CHARACTERIZING THE PERSON DEPRIVED OF LIBERTY USING KRETSCHMER'S THEORY

Irish P. Bandolos[i],
Luzviminda T. Orilla
Teacher,
University of Mindanao,
Davao City, Philippines

Abstract:

The purpose of this study was to characterize a Person Deprived of Liberty (PDL) in determining crime causation using Kretschmer's classification. These PDLs who committed crimes covering the study's findings may help practitioners identify potential offenders through profiling, and the period of 2015 to 2017, were confined in the Bureau of Jail Management and Penology Region XI. The study's findings may help practitioners identify potential offenders through profiling come up with additional literature related to policing and share findings and recommendations to inform future researchers and clarify the policy implications of the association of Body Mass Index and delinquency. The study employed Quantitative Descriptive Research utilizing secondary data. Descriptive Research was a method to generate knowledge in describing the characteristics of offenders thru Body Mass Index about the occurrence of rape, murder, attempted murder, frustrated murder, and robbery. The findings of the study revealed that most of the crimes being studied were perpetrated by athletic type of persons for three consecutive years. It concludes that the state of muscularity may lead to masculinity which allows to dominate others and encourage to use violence and threat. Muscular or physical strength has concluded that an offender was more muscular or physically more robust than a non-offender.

Keywords: criminology, Kretschmer's body physiques, secondary data, quantitative-descriptive research, Philippines

1. Introduction

Many theories exist to explain the occurrence of crime; some are about biological factors, and some are about socioeconomic factors. Also, there is a lot of method of crime prevention applied by law enforcement. However, the theory and method could not stop

---

[i] Correspondence: email ipioneta@umindanao.edu.ph

the existence of crime. There is a problem because crime exists despite all the efforts of the government, law enforcement, and community in fighting criminality. The researcher believes that it could be answered if we utilized properly the gathered data by law enforcement and the theory in battling the occurrence of crime. This process of utilizing the data may called characterizing or classifying offenders through Kretschmer's theory. The systems of classification enable the authorities to make decisions about appropriate offender program placements and determine whether selective incapacitation is desirable for particular offenders or offender groupings (Champion, 1994).

The process of characterizing through classification tends to describe the origin, development, and current state-of-the-art instruments and methods whereby effective offender classification may be achieved. The main purpose of classification is to differentiate among persons according to particular characteristics they possess. This is closely related to measurement, where we might seek to distinguish between objects according to previously established criteria or rules. Offender and their process is the primary interest of the criminal justice system; there is a need to characterize offender. Classifying requires measurement, assigning numbers to social, behavioural, and psychological properties of offenders according to social, or behavioural, and psychological properties of offenders according to rules, and correlating these numbers with these properties. Thus, the measurement process produces the offender's classification (Champion, 1994).

This research classifies offenders using the theory of Kretschmer the Body Physique. Kretschmer comes out into three ever-recurring principal types of physique from clinical material, which are called asthenic, athletic, and pyknic. He concluded that these three types were correlated to schizophrenia. Those healthy responded only a small proportion to pathological culmination; they were categorized as dysplastic type. Each type of body physique has its own principal standard of measurement as the basis of its classification and undergoes extreme investigation in regard to its behaviour. As a result, he formulates Physique and Character: One, there is a clear biological affinity between the psychic disposition of the manic depressives and the pyknic body type; Second, there is a clear biological affinity between the psychic disposition of the schizophrenes and the bodily disposition characteristics of the asthenics, athletics, and certain dysplastics; Third, there is only a weak affinity between schizophrenia pyknic on the one hand, and between circulars and asthenics, athletic, and dysplastics. It is above contrast that the researcher opted, the research did not get another research locale in characterizing offenders utilizing the theory. The researcher recognizes the gap considered the missing piece or pieces in the research literature, the area that has not yet been explored or is under-explored in localities. The goal of the research was to find an opening for contributing new research. As their urgency to address and solve crime and disorder problems, there must be a study informing about the kind, frequencies, and locations of such incidents on the other (Kretschmer, 1925).

2. Literature Review

Some studies in figuring causation of crime used the body physiques to determine its linkage to criminality. The theory of Kretschmer and Sheldon further explains that the athletic type of person is associated with violent crimes like murder and homicide which are classified as crimes against person. Then the asthenic is carried out with crime by passion due to its behavior being timid and shy they cannot express their feeling and when an outburst occurs it results in a crime. And, the pyknic type, as characterized by fatty and round also associated with crimes against property (Hollin, 2013). The height and weight had been studied to figure out if there is an association with criminality.

This is to evaluate the association between being convicted of a violent crime and height. The study also used Cox proportional hazard modelling and controlled by three types of potential confounders in terms of childhood demographics, physical characteristics, and general cognitive ability. As a result, from unadjusted analyses there is a moderate negative relationship between height and violent crimes. Thus, the tallest men are less likely to commit violent crimes than the shortest men. But, in terms of simultaneously controlling for all measured with the three confounders, height was positively and weakly related to violent crime (Beckley et al., 2014).

In weight, a study was conducted in Chicago to examine the associations between several types of police-recorded crime violent, non-violent, and homicide with cardiometabolic health or obesity and elevated blood pressure. Determining also if the relationship is modified by sex and age. Based on the evaluation in the sample of urban-dwelling adults the measured obesity and elevated BP are highly observed in the violent crime rate in the police record consistently. Moreover, obesity is associated with higher exposure to non-violent theft or property crime; thus, these effects to a certain degree are decreased in contrast with analyses examining exposure to violent crime. In the totality of the findings, in a massively populated extreme poverty region in Chicago, frequent exposure to high rates of violent crime is probably associated with elevated BP and obesity, but limited exposure to homicide is not (Tung, Wroblewski, Boyd, Makelarski, Peek, & Lindau, 2018).

