanika.upm.edu.my/

### Correlates of Crime Prevention and Perception of Safety Using the Knowledge, Attitudes, and Behavior (KAB) Model

Mark Erana Patalinghug<sup>1\*</sup>, John Dexter Gaston Sarcena<sup>1</sup>, Ronilo Seronio Bustamante<sup>1</sup>, Katreen Glimada Melecio<sup>1</sup>, Junrey Maglangit Mangubat<sup>1</sup> and Haidee Fuentes Patalinghug<sup>2</sup>

<sup>1</sup>Criminology Department, Faculty, School of Criminal Justice Education, J. H. Cerilles State College-Dumingag Campus, 7028 Zamboanga del Sur, Philippines

<sup>2</sup>Secondary Education Faculty, School of Teacher Education, J. H. Cerilles State College- Dumingag Campus, Dumingag, 7028 Zamboanga del Sur, Philippines

#### **ABSTRACT**

As empirical studies have progressed, various metrics and study areas have been incorporated into safety perception and worry about victimization. In this study, the Knowledge, Attitude, and Behavior Model was applied in evaluating the cognitive and emotional domains of 401 residents of Zamboanga del Sur, Phillipines focusing on their knowledge of crime prevention, safety perception, and fears of victimization. Using the model, the knowledge of crime prevention, safety perception, and fear of victimization was considered an exploratory variable based on the common-sense assumption that feelings and emotions govern how people perceive certain things. The result shows that implemented crime prevention strategies in the province were observable, and community awareness is considerable. Regarding safety and security, the respondents rated the province as safe for everyone and moderately safe when personal belongings are left unattended. The threats to physical safety and security against persons and property are less likely to occur. Finally, the data show a statistically significant weak positive correlation between crime prevention and the perception of safety and security. The associations of safety and security and general satisfaction with personal safety among the representative samples

#### ARTICLE INFO

Article history:

Received: 11 October 2021 Accepted: 20 October 2022 Published: 19 May 2023

DOI: https://doi.org/10.47836/pjssh.31.2.09

E-mail addresses:

mark.patalinghug@jhcsc.edu.ph (Mark Erana Patalinghug) johndexter.sarcena@jhcsc.edu.ph (John Dexter Gaston Sarcena) ronilo.bustamante@jhcsc.edu.ph (Ronilo Seronio Bustamante) katreen.glimada@jhcsc.edu.ph (Katreen Glimada Melecio) junry.magubat@jhcsc.edu.ph (Junrey Maglangit Mangubat) haidee.patalinghug@jhcsc.edu.ph (Haidee Fuentes Patalinghug) \*Corresponding author

show a significant positive weak correlation. Knowledge of crime prevention strategy and general satisfaction with personal safety shows a weak, statistically significant positive correlation. Thus, awareness of crime prevention significantly influences the safety perception, level of worry, and satisfaction with personal safety.

Keywords: KAB model, correlational study, crime prevention, safety and security perception, worries of victimization

#### INTRODUCTION

People are increasingly concerned about crime and fear of it, and these issues have grown to be exceedingly serious as crime has the potential to influence economic opportunities and employment (Chalfin, 2015; Goulas & Zervoyianni, 2015), youths' criminal behavior in later life (Damm & Dustman, 2014), mental well-being (Cornaglia et al., 2014; Medina & Tamayo, 2012; Tan & Haining, 2016), health (Dustmann & Fasani, 2016; Halle et al., 2020) and has a tangible and intangible cost to society (Baranyi et al., 2021; Wickramasekera et al., 2015). Not surprisingly, criminal activities' impact on the community varies widely. However, it is acceptable to expect that various types of crime, including unemployment, can lead to different social costs (Detotto & Vannini, 2010; Howell, 2014; Kassem et al., 2019). The poor economy resulting from crimes will further spur people to commit crimes for monetary benefit (Tongsamsi & Tongsamsi, 2018).

The crime involves costs for victims, i.e., neighborhoods and society, in general, stolen and damaged goods, loss of productivity, physical harm, fear, and emotional distress, the risk of violence, and the expenses of the government to bring the perpetrator before the courts (Anderson, 2011; Button et al., 2014; Detotto & Vannini, 2010). The risk of crime leads to increased funds allocated to crime-prevention programs, resulting in higher stress levels for citizens and consequently impeding community productivity (Jaitman

& Compeán, 2015; Motta, 2017). Many studies were conducted examining the effect of crimes on productivity, such as in tourism industries (Batra, 2008; Lisowska, 2017), hotel operating performance (Hua & Yang, 2017), business and entrepreneurial activity (Rosenthal & Ross, 2010; Sloan et al., 2016), economic growth (Burnham et al., 2004) and other areas. Moreover, Tongsamsi and Tongsamsi (2018) concluded that the effects of economic conditions on property crime rates depend on social conditions and the relationship between economic and social factors. Such societal needs about crime posed significant safety and security concerns among communities everywhere.

As part of law enforcement's mission to keep the public safe from violence and harm, the police and other law enforcement agencies exist. The most crucial role of the police is to promote a safe and secure community to eliminate insecurity and fear of victimization. Providing safety, security, and justice on an equitable basis for all citizens is critical for legitimacy and effectiveness. The fundamental purpose of the community policing technique was to reduce the chance of victimization and generate a sense of safety and security in the neighborhood. It aids in the reduction of public mistrust in dangerous places. Creating trust and offering services to local communities helps generate virtuous cycles of institutional transformation and national development (World Bank, 2011). Under this concept, community safety is narrowed to a focus on corrective action in cases where punitive methods fail, and

step is performed at the community level to remedy these imbalances (Matt, 2011; Whitzman, 2008).

Despite the plethora of research about crime, criminality, and victimization, the community's perception of crime safety, security, and worries about victimization has gained little attention (Williams et al., 2002). Much of the relevant study has focused on physical and social incivilities evaluating people's perception of a crime risk and neighborhood safety (Kidd & Anderson, 2015; Worrall, 2006). A recent study on crimes conducted in Melbourne focuses only on young people's views of public transportation safety (Hamilton et al., 2011).

