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An Anthropometric Study of Pedophiles and Rapists

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ABSTRACT: Anthropometric measurements were obtained on pedophiles ($n = 23$) and rapists ($n = 13$) who were in a forensic treatment facility. Hand grip strength was measured with a Jamar hand dynamometer. Ten separate body measurements were taken including height and weight. As an indicator of body fat, triceps skinfold thickness was obtained with calipers on the non-dominant arm. The findings provided mild support for the hypothesis that the rapists in the sample would be stronger, more muscular, and have less body fat than the pedophiles.

KEYWORDS: psychiatry, pedophiles, rapists, anthropometric study

Efforts to categorize humans by morphological type have been ongoing at least since the time of Hippocrates in the 5th century B.C. [1]. He described two physical types, the phthisic habitus (tall, thin physique) and the apoplectic habitus (short, thick physique). More recently, Sheldon [1] in 1940 proposed three somatotypes which remain the most well-known classification system to date: ectomorphic, endomorphic, and mesomorphic.

The association between somatotype and variables such as personality and mental illness has also received sporadic scientific attention throughout the ages, and such efforts have continued into this century. For example, in 1924 Ernest Kretschmer [2] associated the leptosome (asthenic) body type with schizophrenia, and the pyknic (rotund) body type with manic-depression. Glueck and Glueck [3] examined anthropometric data on 500 delinquents and found a tendency for this population to be endomorphic mesomorphs. Parnell [4] attempted to correlate somatotype with different psychiatric diagnoses, behaviors, vocations, and cognitive abilities. Balogun [5] found that, in adult females, the relative strength of trunk and arm muscles is positively related to self-concept and body cathexis. In a study of 126 male suicides, Lester [6] noted that those using suffocation had a higher degree of ectomorphy than those using other methods.

Research looking at the relationship between physique and sexual behavior is scant. Sheldon [1] opined that the ectomorphic somatotype may be related to the development of sexual deviancy:

"Ectomorphs appear to be individuals who are intermittently overwhelmed by an imperative sexual drive . . . theirs are sensitive bodies and they are consequently susceptible to the development of masturbational and perverse practices."

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TABLE 1—Mean body measurements of pedophiles and rapists.

	Pedophiles (<i>n</i> = 23)	Rapists (<i>n</i> = 13)	Sig.
Right hand grip (kilograms force)	49.5 ± 8.3	56.8 ± 11.5	.05
Left hand grip (kilograms force)	43.3 ± 7.5	49.2 ± 6.6	.05
Height (inches)	67.8 ± 2.3	69.5 ± 2.7	ns
Weight (pounds)	173.5 ± 26.6	174.3 ± 33.6	ns
Biceps circumference (inches)	12.4 ± 1.3	12.9 ± 1.6	ns
Forearm circumference (inches)	11.1 ± 0.9	11.4 ± 0.9	ns
Shoulder breadth (inches)	16.4 ± 1.4	16.3 ± 2.0	ns
Chest breadth (inches)	15.9 ± 1.5	16.0 ± 1.6	ns
Chest circumference (inches)	37.1 ± 4.1	37.3 ± 3.4	ns
Waist circumference (inches)	35.3 ± 3.6	33.2 ± 4.0	ns
Iliac crest height (inches)	42.2 ± 1.8	43.0 ± 1.9	ns
Subacromial height (inches)	57.4 ± 1.9	58.2 ± 2.4	ns
Triceps skinfold (millimeters)	17.8 ± 7.9	12.2 ± 4.5	.01

Perkins [7] reported that homosexual women have narrower hips, increased arm and leg girths, less subcutaneous fat, and more muscle than heterosexual women. He also reported that psychosexually dominant homosexual women are taller, have broader shoulders, and narrower hips, are more muscular with greater arm and leg girths, are fatter, and are less linear than psychosexually passive or intermediate homosexual women.

To date, there have been no published studies examining the possible association between anthropometric data and different types of sexual offenders. It has been a clinical observation of the authors through their work with sexual offenders that rapists tend to be more mesomorphic, having athletic and muscular qualities with low body fat. In contrast, pedophiles tend to appear more endomorphic, being less muscular and athletic appearing with a higher amount of body fat. It was therefore hypothesized in the study at hand that rapists in a sexual offender residential treatment program, in comparison to pedophiles in the same program, would be stronger, manifest more mesomorphic versus endomorphic features, and have less body fat.