Research also reveals that individuals who are classified as "fat" or overweight are less likely to perpetrate a crime. But in contrast to this, criminality is associated with normal-weight individuals in a hazard rate. In other words, being fat correlative to a normal weight lessens the likelihood of a person making a transition into criminality. When someone had a comparatively low in BMI, he probably had disadvantages in the labor market. This means there is a chance to increase the probability of transitioning into crime. This is based on studying the records of inmates in Tennessee and Illinois (Bodenhorn & Price, 2009). Moreover, being overweight is carried with an increased likelihood of developing internal problems among children entering middle school. Paediatricians consistently check for any signs of depression and anxiety or any related signs of distress even though test scores on such tools do not necessarily provide definitive diagnoses. Hence, BMI can be utilized as a basis for formulating appropriate referrals for further assessment and possible intervention in children (Bradley, 2008).

Another researcher figured out that offenders with the mesomorph body type were significantly more likely than ectomorph and endomorph to be incarcerated for a violent offense. In this manner, violent forms of delinquency have a minor yet statistically significant effect on body type. It is the temperament that links the relationship between body type and delinquency. The study further elaborates when they studied the effects of body size on delinquency in a sample of 1130 children. They established that the large body size at age 3 was predictive of increasing aggression at age 11 (Regoli, 2011).

Thus, most of the children were inclined to be more fearless and stimulation-seeking aggression yet the effects of the body size on delinquency persisted even after the researchers controlled the findings for temperament. The results were applied to mesomorph which was more effective at acting out their frustration and desires than more delicately built children. Furthermore, being muscular permits mesomorphs to be admitted to a delinquent gang. It is a fact that masculinity allows someone to more easily dominate others and it encourages the use of violence. Muscularity leads to masculinity and physical toughness (Regoli, 2011).

Further, a study observed and examined at the physical characteristics of about 5,000 Arkansas inmates. It was noticed when they entered prison founds that most were athletically fit. The researchers referred to them as mesomorphs but there are also endomorphs and ectomorphs' inmates. The researchers found that they were less likely to have been incarcerated for violent forms of crime. To assess fitness the study utilized body mass index, a measure of weight and height. They figured out whether the physical characteristics had a degree of relationship with criminality. However, it does not mean that being physically fit will be a measure of predicting criminal tendencies. As further stated by Dr. Walker "*those who are fit may have personalities that are more likely to make them violent.*" In essence what drives them to be fit also drives them to be violent. It is also likely that those who are fit find themselves in violent situations more (Walker, 2010).

The review of the related literature cited above has increased the understanding of the researcher on some propositions and theories related to the association of crime with height, weight, and Body Mass Index using Kretscmer's theory. This review of related literature has also benefited the researcher in gaining insights into how recent studies conduct the examination using public records in determining and classifying crime causation. Further, the review has helped to enrich the concepts of factors that body stature has a direct linkage to deviancy. These insights are also helpful in supporting the claims or findings of the study.

3. Study Objectives

This study aimed to characterize the Person Deprived of Liberty (PDL) using Kretschmer's classification. These PDLs, who committed crimes covering the period from 2015 to 2017, are confined in Bureau of Jail Management and Penology Region XI. Specifically, this study answered the following: to present the characteristics of the Person Deprived of Liberty (PDL) with different types of cases using Kretschmer's classification (athletic, asthenic, and pyknic) in terms of weight, height, and body-mass-

index; to determine if the Persons Deprived of Liberty (PDL) with different types of cases are significantly characterized using Kretschmer's classification; and to find out if the Persons' Deprived of Liberty (PDL) with different types of cases using Kretschmer's classification is significantly characterized according to their body-mass-index status. The hypothesis of the study there is no statistical evidence, at 0.05 margin of error that the Person Deprive of Liberty (PDL) with different types of cases is not significantly characterized using Kretschmer's classification.

On the conceptual paradigm in Figure 1, the researcher conceptualized the conduct of characterizing the person deprived of liberty (PDL) using Ketschmer's classification. In this framework, the classifications of the theory could be ascertained namely as: asthenic, athletic, and pyknic (Kretschmer, 1925). Asthenic is an underdeveloped type of body that is thin and small in stature. The athletic is the strong type, with rounded shoulders, tall, solid upper body, and partially coarse bones. Pyknic is that fatty type, identified above all in the face and in the soft modelling trunk and limbs where muscles are located (Sass, 2009).

The dependent variable of the study is the occurrence of crime which has the following indicators namely: theft and robbery, crimes of violence, and crimes of deception (Kretschmer, 1925).