In the Philippines, crime is a pervasive social issue that has reached alarming proportions, and the prevention of crime is a role that plays an enormously significant role. The authorities that oversee enforcing the law have the duty of keeping an eye on the rate of criminal activity that has steadily increased in modern society and bringing it down to a more manageable level. Maxwell (2019) found that the residents think the country's crime problem is serious at the national level and less serious in their town. However, there was a significant decrease in the crime rate in 2020, which was 39.50% lower than the previous year (Philippine Statistics Authority, 2021). At the local level, crime volume dropped by 26.49% in the third quarter of 2020 compared to the previous year. In crime victimization cases in the country, street crimes are less likely to occur. However, the risk of bullying in school among teenagers is frequent and significantly greater than the global rate of 30% among adolescents (Elgar et al., 2015; Peltzer & Pengpid, 2015). The lack of self-control and participation in dangerous lifestyles are also contributing to the increase in victimization in the Philippines (Barrera, 2018).

The above literature postulates an understanding of the nature and consequences of crime on safety and security. However, insecurity and fear cannot be fully understood without knowing the side stories of the community as they have firsthand experiences and knowledge on the issues, which make them feel insecure and fear doing activities that expose them to the victimization of crimes. Consequently, this research aims to shed light on community policing through crime prevention activities and how it contributes to the feeling of safety and security among diverse residents of Zamboanga del Sur province in the Philippines.

Fewer safety and security evaluations in the province of Zamboanga del Sur are conducted relative to the national and local reduction in the reported crime rate. These studies would give baseline information about the perceived safety and security felt by the province's people, leading to policy formulation, enhancement of the existing public safety programs, and development projects for improving public safety and reducing the crime rate.

#### Literature Review

Increasing the feeling of security against the threat of crime among members of

a society can enhance the well-being of a nation's population. It is vital to have consistent policies in addition to logical and organized behaviors. Maintaining the peace and well-being of the people to reduce crime should be an important component, which should also involve reducing people's fear of crime (Che Azmi & Hamdan, 2022). As crime occurs in the community, residents continue to perceive social upheaval, harming their quality of life and civic culture (Ulrich-Schad et al., 2019). Understanding how people perceive and feel about changes in their surroundings is essential to explain why they alter their conduct, but it is impossible to conclude with certainty if the changes in behavior impacted their sense of safety (Ulrich-Schad et al., 2019). Additionally, it was underlined that tourists' perceptions of safety and crime are crucial for comprehending and satisfying their inherent needs for safety when visiting a tourist destination (Batra, 2008).

Citizens' views regarding different crime-related topics, such as the relevance of crime as a social problem, security against crimes, the severity of criminal penalties, and the death penalty, are known as public perceptions of crime. Public perception of security against crime is relevant and valuable to policymakers because it helps them shape legislation and government measures (Lu, 2015). Moreover, public perceptions of crime significantly impact policy decisions and operational activities in frontline law enforcement and sentencing (Cohen, 2000). Crimes and violence exemplify the adverse effects of injury and

danger to the victims and the public. The primary goal of the community policing strategy was to lower the likelihood of victimization and promote a sense of safety and security in the neighborhood. Davey and Wootton (2016) added that crime and antisocial behavior are the top problems for policymakers and individuals. Victims of crime may sustain financial, bodily, and actual trauma, all of which can negatively affect their long-term quality of life. Crime and insecurity can negatively influence communities and their use of public services, such as public transportation.

Safety is one of humanity's basic needs in Maslow's Hierarchy of Needs. Human nature is to protect themselves and theirs from harm. It may manifest as physical, psychological, or emotional harm. Numerous scientific research indicates that the field of safety is undervalued. However, even without reference to Maslow's Hierarchy of Needs, it is clear that safety is a critical component of living quality in any community (Lacinák & Ristvej, 2017). Personal safety is vital for citizens because it relates to the need to establish human security, a people-centered concept of security that recognizes that vulnerable individuals are entitled to be free from fear and movement, with an equal opportunity to exercise all their rights and fully develop their human potential (Bakrania & Haider, 2016). Kidd and Anderson (2015) stress that human characteristics, such as perceptions, social support, mental health and wellbeing, and cognitive emotion control, are all acceptable and necessary components of a

broad and diversified community safety and security definition.

The physical characteristics of a location, such as lighting, security cameras, and facilities, can be linked to people's perceptions of safety, which can contribute to resilience and security outcomes. Security may also relate to protection from external threats, such as terrorist threats, public disturbances, and contagious diseases. The concept of security may mean something different to different parts of the community, depending on their perspective (Waka Kotahi NZ Transport Agency, 2022). However, one's sense of safety is especially important among the residents where community safety programs are enforced.

Studies have shown that there is not always a link between actual crime rates and perceptions of safety, even though the latter still affects the well-being of the community as a whole (McPhail et al., 2017; Tilley & Tseloni, 2016). It brings an additional level of complication to determining how research on people's perceptions of safety may be applied to enhance the overall wellbeing of communities. Moreover, the focus of risk perception research has shifted from cognition to the function of emotion. Today, it is widely acknowledged that both factors are vital in decision-making (Fyhri et al., 2010). This research would address both concerns and proves their respective contributions to address methodological obstacles. From this perspective, the knowledge of crime prevention and perception of safety is equally important in ascertaining worries about crime victimization.