Methods

This research was conducted at a state forensic facility for the residential treatment of mentally disordered sexual offenders. Fifty-nine of the 75 inmates agreed to participate in the study; 16 refused.

Before the residents were measured and weighed, they completed a questionnaire on their lifelong history of sexual offenses. The questionnaire secured information on the age, sex, and relationship of their sexual victim(s); nature of the sexual act(s) performed; occurrence and type of penetration; physical injury of the victim(s); and use of bribes, force, or threats.

A Jamar hand dynamometer (Model 1) was used to measure grip strength of the right and left hands as an indicator of body strength. Three measurements were taken for each hand and the mean was used in the analysis. Height and weight were measured on a standard scale. A tape measure was used to measure resting biceps and forearm circumference of the dominant arms, shoulder breadth, chest breadth between posterior axillary lines, chest circumference at the tenth intercostal space, abdominal circumference at the umbilicus, subacromial height, and iliac crest height. As an indicator of body fat, triceps skinfold thickness was determined by taking the mean of three measurements obtained with calipers on the non-dominant arm.

The sex offenders were classified into two groups: pedophiles ($n = 23$) and rapists ($n = 13$). This was done on the basis of the information obtained from the sex offenders and their arrest record. Pedophiles had a history of sexual relations with opposite sex minors (under the age of 18). Ten of the 23 pedophiles had sexual relations with non-related minors and thirteen had sexual relations with minors who were relatives, either blood relatives or relatives through marriage. Although there is mixed opinion as to whether incest offenders comprise a separate entity from the child molesters, there is considerable empirical evidence supporting the unified theory approach; i.e., incest offenders share many similarities with child molesters and common theories explain the behavior of both [8]. Thus we grouped the incest offenders with the child molesters in this study. With the exception of three subjects, the rapists had a history of sexual battery exclusively with adult victims. These three subjects were included because their sexual offenses were overwhelmingly against only adult victims, and the few victims under 18 years of age were old enough to allow them to be mistaken for adults. All of the victims of the rapists were of the opposite sex.

Results

The pedophiles were slightly older (33.0 ± 8.5 , Range = 31) than the rapists (28.3 ± 6.7 , Range = 21; $T = 1.64$, $df = 1$, ns). There were no significant differences in race between the two groups (78.3% of the pedophiles were white compared to 76.9% of the rapists). Only 15.4% of the rapists were married, whereas 52.2% of the pedophiles were married ($X^2 = 4.73$, $df = 1$, $P = .03$).

A T Test showed significant differences in the mean kilograms force of the right (56.8 ± 11.5 v. 49.5 ± 8.3 ; $T = 2.15$, $df = 33$, $P < .05$) and left hand grip strengths (49.2 ± 6.6 v 43.3 ± 7.5 ; $T = 2.31$, $df = 33$, $P < .05$) of the rapists compared to the pedophiles. The rapists had a significantly thinner triceps skinfold than the pedophiles (12.2 ± 4.5 v 17.8 ± 7.9 ; $T = 2.75$, $df = 34$, $P < .01$). There were no significant differences in height or weight; circumference of biceps, forearm, chest, or waist; breadth of the shoulder or chest; or the height of the iliac crest or subacromial point.

Discussion

The lack of notable anthropometric differences for most measurements between the two groups in this study precluded the usefulness of attempting to categorize them into somatotypes [9]. The limited positive findings provide mild support for the hypothesis that the rapists in our sample would be stronger, more muscular, and have less body fat than the pedophiles. It is important to note, however, that the findings cannot be generalized to other populations due to several factors: first, a sizeable number of the subjects were excluded from the study because they fell into more than one category of sexual offense and, second, the sample was drawn from a prison population. Furthermore, the associations found in this study do not indicate a causal relationship between body type and sexual preferences and/or behavior.

Although these findings are preliminary and need confirmation, they are of interest in light of other biological differences that are being discovered in paraphilic subjects. Hendricks et al. [10] found that child molesters had thinner and less dense skulls and lower regional cerebral blood flow (rCBF) than controls. Langevin [11] recently reviewed other possible contributory biological factors found in those with paraphilias, including endocrine, neuroimaging, EEG, brain structure, and neuropsychological findings.

In summary, this study suggests that certain anthropometric measurements may be associated with different types of sex offenders. How such biological variables as these may be related to the behavior of sexual offenders requires further investigation.

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