Theft and robbery in legal classifications are classified as crimes against property, these crimes are acquisitive hence, the perpetrator acquires something either money or property. Violent crimes are classified as crimes against person which could be murder, homicide, rape, etc., these crimes are extensive which means the result is destruction or there is bodily harm. Crime of deception is by means of deceit or fraud like Estafa. The study would attempt to find out if the PDL with different types of cases could be significantly characterized using Kretchmer's classification and BMI status.
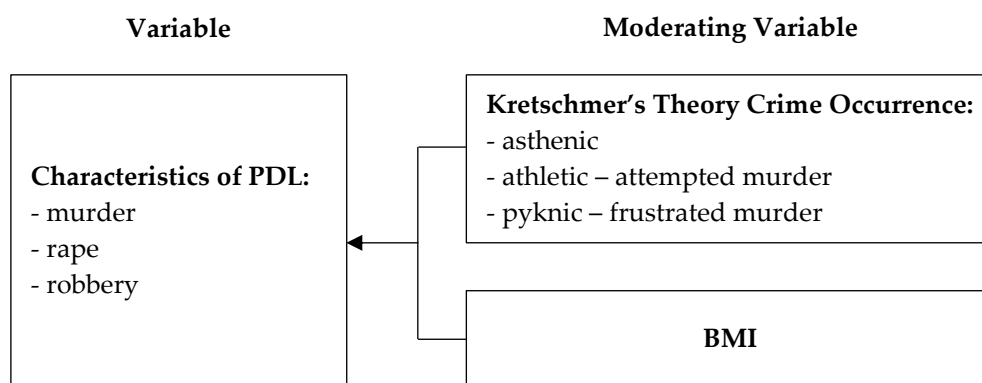
Variable   **Moderating Variable**

Characteristics of PDL: **Kretschmer's Theory Crime Occurrence:**
- murder   - asthenic
- rape   - athletic – attempted murder
- robbery   - pyknic – frustrated murder

                                BMI

Figure 1: Conceptual Framework Showing the Variables of the Study

The following are defined operationally as they were used in the study. Characterization - the Person Deprived of Liberty (PDLs) admitted in the Bureau of Jail Management and Penology Region IX were characterized according to their Body Mass Index and identified based on the classification of Kretschmer's Theory of the Body Physiques where they belong in relation to crime occurrence.

3. Materials

The quantitative-descriptive research utilizing secondary data was employed in this investigation. Descriptive Research is a method suited to generate knowledge in describing the characteristics of offenders thru Body Mass Index in relation to the occurrence of crime rape, murder, attempted murder, frustrated murder, and robbery based on the given data from the records of the Bureau of Jail Management and Penology with their inmates on the lens of the theory. Descriptive research is a scientific method that implies describing and observation of the subject's behaviour without influencing it in any way. Describing the data provides an accurate and factual description of the population being studied. It gives the number of times something happens and tends to determine population descriptive statistics that is the average number of occurrences or frequency of occurrences (Monsen & Horn, 2008). Moreover, this method expresses what was, recording, describing, analysing, and interpreting conditions that exist. It also involves some types of comparisons and contrasts that attempt to discover associations between existing non-manipulated variables. It is widely used in scientific disciplines like social science and psychology to obtain a general overview of the subject (Singh, 2007).

The secondary data employed in the study were previously gathered and accessed by researchers. They are also used by other crime researchers of the Bureau of Jail Management and Penology. A sample survey was done by other people as secondary data sources. Moreover, secondary data were the major sources of information in cross-cultural or transnational research. For example, most of the cross-cultural researches rely on the survey of the International Police Organization (INTERPOL) statistics drawn from police and various countries. It can be used to assess changes at different times in the same place as collected information will be organized by agencies over a long period of time and used to examine crime trends (Riedel, 2000).

This study used secondary data about persons deprived of liberty profiles from the archival records of the Bureau of Jail Management and Penology in Region IX confined from the year 2015 up to 2017. The data contained the body physique under the categories of Kretschmer the athletic, pyknic, and asthenic classified by year. The inclusion criteria include records of inmates, the year they committed a crime, types of crime, and height and weight as a basis of prediction. The requested data excluded the name and address of an inmate in every profile for confidentiality.

Secondary data are readily available resources to examine characteristics of populations or particular hypotheses data sets, generally collected by the government, research institutions, and in some cases, agencies. A large secondary data set represents some broader population or region in the country and typically covers a broad sample of individuals or other entities. Secondary data sets today are often high because they discover a broad array of topics, and the quality of these data sets, from reputable organizations. Many existing data sets have been designed to capture policy-relevant outcomes that have the potential to begin capturing policy effects as soon as policy shift allows for the prompt examination of current policy issues (Vartanian, 2011).

In the data collection, the researcher asked permission from the office of the Bureau of Jail Management and Penology (BJMP) Regional Office IX to obtain the archival records of the inmates that serve as the secondary data. After the approval, the researcher personally received the copy. Consequently, the data gathered were tallied, tabulated, analyzed, and interpreted statistically. The retrieval of files did not take so long, the moment the data were available the researcher personally received the files. Thereafter, the researcher obtained the initial data with the accounts of recorded cases from year 2015 to 2017. The initial file is necessary for outlining and needed as a basis of determination in the population sample. The researcher collected the complete data as long as it was available already.

The researcher employed yearly observations of the data gathered from 2015 to 2017. The data gathered were treated by the following:

- Mean. This was computed to obtain the mean score of height, weight, and body mass index. ANOVA. This was applied to test the significance of the relationship between the frequencies of Person Deprived of Liberty (PDL) with different types of cases using Kretschmer's classification between 2015 and 2017.
- Chi-Square Test. This was used to test the significance of the relationship on the BMI of Person Deprived of Liberty (PDL) with different types of cases using Kretschmer's classification between 2015 and 2017.

The researcher was responsible enough to conduct secondary data analysis and ensure that it was appropriate. The researcher never falsified or manipulated through changing and omitting any research materials, or process, of the information. The researcher properly quoted, paraphrased, and cited well the sources. The researcher employed ethical norms in research and never employed misconduct in the research since the information gathered was legitimately obtained and never fabricated.

4. Results and Discussion

In this section, the study's results are presented and discussed in consonance with the following objectives. First, to present the characteristics of the Person Deprived of Liberty (PDL) with different types of cases using Kretschmer's classification (athletic, asthenic, and pyknic) in terms of weight, height, and BMI. Second, to determine if the Persons Deprived of Liberty (PDL) with different types of cases are significantly characterized using Kretschmer's classification. Last, to determine if the Persons Deprived of Liberty (PDL) with different types of cases using Kretschmer's classification is significantly characterized according to their BMI status.