#### **Conceptual Framework**

The Knowledge, Attitudes, and Behavior (KAB) model was adapted to formulate the study flow. The model is a viable tool to evaluate improvements and identify the results that increase human performance in any field (Schrader & Lawless, 2004). The KAB model describes the significance of knowing and posits that behavior changes gradually. As knowledge accumulates in a health behavior domain, attitude adjustments are triggered. Over time, changes in attitude accumulate, culminating in behavior modification (Baranowski et al., 2003; Bilal et al., 2011). Much research demonstrates that the KAB model can be used as a conceptual framework for understanding the process of change in the behavior on security awareness (Sas et al., 2019), cabin safety (Chuaychoo, 2021), information security (Bilal et al., 2011; Parsons et al., 2014), food safety (Chang et al., 2003), and behaviors regarding elderly abuse (Yi & Hohashi, 2019). This study examines the observability and knowledge of crime prevention strategies to establish an association between personal security and safety, worry about victimization, and general satisfaction with personal safety. From three perspectives, the KAB model was adapted to study the change in behavior in crime prevention and the perceptions of safety and security against crime. The importance of this study shows that by predicting the attitude of the respondents on their state of safety and security against crime victimization, agencies involved can develop crime prevention programs that will

reduce the worry and increase the feeling of personal safety in the community. The three phases guide of the KAB model is presented in this study, as shown in Figure 1 (Chuaychoo, 2021; Iyer, 2018; Parsons et al., 2014).

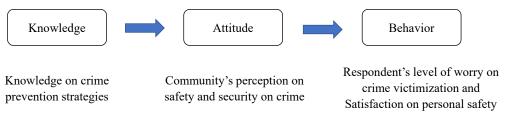


Figure 1. The KAB model employed for the study

Based on the KAB model, this study assumed that what residents know about the crime prevention strategy of the province may affect their attitudes toward safety and security, and the degree to which their attitudes toward their safety are good may consistently influence their level of worry against being a victim of a crime (Figure 2). Thus, the primary objective of this study is to determine the respondents' level of awareness of crime prevention implementation in the Zamboanga del Sur province of the Philippines. The second objective is to assess the perception of the residents on safety and security against crimes in the province, prevailing threats to physical safety, and security against property and persons. The third goal is to ascertain the residents' concerns about criminal victimization. Finally, the correlation

between the variables supplied must be determined. Therefore, the following hypotheses are proposed:

*H*<sub>1</sub>: Crime prevention strategy knowledge and the perception of safety and security are positively related

 $H_2$ : Perception of safety and security and level of worry for crime victimization are inversely related

*H<sub>3</sub>: Perception of safety and security* and general satisfaction with personal safety are positively related

 $H_4$ : Crime prevention strategy knowledge and general satisfaction with personal safety are positively related

*H*<sub>5</sub>: Crime prevention strategy and the level of worry about crime victimization are inversely related

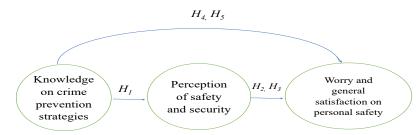


Figure 2. The proposed hypotheses

#### **METHODS**

#### **Ethical Approval**

Approval for the conduct of the study was secured through the Institutional Research Ethics Committee (IERC) of J.H. Cerilles State College (JHCSC) before the survey was done. Since JHCSC funded this study with the Board Resolution Number 22 series of 2020, the researchers underwent an evaluation process of research protocols. The protocols were also appropriately discussed regarding the information to be collected. The researchers abide by the provisions of the Republic Act Number 10173 (The Data Privacy Act of 2012), and the Philippines Health Research Ethics Board (PHREB) guidelines for research involving human subjects.

# The Design, Data Collection Tools, Sampling, and Population

The descriptive-correlational approach is applied in this study. The first part of the survey questions was taken from Piscitelli (2011). These questions are about crime prevention, how safe they felt, and how they thought they might become victims in the future. Crime prevention strategies are evaluated using a 4-point Likert scale (Eser et al., 2020): 1.00–1.75 is not observable, 1.76–2.5 is moderately observable, 2.51–3.25 is observable, and 3.26–4.00 is highly observable.

The second part of the questionnaire is taken from Diprose's (2017) survey module. Particularly, modifications are made to offenses such as burglary and larceny, which in the Philippines have different designations

and elements of the commission of the crime. The suggested survey module on physical safety and security is divided into three sub-components to ensure that questions are answered logically and sequentially. It will maximize the data that can be recorded in around ten to fifteen minutes. The first sub-component is to determine the frequency of property-related crimes. A 5-point Likert scale was utilized for class intervals and their descriptive values to interpret the computed mean of the perception of safety and security in the province with the following arbitrary values and statistical limits: 1.00-1.79 is not safe at all, 1.80-2.59 least safe, 2.60-3.39 moderately safe, 3.40-4.19 is safe, and 4.20-5.00 is very safe.

The second sub-component covers threats to a person's physical safety and security. The third sub-component of the survey module is to determine the level of worry about crime victimization and would be interpreted by a 4-point Likert that has the following arbitrary values and statistical limits: 1.00-1.75 is not worried at all, 1.76-2.5 is not too worried, 2.51-3.25 is somewhat worried, and 3.26–4.00 is very worried. Validation and reliability testing are conducted during the instrument's finalization process, yielding a fit-for-use result with an alpha between 0.8 to 0.9 and is strongly reliable based on Taber's (2018) guide.

Convenience sampling is utilized as the data-gathering tool during the actual survey. In the proposal stage of the study, the actual survey protocol is through a printed

questionnaire. However, due to the onset of the COVID-19 pandemic with quarantine restrictions, the protocol was modified with the approval of the IERC to use an online survey utilizing Google Forms. Respondents in this survey were over 18 and had been living or working in the province for at least three years before participating in the research. The respondents were recruited using email, Facebook, messenger, and Short Messaging Services (SMS). The researchers used Cochran's (1977) procedure for sample size computation to determine the number of samples. In the most recent survey in 2015, the estimated population of Zamboanga del Sur province was 1,010,674. The result indicated that 385 or more representative samples are needed for the survey to have a confidence level of 95% within  $\pm 5\%$  significance level. In this case, 401 respondents were able to participate in the survey. Thus, this ensures that the sample size reduces the likelihood of errors. Data gathering started in June 2020 and ended in August of the same year.