4.1 The Characteristics of the Person Deprived of Liberty (PDL) with Different Types of Cases Using Kretschmer's Classification

Table 1: Summary of the Descriptive and Statistical Frequencies of Kretschmer's Classification among the Persons Deprived of Liberty (year 2015), n = 430

Type of Cases	n	%	Statistics	Weight (in kg)	Height (in meter)	BMI	Kretschmer's Classification
Attempted Murder	38	71.7%	Mean	55.58	1.63	21	Athletic
			Standard Deviation	4.366	0.043		
	2	3.77%	Mean	50.00	1.7	17	Asthenic
			Standard Deviation	0	0		
	13	24.53%	Mean	72.15	1.60	28	Pyknic
			Standard Deviation	13.366	0.179		
N₁	**53 (12.33%)**	100%					
Frustrated Murder	22	73.33%	Mean	53.27	1.61	20	Athletic
			Standard Deviation	3.104	0.038		
	8	26.67%	Mean	67.25	1.53	29	Pyknic
			Standard Deviation	14.607	0.186		
N₂	**30 (6.98%)**	100%					
Murder	28	52.83%	Mean	55.32	1.61	21	Athletic
			Standard Deviation	6.319	0.044		
	7	13.21%	Mean	50.00	1.71	17	Asthenic
			Standard Deviation	0	0		
	18	33.96%	Mean	68.44	1.57	28	Pyknic
			Standard Deviation	15.531	0.207		
N₃	**53 (12.33%)**	100%					
Rape	128	66.32%	Mean	58.48	1.62	22	Athletic
			Standard Deviation	5.257	0.058		
	15	7.77%	Mean	46.13	1.66	17	Asthenic
			Standard Deviation	4.719	0.08		
	50	25.91%	Mean	63.3	1.49	28	Pyknic
			Standard Deviation	13.142	0.143		
N₄	**193 (44.88%)**	100%					
Robbery	38	37.62%	Mean	58.66	1.61	23	Athletic
			Standard Deviation	4.564	0.078		
	63	62.28%	Mean	66.65	1.57	27	Pyknic
			Standard Deviation	10.709	0.02		
N₅	**101 (23.49%)**	100%					
Overall	430						**N₁ = Athletic 254 (59.07%)** **N₂ = Asthenic 24 (5.58%)** **N₃ = Pyknic 152 (35.35%)**

4.1.1 The Statistical Characterization in 2015

Presented in Table 1 is the year 2015 summary of the descriptive characteristics of the Persons Deprived of Liberty (PDL) with different types of cases namely: attempted murder, frustrated murder, murder, and rape which are categorized as crimes against person, and robbery as a crime against the person.

Using Kretschmer's classification, Persons Deprived of Liberty (PDL) were classified in terms of: weight, height, and BMI to determine if they belong to athletic, pyknic, and asthenic. The crimes against person are noticeably committed mostly by athletic type of persons and the crime against property is chiefly perpetrated by pyknic type of person. As reflected in the table, out of 430 recorded commissions of crime 59.07 percent are athletic. Particularly, in the cases of frustrated murder which obtains 73.33 percent.

In terms of weight, the PDL which obtains the heaviest weight is classified as pyknic with 72.15 kg under the case of attempted murder. However, the lowest weight is 46.13 kg classified as asthenic in the case of rape. In terms of height, the tallest PDL is measured at 1.71 m classified as asthenic under the case of murder. Conversely, the shortest PDL is measured at 1.49 m categorized as pyknic in the case of rape. In terms of the Body Mass Index (BMI), the highest BMI belongs to pyknic ranging to 29 in the case of frustrated murder. In contrast, asthenic got the lowest BMI of 17 in the cases of attempted murder, murder, and rape.

4.2 The Statistical Characterization in 2016

On the other hand, as reflected in Table 2 for the year 2016, the summary of the descriptive and statistical frequencies of Kretschmer's classification among the PDLs. The crimes against persons and crimes against property are predominantly perpetrated by athletic type. As the data shows out of 470 PDLs recorded this year, 64.04 percent of it belongs to athletics. However, the lowest percentage is 17.87 percent which is carried out by asthenic.

Regarding weight, in all studied types of cases, the heaviest PDL are classified as pyknic weighing 77.67 kg in the case of murder. Conversely, the lightest PDL is measured as 47.33 kg classified as asthenic under the case of attempted murder. Regarding height, the tallest PDL is classified as asthenic measuring 1.72 m under the case of attempted murder. On the flip side, the shortest PDL is measured as 1.58 m classified as pyknic in the case of attempted murder, frustrated murder, and robbery. In Body Mass Index (BMI), PDL with the highest BMI is pyknic ranging 29 under the case of attempted murder and rape. In contrast, the lowest BMI is under asthenic ranging from 17 in all cases except robbery.

Table 2: Summary of the Descriptive and Statistical Frequencies of Kretschmer's Classification among the Persons Deprived of Liberty (year 2016), n = 470

Type of Cases	n	%	Statistics	Weight (in kg)	Height (in meter)	BMI	Kretschmer's Classification
Attempted Murder	51	76.12%	Mean	55.51	1.62	21	Athletic
			Standard Deviation	5.147	0.056		
	9	13.43%	Mean	47.33	1.72	17	Asthenic
			Standard Deviation	3.162	0.039		
	7	10.45%	Mean	71.86	1.58	29	Pyknic
			Standard Deviation	8.630	0.030		
N_1	67 (14.26%)	100%					
Frustrated Murder	29	61.70%	Mean	55.28	1.63	21	Athletic
			Standard Deviation	5.567	0.058		
	13	27.66%	Mean	48.38	1.68	17	Asthenic
			Standard Deviation	2.534	0.04		
	5	10.64%	Mean	67.40	1.58	27	Pyknic
			Standard Deviation	3.362	0.026		
N_2	47 (10.00%)	100%					
Murder	35	61.40%	Mean	55.80	1.60	21	Athletic
			Standard Deviation	3.947	0.039		
	7	12.28%	Mean	50.00	1.71	17	Asthenic
			Standard Deviation	0	0		
	15	26.32%	Mean	77.67	1.67	28	Pyknic
			Standard Deviation	7.38	0.099		
N_3	57 (12.13%)	100%					
Rape	112	57.53%	Mean	57.26	1.63	21	Athletic
			Standard Deviation	5.900	0.067		
	31	15.98%	Mean	48.65	1.71	17	Asthenic
			Standard Deviation	2.589	0.06		
	51	26.29%	Mean	74.48	1.60	29	Pyknic
			Standard Deviation	11.90	0.062		
N_4	67 (14.26%)	100%					
Robbery	74	70.48%	Mean	55.80	1.64	21	Athletic
			Standard Deviation	3.910	0.067		
	24	22.86%	Mean	51.25	1.71	17	Asthenic
			Standard Deviation	1.359	0.022		
	7	7.67%	Mean	65.0	1.58	26	Pyknic
			Standard Deviation	0	0.015		
N_5	105 (22.34%)	100%					
Overall	470						N_1 = Athletic 254 (64.04%) N_2 = Asthenic 84 (17.87%) N_3 = Pyknic 152 (18.09%)

Table 3: Summary of the Descriptive and Statistical Frequencies of Kretschmer's Classification among the Persons Deprived of Liberty (year 2017), n = 607

Type of Cases	n	%	Statistics	Weight (in kg)	Height (in meter)	BMI	Kretschmer's Classification
Attempted Murder	87	88.78%	Mean	59.00	1.67	21	Athletic
			Standard Deviation	58.61	0.062		
	11	11.22%	Mean	53.45	1.72	18	Asthenic
			Standard Deviation	2.697	0.042		
N₁	**98 (16.14%)**	**100%**					
Frustrated Murder	24	77.42%	Mean	59.26	1.68	21	Athletic
			Standard Deviation	55.19	0.061		
	17	22.58%	Mean	50.86	1.66	18	Asthenic
			Standard Deviation	2.968	0. 049		
N₂	**41 (6,75%)**	100%					
Murder	97	90.65%	Mean	59.37	1.68	21	Athletic
			Standard Deviation	5.433	0.060		
	10	9.35%	Mean	53.3	1.71	18	Asthenic
			Standard Deviation	2.791	0.044		
N₃	**107 (17.63%)**	**100%**					
Rape	144	54.75%	Mean	57.92	1.65	21	Athletic
			Standard Deviation	6.286	0.069		
	42	15.97%	Mean	49.40	1.73	17	Asthenic
			Standard Deviation	3.209	0.059		
	47	29.28%	Mean	67.88	1.54	29	Pyknic
			Standard Deviation	10.938	0.164		
N₄	**263 (43.33%)**	**100%**					
Robbery	67	68.37%	Mean	58.57	1.65	21	Athletic
			Standard Deviation	4.016	0.055		
	7	7.14%	Mean	54.43	1.75	17	Asthenic
			Standard Deviation	1.359	0.037		
	24	24.49%	Mean	64.96	1.49	29	Pyknic
			Standard Deviation	4.237	0.170		
N₅	**98 (16.14%)**	**100%**					
Overall	**607**						**N₁ = Athletic 415 (69.03%)** **N₂ = Asthenic 87 (14.33%)** **N₃ = Pyknic 101 (16.64%)**

4.1.3 The Statistical Characterization in 2017

In addition, presented in Table 3 is the year 2017 summary of the descriptive and statistical frequencies of Kretschmer's classification among the Persons Deprived of Liberty (PDL). The attempted murder, frustrated murder, and murder cases are carried out by athletic and asthenic. Only in the case of rape and robbery where pyknic type of Persons Deprived of Liberty (PDL) is present. As data reflected, 607 PDLs were recorded this year; most of them were carried out by athletes with 69.02 percent. However, the lowest percentage is asthenic, only 14.33 percent. In terms of weight, the heaviest PDL is classified as pyknic weighing 64.96 kg in the case of robbery. In contrast, the lightest PDL is asthenic, weighing 49.40 kg in the case of rape. Regarding height, the tallest PDL is measured as 1.75 m and classified as asthenic in the case of robbery. However, the shortest PDL is classified as pyknic measured as 1.49m in the case of robbery. Regarding the Body Mass Index (BMI), the PDL obtains the highest BMI in pyknic, ranging from 30 to overweight. Conversely, the PDL with the lowest BMI is asthenic, ranging 18 which means underweight.

4.2 Determination if the Persons Deprived of Liberty (PDL) with Different Types of Cases is Significantly Characterized Using Kretschmer's Classification

Table 4 presented the Chi-square Test on the frequencies of the Persons Deprived of Liberty (PDL) characterization when analysed according to their Body Mass Index status. Using the chi-square test the computed value of characterization is 76.668. Considering, the p-value is 0.05 lower than the level of significance the null hypothesis is rejected. The researcher leads to the idea that there is a significant difference in the frequencies of Persons Deprived of Liberty (PDL) characterization when analysed according to their Body Mass Index status. The athletic obtained the highest number of frequencies of 974 out of 1507 in three consecutive years. However, the body type that obtained the lowest number of frequencies is the asthenic which got 195 only. The highest recorded crime rate was in the year 2017, with a total of 607. In contrast, the year obtained the lowest crime rate was in the year of 2015 with a total of 430.