Following the guide presented by Alessi and Martin (2010), the online survey was done with an opening page that outlines the intent of inquiry, identification, and affiliations of the researchers and specifies what involvement would entail before requiring participants to answer the questions. Any requirements for inclusion or omission were made clear such as only those who reside or have worked in the province of Zamboanga del Sur for the last three years with ages, not under 18 years old. The online survey program has

screening questions so that only participants who agree to satisfy those requirements can access the remainder of the survey (Ball, 2019). Based on Bernard's (2017) design, well-established rules were also followed, including the unambiguous use of terms that the participants understand, paying attention to contingencies and filter questions, giving respondents a "Don't Know" option, and avoiding loaded loading and repeated questions. The data was extracted from the Google Form using Google Spreadsheets and analyzed based on the study's presented objectives using SPSS Version 22. Descriptive statistics and correlation tests were used in the data analysis to investigate the association between the variables.

Pearson correlation coefficient (r) was used to analyze the correlation between measures. In interpreting the correlation, the suggested guide of Schober and Schwarte (2018) was used as the absolute magnitude of the observed correlation coefficient and its interpretation with the following range: 0.00–0.10 as negligible correlation, 0.10–0.39 weak correlation, 0.40–0.69 as moderate correlation, 0.70–0.89 as strong correlation, and 0.90–1.00 as very strong correlation.

#### RESULTS AND DISCUSSION

### **Implemented Crime Prevention Strategies**

In this study, the respondents are 48.88% female, 46.13 male, and 4.99 belonging to LGBT. Most respondents were 21–30 years old (83.79%). The respondents were

mainly single, 85.04%, and had stayed in the province for 6 to 8 years (78.30%). The research sample shows that crime prevention strategies were observable in Zamboanga del Sur province in the Philippines.

Table 1
Implemented crime prevention strategies observed by the residents

Crime prevention strategies	<b>X</b>	SD	Interpretation
1. Presence of police in the community	3.42	0.67	Highly observable
2. Patrolling in highly populated areas	3.33	0.69	Highly observable
3. Requiring all vehicles to run within a minimum speed	3.16	0.84	Observable
4. Presence of choke points and checkpoints on major municipal roads	3.41	0.68	Highly observable
5. Fixed tarpaulin and poster about crime prevention and crime reporting in public places	3.13	0.80	Observable
6. Presence of a police assistance center	3.30	0.75	Highly observable
7. Protection by political parties	3.04	0.85	Observable
8. The protection provided by various organizations	3.05	0.81	Observable
9. Discipline and unity among the community people	3.32	0.72	Highly observable
10. Road traffic management	3.09	0.84	Observable
11. Enforcement of relevant laws and orders	3.25	0.79	Observable
12. Installation of CCTV cameras to monitor people's activity	2.79	0.97	Observable
13. Neighborhood watch	2.85	0.85	Observable
14. Police multipliers are present	3.03	0.82	Observable
15. Community police post is present	3.12	0.81	Observable
Overall mean	3.15	0.79	Observable

Table 1 shows that the residents of Zamboanga del Sur are cognizant of the crime prevention strategies at an observable level ( $\bar{x} = 3.15$ , SD = 0.79). Concerning crime prevention, the presence of police in the community ( $\bar{x} = 3.42$ , SD = 0.67) is found to be highly observable, followed by the presence of choke points and checkpoints

in major roads found to be highly observable ( $\bar{x} = 3.41$ , SD = 0.68), patrolling in highly populated areas ( $\bar{x} = 3.33$ , SD = 0.69), discipline and unity among the community people ( $\bar{x} = 3.32$ , SD = 0.72), and presence of a police assistance center ( $\bar{x} = 3.30$ , SD = 0.75). The province's residents are aware of the activities conducted against crime.

# Perceptions of Safety and Security in the Province

Table 2 shows that Zamboanga del Sur province is safe for everyone, as perceived by the representative sample population ( $\bar{x}$  = 3.55, SD = 1.10). Concerning safety and security, the citizens rated that walking on the street during nighttime is safe ( $\bar{x}$  = 4.00, SD = 1.36), followed by going to the park alone ( $\bar{x}$  = 3.90, SD = 0.89), wearing pieces of jewelry while in public space ( $\bar{x}$  = 3.83, SD = 0.93), hanging of clothes outside of the residence ( $\bar{x}$  = 3.79, SD = 0.95), and tourist visits ( $\bar{x}$  = 3.70, SD = 0.93).

Following these findings, as can be expected, the locals of Zamboanga del Sur believed that crime is less likely to occur when people are in public spaces and with companions. Also, if valuables are left unattended, there is an increased likelihood of crime because it entices and provides the would-be criminal an opportunity to commit the crime. When people are alone in a public area, especially at night, they are more vulnerable to becoming victims of crime than when others accompany them.

Table 2
Perceptions of safety and security in the province

	rceptions of safety and security in the ovince	<del>x</del>	SD	Interpretation
1.	Walking on the street during nighttime	4.00	1.36	Safe
2.	Leaving motorcycle or any vehicles outside the residence	3.52	1.07	Safe
3.	Leaving livestock unattended	3.37	1.02	Moderately safe
4.	Wear pieces of jewelry while in a public space	3.83	0.93	Safe
5.	Leaving home unattended during nighttime	2.68	1.67	Moderately safe
6.	Forgot to close the gates	3.34	1.19	Moderately safe
7.	Allowing children to play at night outside the house	3.35	1.14	Moderately safe
8.	Tourist visits	3.70	1.06	Safe
9.	Parked cars without occupants.	3.53	0.93	Safe
10.	Waiting for public transport during nighttime	3.40	1.12	Moderately safe
11.	Hanging clothes outside the residence	3.79	0.95	Safe

Table 2 (Continue)

	x	SD	Interpretation
12. Leaving valuables such as shoes, clothes, and tools outside the house.	3.68	0.98	Safe
13. Carrying valuables while walking in the street	3.60	1.04	Safe
14. Going to the park alone	3.90	0.89	Safe
15. First-time visits to the place	3.62	1.10	Safe
Overall mean	3.55	1.10	Safe

# Threats to Physical Safety and Security Against Property and Person

Table 3 shows the responses to the threats to physical safety and security against property and persons.

Table 3 shows the frequency and percentage of respondent's responses to the identified threats to physical safety and security against persons and property of 401 respondents. The table shows that a greater majority of the sample population has not witnessed and experienced threats to physical safety and security against property (N = 328, 81.00%). Moreover, most of the sample population have not witnessed and experienced physical safety and security threats against a person (N = 333, 83.25%).

Table 3
Threats to physical safety and security

Th	reats to physical safety and security against property	Yes		No	
		n	%	n	%
1.	My companion and I, or any household member, were victimized by crime against property.	59	14.71	342	85.29
2.	Someone tries to get into my house or place where I stay without permission to steal or steal something in this place.	63	15.71	338	84.29
3.	Someone took something from me, my companion, or a household member with force or a threatening manner during my stay at this place.	61	15.21	340	84.79
4.	Someone deliberately destroyed or caused damage to property that I owned, my companion, or a member of my household during their stay in this place.	52	12.97	349	87.03
5.	I have witnessed or heard that crimes against the property were victimizing someone during my stay in this place.	130	32.42	271	67.58

Table 3 (Continue)

Threats to physical safety and security against a person		7	Yes		No	
		n	%	n	%	
1.	My companion and I, or a household member, were assaulted (hit, slapped, shoved, punched, pushed, or kicked) with staying at the municipality.	69	17.21	332	82.79	
2.	I, my companion or household member, was stabbed, beaten, throttled, or otherwise attacked).	41	10.22	360	89.78	
3.	Did someone shoot you, your companion, or a household member while staying in this town?	39	9.73	362	90.27	
4.	Is anybody you know being kidnapped in this town?	39	9.73	355	88.53	
5.	Did anybody you know threaten by an explosion in this place?	46	11.47	355	88.53	
6.	Did anybody in this place have heard of being abducted, sexually harassed, or raped while they stayed in this place?	124	30.92	277	69.08	
7.	I have witnessed or heard that crimes against a person were victimizing someone during my stay in this place.	108	26.93	293	73.07	
	Total	67	16.60	333	83.15	

## **Level of Worry Felt by the Community on Crime Victimization**

Table 4 indicates that Zamboanga del Sur Province citizens are somewhat worried about being victimized by a crime ( $\bar{x} = 2.58$ , SD = 1.08). The community was worried that the member of their household might be the victim of a property crime like theft (x = 2.85, SD = 1.15), followed by victimized

of a violent crime like assault ( $\bar{x} = 2.82$ , SD = 1.16), victimized by home envision (and residential break-in ( $\bar{x} = 2.78$ , SD = 1.14). However, it is noteworthy on a personal level that the respondents rated that being assaulted scored not worried at all ( $\bar{x} = 1.45$ , SD = 0.5), and the least among the item rated with somewhat worried were being held up or mugged ( $\bar{x} = 2.52$ , SD = 1.1).

Table 4
Level of worry about crime victimization among the sample population

Fe	eling of worry about crime victimization	$\bar{\mathbf{x}}$	SD	Interpretation
1.	I worried about being held up or mugged.	2.52	1.1	Somewhat worried
2.	I am worried about being assaulted.	1.45	0.5	Not worried at all
3.	I worry about having my vehicle, residence, or another property was broken into.	2.61	1.16	Somewhat worried
4.	I worry about having my vehicle, residence, or other property vandalized.	2.59	1.16	Somewhat worried

Table 4 (Continue)

		$\bar{\mathbf{x}}$	SD	Interpretation
5.	I worry that a home invasion may victimize a member of my household.	2.79	1.17	Somewhat worried
6.	I worry that a member of my household may be the victim of a residential break-in/ burglary.	2.78	1.14	Somewhat worried
7.	I worry that a member of my household may be the victim of a violent crime like assault.	2.82	1.16	Somewhat worried
8.	I worry that a member of my household may be the victim of sexual assault.	2.80	1.18	Somewhat worried
9.	I worry that a member of my household may be the victim of a property crime like theft.	2.85	1.15	Somewhat worried

On the levels of worry among the community, representative samples pay little attention to personal worry but express greater worry for the member of their household being victimized by a crime. It suggests that knowledge of status safety and security in the province influences personal safety concerns on a personal level.

### Correlation of the Variables (n = 401)

Pearson correlation coefficient (r) was used to analyze the correlation between measures. The suggested guide by Schober and Schwarte (2018) was then utilized to interpret the correlation.

Table 5 shows a significant weak positive correlation between crime prevention and the perception of safety and security with n = 401, r = 0.246, p(0.000). Safety and security perceptions and the representative samples' worry levels show a weak inverse correlation with n = 401, r = -0.277, p(0.000). Safety and security and general satisfaction with personal safety among the representative

Table 5

Correlation between measures

Correlation between measure	$\bar{\mathbf{x}}$	SD	r	<i>p</i> -value
Correlation of crime prevention on the perception of safety and security				
Perceptions of safety and security in the province	3.15	0.79	0.246**	0.000
Observed crime prevention strategies	3.55	1.10		
Correlation of perceptions of safety and security level of worry on crime victimization	y and			
Perceptions of safety and security in the province	3.15	0.79	-0.277**	0.000
Level of worries about crime victimization	2.58	1.08		

Table 5 (Continue)

	x	SD	r	<i>p</i> -value
Correlation of safety and security and general satisfaction with personal safety				
Perceptions of safety and security in the province	3.15	0.79	0.210**	0.000
General satisfaction with personal safety	3.29	0.67		
Correlation of crime prevention strategy and ge satisfaction with personal safety	neral			
Observed crime prevention strategies	3.55	1.10	0.261**	0.000
General satisfaction with personal safety	3.29	0.67		
Correlation of crime prevention strategy and leworry about crime victimization	vel of			
Observed crime prevention strategies	3.55	1.10	-0.023**	0.000
Level of worries about crime victimization	2.58	1.08		

Note. \*\*Correlation is significant at the 0.01 level (2-tailed)

samples show a significant positive weak correlation with n = 401, r = 0.21, p(0.000). The knowledge of crime prevention strategy and the general satisfaction with personal safety shows a weak positive correlation with n = 401, r = 0.261, p(0.000). On the association of knowledge of crime prevention strategy and level of worry about crime, victimization shows a negligible inverse correlation with n = 401, r = -0.023, p(0.000).