Table 4: Chi-square Test on the Frequencies of the Persons Deprived of Liberty (PDL) Characterization When Analyzed According to Their Body Mass Index Status

| Year | Kretschmer's Classification | | | Total | χ^2 | p-value |
	Athletic	Asthenic	Pyknic			
2015	254	24	152	430		
2016	301	84	85	470	76.668*	0.000
2017	419	87	101	607		
Total	974	195	338	**1507**		

*p<0.5

4.3 Determination if the Persons Deprived of Liberty (PDL) with Different Types of Cases Using Kretschmer's Classification are Significantly Characterized According to Their BMI Status

Presented in Table 5 is the analysis of variance test (ANOVA) on the Persons Deprived of Liberty (PDL) characterization when analysed according to their BMI status. As reflected in the table, the F value is 265.38 in the frequencies of Persons Deprived of Liberty (PDL) characterization. The adjusted p-value is less than the alpha of 0.05 level of significance, it concludes that the difference between a pair of group means is statistically significant. The particular null hypothesis is rejected as the adjusted p-value as regarded as the smallest family error rate. Thus, it averred that there is a significant difference in the Body Mass Index of Persons Deprived of Liberty (PDL) with different types of cases using Kretschmer's classification during the three consecutive years.

Table 5: ANOVA Test on the Persons Deprived of Liberty (PDL)
Characterization When Analysed According to Their Body Mass Index Status

	Sum of Squares	df	Mean Square	F
Between Groups	190.482	2	95.241	265.38*
Within Groups	2.153	6	0.359	
Total	192.636	8		

*p<0.05

In the years 2015, 2016, and 2017, the crimes were categorized as a crime against person the: attempted murder; frustrated murder; murder; and rape are classified to be highly committed by athletic and less likely by asthenic type of person in terms of height, weight, and body mass index. This implies that the Theory of Kretschmer on Body Physiques matches in the statistical examinations done using the records of BJMP Region XI. This is related to Landecker (1941), who averred that the result of the German study does not substantiate the assumption that pyknics commit acts of violence; rather, the athletic type appeared to be more associated with such offenses. The result also figures out that Asthenic has a lesser number in the commission than Athletic in committing crimes against person. For the fact that asthenics was characterized by a lack of energy, susceptibility to influences, timidity, cowardly acts, careful calculatedness, and a tendency to commit acts solitarily. Moreover, athletic persons were self-confident and egocentric which matches the conclusion of Kretschmer.

In the crimes against property specifically, the robbery in the year 2015, was mostly committed by pyknic type of persons which correlates to the theory that states that the delinquency of pyknics, consists of usually momentary aggressions, sensational joy-rides with stolen motors, forming of criminal gangs, sexual excesses, and alcoholic intemperance. But in the year 2017, all studied crimes were predominantly committed by athletic and followed by asthenic. The results of the study are also aligned with the proposition of Wetzell (2000) that most criminals belonged to the athletic and asthenic body types which links to a schizothymic temperament, while the round pyknic physique is rare among criminals. Due to the fact that the pyknic type is rare in the general population as well and that the athletic and asthenic physiques were probably more

common among the lower classes from which most criminals came. Moreover, as Dr. Walker (2010) stipulated what urges them to be strong and fit also impels them to be violent. It is also likely that those who are fit find themselves in violent situations more. Hence, body physique may not be the cause of crimes, yet there is a direct relationship between the two. As a result, between measures, it indicates significant differences in the frequencies of Persons Deprived of Liberty (PDL) with different types of cases using Kretschmer's classification during the years 2015 to 2017. It was observed that Athletic got a greater quantity in the commission of crimes and it is almost always followed by pyknic.

In the year 2017, pyknic types were only observed in the crime of rape and robbery but still got the second highest number than asthenic. This implies that every individual has a unique pattern of thoughts, feelings, and behaviors that persist over time and across situations based on the body figure. Pyknic is characterized by a heavy, soft body, lacks spontaneity/sophistication, and has a great tendency to commit nonviolent property crimes. This is related to Eysenck's (1991) assertion that pyknic is correlated to being the manic-depressive type of behavioral disorder, while the athletic and asthenic are correlated to schizophrenia. As a result of having behavioral problem study shows there is a certain crime that these figures are prone to or often committed. The pyknic type has a manifestation of committing crimes against property, the athletic is manifested to the commission of violent crimes the crime against person, and the asthenic is related to passionate crime.

While the athletic is known to be a muscular body type an aggressive, bully, loud, and had a great chance to commit violent offenses. The asthenic had a peculiarity of being thin, highly emotional, unable to control themselves, and prone to commit sexual offenses/crimes of passion due to being introverted in character. Moreover, as what Walsh (2016) noted, it is assumed that individuals with the same resemblance of abilities and traits, who made their life course with the same choice, should tend to group together within social spheres and economics. This is aligned with the proposition Regoli (2011), when Maddan and his colleagues figured out that offenders with the mesomorph (athletic) body type were significantly more likely than ectomorph (asthenic) and endomorph (pyknic) to be incarcerated for a violent offense. Athletic type appears to have a minor yet statistically significant effect on violent forms of delinquency. The relationship between body type and delinquency is linked to temperament a consistent individual difference in behaviour that is biologically based and relatively independent of learning, values, and attitudes. Furthermore, large body size increases the chance of aggression. The state of muscularity may lead to masculinity, which allows one to dominate others and encourage violence and threat. It comes into view that body type is indeed related to officially recorded delinquency. This added to the assertion of Walker (2010) that those who are muscular gain pleasure and rewards from extensive muscular activities, while the thin and more dominated by nerve tissue, which made them sensitive to heavy activities, and those who are fat like good food and "no wine before its time." This means that criminal activity is more appealing to the athletic type. In determining

the Persons Deprived of Liberty (PDL) with different types of cases using Kretschmer's classification, the characterized persons are significant according to their BMI status.