#### CONCLUSION

This study focused on assessing the security and safety perceptions of residents in Zamboanga del Sur province in the Philippines using the KAB (Knowledge, Attitude, Behavior) model. The results indicated that the community had a reasonable understanding of crime prevention measures, largely due to the

efforts of the local police department. The presence of police significantly increased public awareness about crime prevention. The study also found that residents considered the province to be safe overall, although unattended goods and belongings were moderately safe. The risk of crime was perceived to be higher when individuals were alone at night or in less supervised locations. However, personal victimization was not a significant concern for individuals, but they were worried about their family members' safety. The study highlighted the importance of crime prevention strategies in improving safety perceptions and reducing worry and crime victimization. Increasing the efforts in crime prevention was suggested as a way to enhance the community's sense of security. The study recommended that authorities in the province should maintain a strong presence and activity in the

community to improve safety and security while reducing fear of crime. However, the study's limitations included the use of an online survey without detailed respondent profiles. Further research incorporating crime rates, crime prevention strategies, and additional variables was suggested.

#### **ACKNOWLEDGEMENT**

We sincerely thank J.H. Cerilles State College, Philippines for their generous funding of this project through the Office of the Vice President for Research and Extension (OVPRE), represented by Dr. Vilma C. Grengia. Without their support, this research would be impossible. Additionally, we thank all the participants for their valuable contributions to our study. Their willingness to share thoughts and experiences is instrumental in advancing the understanding of the subject matter. We are truly grateful for their collaboration and support.

#### REFERENCES

- Alessi, E. J., & Martin, J. I. (2010). Conducting an internet-based Survey: Benefits, pitfalls, and lessons learned. *Social Work Research*, 34(2), 122-128. https://doi.org/10.1093/swr/34.2.122
- Anderson, D. A. (2011). The cost of crime. *Foundations and Trends in Microeconomics*, 7(3), 209-265. https://doi.org/10.1561/0700000047
- Bakrania, S., & Haider, H. (2016). Safety, security and justice: Topic guide. GSDRC, University of Birmingham. http://www.gsdrc.org/topic-guides/safety-security-and-justice/
- Ball, H. L. (2019). Conducting online surveys. Journal of Human Lactation, 35(3), 413-417. https://doi.org/10.1177/0890334419848734

- Baranowski, T., Cullen, K. W., Nicklas, T., Thompson, D., & Baranowski, J. (2003). Are current health behavioral change models helpful in guiding prevention of weight gain efforts? *Obesity Research*, 11(S10), 23-43. https://doi.org/10.1038/oby.2003.222
- Baranyi, G., Di Marco, M. H., Russ, T. C., Dibben, C., & Pearce, J. (2021). The impact of neighbourhood crime on mental health: A systematic review and meta-analysis. *Social Science and Medicine*, 282, Article 114106. https://doi.org/10.1016/j. socscimed.2021.114106
- Barrera, D. J. (2018). The role of "problematic" and "improved" indicators of risky lifestyles in the self-control/lifestyle framework of victimization among Filipino adolescents. *Asian Journal of Criminology*, *13*(3), 175-191. https://doi.org/10.1007/s11417-018-9265-1
- Batra, A. (2008). Foreign tourists' perception towards personal safety and potential crime while visiting Bangkok. *Anatolia*, *19*(1), 89-101. https://doi.org/10.1080/13032917.2008.9687055
- Bernard, H. R. (2017). Research methods in anthropology: Qualitative and quantitative approaches (4th ed.). Rowman & Littlefield.
- Bilal, K., Alghathbar, K. S., Nabi, S. I., & Khurram, K. M. (2011). Effectiveness of information security awareness methods based on psychological theories. African Journal of Business Management, 5(26), 10862-10868. https://doi.org/10.5897/ajbm11.067
- Burnham, R., Feinberg, R. M., & Husted, T. A. (2004). Central city crime and suburban economic growth. *Applied Economics*, 36(9), 917-922. https://doi.org/10.1080/0003684042000233131
- Button, M., Lewis, C., & Tapley, J. (2014). Not a victimless crime: The impact of fraud on individual victims and their families. *Security Journal*, 27(1), 36-54. https://doi.org/10.1057/sj.2012.11
- Chalfin, A. (2015). Economic costs of crime. In W. G. Jennings (Ed.), *The encyclopedia of crime and punishment* (pp. 1-12). Wiley & Sons. https://doi.org/10.1002/9781118519639.wbecpx193

- Chang, H. J., Lee, J. S., & Kwak, T. K. (2003). Effectiveness of HACCP-based training on the food safety knowledge and behavior of hospital foodservice employees. *Nutritional Sciences*, 6(2), 118-126.
- Che Azmi, A., & Hamdan, M. (2022). Review of international studies on perception of safety and human security. *Journal of Community Safety and Well-Being*, 7(1), 10-13. https://doi.org/10.35502/jcswb.234
- Chuaychoo, I. (2021). A study of cabin safety awareness among Thai passengers using knowledge, attitudes, and behaviors (KAB) approach. *Humanities, Arts and Social Sciences Studies*, 21(1), 78-87. https://doi.org/10.14456/hasss.2021.8
- Cochran, W. G. (1977). *Sampling techniques* (3rd ed.). John Wiley & Sons.
- Cohen, M. A. (2000). Measuring the costs and benefits of crime and justice. *Criminal Justice*, 4(1), 263-315. https://doi.org/10.4324/9780203313145
- Cornaglia, F., Feldman, N. E., & Leigh, A. (2014). Crime and mental wellbeing. *Journal of Human Resources*, 49(1), 110-140. https://doi.org/10.1353/jhr.2014.0005
- Davey, C. L., & Wootton, A. B. (2016). Design against crime a human-centred approach to designing for safety and security (1st ed.). Routledge. https://doi.org/10.4324/9781315576565
- Detotto, C., & Vannini, M. (2010). Counting the cost of crime in Italy. *Global Crime*, *11*(4), 421-435. https://doi.org/10.1080/17440572.2010.519523
- Diprose, R. (2007). Physical safety and security: A proposal for internationally comparable indicators of violence. *Oxford Development Studies*, 35(4), 431-458. https://doi.org/10.1080/13600810701701913
- Dustmann, C., & Fasani, F. (2016). The effect of local area crime on mental health. *Economic Journal*, 126(593), 978-1017. https://doi.org/10.1111/ecoj.12205

- Elgar, F. J., McKinnon, B., Walsh, S. D., Freeman, J., Donnelly, P. D., De Matos, M. G., Gariepy, G., Aleman-Diaz, A. Y., Pickett, W., Molcho, M., & Currie, C. (2015). Structural determinants of youth bullying and fighting in 79 countries. *Journal of Adolescent Health*, 57(6), 643-650. https://doi.org/10.1016/j.jadohealth.2015.08.007
- Eser, H., İnan, M., Kucuker, M., Kilçiksiz, C., Yilmaz, S., Dinçer, N., Kiliç, Ö., Ercan, A., & Aydemir, Ö. (2020). Development, validity and reliability of the 4-point Likert Turkish version of cognitive failures questionnaire. *Annals of Medical Research*, 27(6), 1650-1656. https://doi.org/10.5455/annalsmedres.2020.04.308
- Fyhri, A., Hof, T., Simonova, Z., & Jong, M. De. (2010). The influence of perceived safety and security on walking. *PQN Final report Part B: Documentation. B.2. Perceived needs* (pp. 49-70). Walk21. https://bit.ly/3Kdlcib
- Goulas, E., & Zervoyianni, A. (2015). Economic growth and crime: Is there an asymmetric relationship? *Economic Modelling*, 49, 286-295. https://doi.org/10.1016/j.econmod.2015.04.014
- Halle, C., Tzani-Pepelasi, C., Pylarinou, N. R., & Fumagalli, A. (2020). The link between mental health, crime and violence. *New Ideas in Psychology*, 58, 1-32. https://doi.org/10.1016/j.newideapsych.2020.100779
- Hamilton, M., Salim, F., Cheng, E., & Choy, S. L. (2011).
  Transafe: A crowdsourced mobile platform for crime and safety perception management. ACM SIGCAS Computers and Society, 41(2), 32-37.
  https://doi.org/10.1145/2095272.2095275
- Howell, J. C. (2014). Mark Lipsey's contribution to evidence-based services for juvenile offenders: What works across juvenile justice systems. *Criminology & Public Policy*, *13*(1), 15-19. https://doi.org/10.1111/1745-9133.12068
- Hua, N., & Yang, Y. (2017). Systematic effects of crime on hotel operating performance. *Tourism Management*, 60(1), 257-269. https://doi.org/10.1016/j.tourman.2016.11.022

- Iyer, L. S. (2018). Knowledge, attitude and behaviour (KAB) of student community towards electronic waste A case study. *Indian Journal of Science and Technology*, 11(10), 1-9. https://doi.org/10.17485/ijst/2018/v11i10/109038
- Jaitman, L., & Compeán, R. (2015). Closing knowledge gaps: Toward evidence-based crime prevention policies in Latin America and the Caribbean. Inter-American Development Bank, Institutional Capacity of State Division. https:// doi.org/10.18235/0000180
- Kassem, M., Ali, A., & Audi, M. (2019). Unemployment rate, population density and crime rate in Punjab (Pakistan): An empirical analysis. *Bulletin of Business and Economics*, 8(2), 92-104.
- Kidd, G., & Anderson, S. (2015). Community safety, perceptions, and psychosocial factors: A selective review. *International Journal of Humanities and Social Science*, 5(7), 1-10.
- Lacinák, M., & Ristvej, J. (2017). Smart city, safety and security. *Procedia Engineering*, 192, 522-527. https://doi.org/10.1016/j.proeng.2017.06.090
- Lisowska, A. (2017). Crime in tourism destinations: Research review. *Tourism*, 27(1), 31-39. https://doi.org/10.18778/0867-5856.27.1.12
- Lu, R. (2015). Public perceptions of crime. In W. G. Jennings (Ed.), *The encyclopedia of crime and punishment* (pp. 1-5). Wiley & Sons, Inc.https://doi.org/10.1002/9781118519639.wbecpx132
- Matt, E. (2011). Commentary on community safety in Germany. *Crime Prevention and Community Safety*, *13*(4), 288-293. https://doi.org/10.1057/cpcs.2011.14
- Maxwell, S. R. (2019). Perceived threat of crime, authoritarianism, and the rise of a populist president in the Philippines. *International Journal of Comparative and Applied Criminal Justice*, 43(3), 207-218. https://doi.org/10.1080/01924036.2018.1558084
- McPhail, I. V., Olver, M. E., & Brooks, C. (2017). Taking the pulse: Perceptions of crime trends and community safety and support for crime control