Though the BMI does not predict that a person can commit crimes, it has a direct relationship. BMI is related to delinquency as physique directly relates to every individual's motivation. This also holds true for Bradley et al. (2008) in their studies on the Body Mass Index (BMI). When children make headway in the adolescence stage, a higher BMI they carried out with an increased likelihood of developing internal problems. Healthcare providers should closely monitor BMI to guide parents and guardians on emerging symptoms of depression and anxiety as children start entering school. Notwithstanding that, the relationship between internalizing problems and BMI looks to be relatively weak in the adolescence stage; hence, being overweight can manifest in internalizing behaviour such as withdrawal, agitation, and internal complaints. This problem rises to a pyknic type of person a common occurrence may lead to delinquency if the solution is not addressed.

5. Recommendations

Based on the findings of the study the researcher formulated the following recommendations. Though linking body physique and criminal behaviour is not widely accepted in the field of law enforcement and is only a theory that has just been discussed in the Criminology curriculum, this finding may utilize the stereotype of the appearance of criminals, physical features, or through BMI which may correspond with the stereotype which may entice police attention. In a collective influence or factor, it is probable that the athletic type or muscular individual is more likely to be invited by delinquent peers to take part in criminal activities.

Moreover, the athletic offender has a greater chance of being successful in regard to violent crime, with the outcome that their anti-social behaviour results in both tangible and social reinforcement. Thus, the researcher recommends BMI should be a factor of social determinant to classify a Person Deprived of Liberty (Pdl). On the other hand, the theory of Kretschmer may be strengthened by further studies if there is a need to conduct another research with additional variables to moderate the relationship between body physiques and delinquency.

This research may be translated into practical management guidelines in correction management in classifying and identifying the profile of Persons Deprived of Liberty (PDL) on as statistical basis. Also, law enforcement agencies may consider this classification and methods in crime prevention in terms of targeting possible offenders. The very need to enrich a more all-inclusive consideration of the outcomes and findings of this study suggests more avenues for future research. Thus, this study is expected to generate an essential contribution to the scientific frontiers of knowledge concerning crime prevention.

6. Conclusion

Based on the evaluation of findings, the following conclusions are educated: it reveals that most of the crimes studied were perpetrated by athletic type of persons for three consecutive years. The researcher concludes that the state of muscularity may lead to masculinity which allows one to dominate others and encourage to use of violence and threats. Muscular or physical strength has been concluded that the offenders are more muscular or physically stronger than non-offenders. It also manifests that next to athletic is almost always pyknic, being overweight can lead to internalizing behaviour such as withdrawal, anxiety, and somatic complaints.

On the other hand, in the year 2017 most of the index crimes are usually perpetrated by athletic and asthenic, the pyknic only recorded the crime of rape and robbery. Pyknic, characterized by a heavy, soft body, lacks spontaneity/sophistication, has a great tendency to commit nonviolent property crimes. Consequently, the athletic is known to be muscular body type aggressive, bully, loud, and has a great chance to commit violent offenses.

Meanwhile, the asthenic has a peculiarity of being thin, highly emotional, unable to control themselves, and prone to commit sexual offenses/crimes of passion due to being introvert in character. The BMI does not predict that a person can commit crimes but it has a direct relationship. BMI is related to delinquency as physique has a direct relation to the motivation of every individual. The relationship between body type and delinquency is linked to temperament or a consistent individual difference in behaviour that is biologically based and relatively independent of learning, values, and attitudes. It indicates that the results confirm the theory of Kretschmer that body physiques are associated with temperance. Athletic type carries out of violent crimes, asthenic is predominantly in crime of passion and the pyknic is associated with property crimes.

Conflict of Interest Statement

The authors declare no conflicts of interest. The authors are dedicated to upholding the highest ethical and research standards. Per these standards, any potential conflicts of interest that may arise during the study will be promptly disclosed and managed to ensure the impartiality, transparency, and integrity of the research outcomes. This declaration is intended to underscore our commitment to transparency and maintaining research integrity throughout the study.

About the Author(s)

Irish Alemania Pioneta-Bandolos is a Master of Criminal Justice with a specialization. She is a research coordinator and full-time faculty in the College of Criminal Justice Education at the University of Mindanao, Philippines. Outside of their professional pursuits, the Irish is actively involved in different organizations. An Emergency Action for Good Leadership Service, Inc. Fire Auxiliary Corp member, specifically the University of Mindanao Chapter. Additionally, she serves as an Enlisted Personnel Reservist in the Philippine Army. To further enhance their knowledge and skills, she has attended various seminars, including the Training Workshop on the 7-Step Method of Investigation for Trafficking in Persons and Environmental Crimes in the Philippines, Cybercrime Incident Response Specialization Training, and Medico-Legal Forensic Training conducted by PAP FILE in Cebu City, Philippines.