- methods in the Canadian Prairies. *Journal of Community Safety and Well-Being*, 2(2), 43-50. https://doi.org/10.35502/jcswb.40
- Medina, C., & Tamayo, J. A. (2012). An assessment of how urban crime and victimization affects life satisfaction. In D. Webb & E. Wills-Herrera (Eds.), Subjective well-being and security (pp. 91-147). Springer. https://doi.org/10.1007/978-94-007-2278-1 6
- Motta, V. (2017). The impact of crime on the performance of small and medium-sized enterprises: Evidence from the service and hospitality sectors in Latin America. *Tourism Economics*, 23(5), 993-1010. https://doi.org/10.1177/1354816616657940
- Parsons, K., McCormac, A., Butavicius, M., Pattinson, M., & Jerram, C. (2014). Determining employee awareness using the Human Aspects of Information Security Questionnaire (HAIS-Q). Computers and Security, 42, 165-176. https:// doi.org/10.1016/j.cose.2013.12.003
- Peltzer, K., & Pengpid, S. (2015). Health risk behaviour among in-school adolescents in the philippines: Trends between 2003, 2007 and 2011, a cross-sectional study. *International Journal of Environmental Research and Public Health*, 13(1), 1-12. https://doi.org/10.3390/ijerph13010073
- Philippine Statistics Authority. (2021). 2021 Philippines in figures. https://psa.gov.ph/sites/default/files/2021\_pif\_final %281%29.pdf
- Damm, A. P., & Dustmann, C. (2014). Does growing up in a high crime neighborhood affect youth criminal behavior? *American Economic Review*, 104(6), 1806-1832. https://doi.org/10.1257/aer.104.6.1806
- Piscitelli, A. (2011). Changing Perceptions: 2011 Waterloo Region Area Survey. Waterloo Region Crime Prevention Council. http:// preventingcrime.ca/wp-content/uploads/2014/0 8/2011PerceptionsOfCrime-REPORT.pdf
- Rosenthal, S. S., & Ross, A. (2010). Violent crime, entrepreneurship, and cities. *Journal of Urban Economics*, 67(1), 135-149. https://doi.org/10.1016/j.jue.2009.09.001

- Sas, M., Reniers, G. L. L., Hardyns, W., & Ponnet, K. (2019). The impact of training sessions on security awareness: Measuring the security knowledge, attitude and behaviour of employees. *Chemical Engineering Transactions*, 77, 895-900. https://doi.org/10.3303/CET1977150
- Schober, P., & Schwarte, L. A. (2018). Correlation coefficients: Appropriate use and interpretation. Anesthesia and Analgesia, 126(5), 1763-1768. https://doi.org/10.1213/ ANE.00000000000002864
- Schrader, P. G., & Lawless, K. A. (2004). The knowledge, attitudes, & behaviors approach how to evaluate performance and learning in complex environments. *Performance Improvement*, 43(9), 8-15. https://doi.org/10.1002/pfi.4140430905
- Sloan, C. W., Caudill, S. B., & Mixon, F. G. (2016). Entrepreneurship and crime: The case of new restaurant location decisions. *Journal of Business Venturing Insights*, 5, 19-26. https://doi.org/10.1016/j.jbvi.2015.12.003
- Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in Science Education*, 48(6), 1273-1296. https://doi.org/10.1007/s11165-016-9602-2
- Tan, S. Y., & Haining, R. (2016). Crime victimization and the implications for individual health and wellbeing: A Sheffield case study. *Social Science and Medicine*, 167, 128-139. https://doi. org/10.1016/j.socscimed.2016.08.018
- Tilley, N., & Tseloni, A. (2016). Choosing and using statistical sources in criminology: What can the crime survey for England and Wales tell us? Legal Information Management, 16(2), 78-90. https://doi.org/10.1017/s1472669616000219
- Tongsamsi, I., & Tongsamsi, K. (2018). What explains variation in property crime rates across Thailand's provinces? *Humanities, Art and Social Sciences Studies Enforcement, 19*(2), 297-113. https://doi.org/10.14456/hasss.2019.19

- Ulrich-Schad, J. D., Fedder, M., & Yingling, J. (2019). "You shouldn't worry walking a block and a half to your car": Perceptions of Crime and Community Norms in the Bakken Oil Play. *International Journal of Rural Criminology*, 4(2), 193-216. https://doi.org/10.18061/1811/87910
- Waka Kotahi NZ Transport Agency. (2022). *Impact on perceptions of safety and security*. https://nzta.govt.nz/planning-and-investment/learning-and-resources/benefits-management-guidance/the-land-transport-benefits-framework/healthy-and-safe-people/2-changes-in-perceptions-of-safety/2-1-impact-on-perceptions-of-safety-and-security/
- Whitzman, C. (2008). Community safety indicators: Are we measuring what counts? *Urban Policy and Research*, 26(2), 197-211. https://doi.org/10.1080/08111140701665849
- Wickramasekera, N., Wright, J., Elsey, H., Murray, J., & Tubeuf, S. (2015). Cost of crime: A systematic review. *Journal of Criminal Justice*, 43(3), 218-228. https://doi.org/10.1016/j.jcrimjus.2015.04.009
- Williams, F. P., McShane, M. D., & Akers, R. L. (2002). Worry about victimization: An alternative and reliable measure for fear of crime. Western Criminology Review, 2(2). https://bit.ly/3zadHnd
- World Bank. (2011). World development report 2011: Conflict, security, and development. The World Bank. https://openknowledge.worldbank.org/ handle/10986/4389
- Worrall, J. L. (2006). The discriminant validity of perceptual incivility measures. *Justice Quarterly*, 23(3), 360-383. https://doi.org/10.1080/07418820600869137
- Yi, Q., & Hohashi, N. (2019). Comparison of perceptions of domestic elder abuse among healthcare workers based on the Knowledge-Attitude-Behavior (KAB) model. *PLoS One*, 13(1), Article e0206640. https://doi.org/10.1371/ journal.pone.0206640