Luzviminda T. Orilla (PhD) is an associate professor and teaching math courses for 35 years at the University of Mindanao, Davao City, Philippines. She is the technical assistant of MS of Pure and Applied Math, as well as PhD math programs. In addition, she was also a research coordinator in the College of Arts and Sciences Education for 5 years. She published and presented studies, locally and internationally.

References

Bakke, M. M., & Igharo, K. O. (2013). Investigation of William H. Sheldon's Constitutional Theory of Personality: A Case Study of the University of the Gambia (Master's Thesis). Doi:10.5901/mjss.2013.v4n7p85

Beckley, A. L., Halkola R. K., Lundholm L., Långström N., & Frisell T. (2014) Association of height and violent criminality: results from a Swedish total population study, International Journal of Epidemiology, Volume 43, Issue 3, June 2014, Pages 835–842, Retrieved from https://doi.org/10.1093/ije/dyt274

Bodenhorn, H. & Price, G. (2009). Crime and Body Weight in the Nineteenth Century: Was There a Relationship between Brawn, Employment Opportunities and Crime?. Economies et Sociétés, Série Histoire Economique Quantitative, 41

Bradley, R. (2008). The Relationship of Body Mass Index and Behavior in Children. Retrieved from https://pubmed.ncbi.nlm.nih.gov/18639889/

Bull, R. H. C., & Green J. (1980). The Relationship between Physical Appearance and Criminality. Sage Journal. Vol 7

Carter, J. and B. H. Heath (1990). Somatotyping: Development and Applications. Retrieved from https://books.google.com.ph

Champion, J. C. (1994). Measuring Offender Risk: A Criminal Justice Sourcebook. Westport. Connecticut, London: Greenwood Press. Retrieved from https://www.ojp.gov/ncjrs/virtual-library/abstracts/measuring-offender-risk-criminal-justice-sourcebook

Cherry, K. (2018). The Trait Theory of Personality. Retrieved from https://www.verywellmind.com/personality-psychology-study-guide-2795699

Ellis, A., Abrams, M., & Abrams, L., (2009). Personality Theories: Critical Perspectives. 2455 Teller Road, Thousand Oaks California91320: Sage Publication Inc. Retrieved from https://sk.sagepub.com/books/personality-theories

Eysenck, H. J. (1991). The Structure of Human Personality (Psychology Revivals). 27 Church Road, Hove, BN3 2FA: Routledge. Retrieved from https://books.google.ro/books?id=afjeAQAAQBAJ&printsec=copyright&redir_esc=y#v=onepage&q&f=false

Fish, R. J. (2006). Stature and Criminal Behavior (Master's Thesis, Virginia Commonwealth University). Retrieved from https://scholarscompass.vcu.edu/cgi/viewcontent.cgi?article=1800&context=etd

Hollin, C. R. (2013). Psychology and Crime: An Introduction to Criminological Psychology. 27 Church Road, Hove, East Sussex BN3 2FA: Routledge. Retrieved from https://www.routledge.com/Psychology-and-Crime-An-Introduction-to-Criminological-Psychology/Hollin/p/book/9780415497022

Horan, S. (1992). The XYY Super male and the Criminal Justice System: A Square Peg in a Round Hole, 25 Loy. L.A. L. Rev. 1343. Retrieved from https://pdfs.semanticscholar.org

Kretschmer, E. (1925). Physique and Characteristics. 2 Park Squared, Milton Park, Abingdon, Oxon, OX14 4RN: Routledge. Retrieved from https://books.google.ro/books/about/Physique_and_Character.html?id=Vk1qAAAAMAAJ&redir_esc=y

Landecker, W. S. (1941). Criminology in Germany. Journal of Criminal Law and Criminology. 31 Am. Inst. Crim. L. & Criminology 551

London South Bank University. (28 September 2015). Overweight people are seen as 'too fat' to commit crime. Retrieved from https://www.lsbu.ac.uk/about-us/news/overweight-people-are-seen-as-too-fat-to-commit-crime

Monsen, E. & Horn L., (2008). Research: Successful Approaches. Retrieved from https://books.google.com.ph

Regoli, R. Hewitt, J., DeLisi, M. (2011). Delinquency in Society: The Essentials. Retrieved from https://books.google.ro/books/about/Delinquency_in_Society.html?id=v6MTZ2WhcfIC&redir_esc=y

Resnik, D. B. (1998). The Ethics of Science: An Introduction. Retrieved from https://books.google.ro/books/about/The_Ethics_of_Science.html?id=zMn2KxPQyk8C&redir_esc=y

Riedel, M. (2000). Research strategies for secondary data. Retrieved from https://us.sagepub.com/en-us/nam/research-strategies-for-secondary-data/book4970

Sass, H. (2009). Anthology of German Psychiatric Texts. Retrieved from https://www.wiley.com/en-us/Anthology+of+German+Psychiatric+Texts-p-9780470684351

Shoemaker, D. J. (2018). Theories of Delinquency: An Examination of Explanations of Delinquent Behavior. (7th ed., pp 23-29). Retrieved from https://global.oup.com/academic/product/theories-of-delinquency-9780195374179

Singh, K. (2007). Quantitative Social Research Methods. SAGE, New Delhi. https://doi.org/10.4135/9789351507741

Tung, E. L., Wroblewski, K. E., Boyd, K., Makelarski, J. A., Peek, M. E., & Lindau, S. T. (2018). Police Recorded Crime and Disparities in Obesity and Blood Pressure Status in Chicago. Journal of the American Heart Association, 7(7), e008030. doi:10.1161/JAHA.117.008030. Retrieved from https://www.ahajournals.org/doi/10.1161/JAHA.117.008030