

Does Cholesterol Eating Habit Influence Anxious Temperament in Kretschmer Typology?

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Abstract: Personality typology Kretschmer approach categorizes human's body shape, personality, and temperament in four classes: picnic/pyknic, leptosome, athletic and dysplastic. Although Kretschmer theory is widely used in the world of psychology in Indonesia, little is known about interference of cholesterol eating habit to the temperament of each body shape typology. This study aims to analyse the relationship among body shape, cholesterol, and hyperthymic temperament. This research used quantitative method with cross sectional design. Subjects of this study were 95 psychology students consist of 32 students with picnic type (short-fat), and 33 students with leptosome type (high-lean), and 30 students with athletic type (balanced). The results showed no relationship between body shape and anxious temperament, but high significant level of relationship between cholesterol eating habit and anxious temperament. Levels of the highest anxiety temperament on leptosomes type with high cholesterol eating habits further research is needed to examine cholesterol metabolism on producing dopamine and serotonin in leptosome typology.

1 INTRODUCTION

Personality is a relatively permanent nature pattern and has unique characteristics that consistently influence its behavior (Strong et al., 2007). Kretschmer's theory was one of the great works of the beginning of the century which was initiated by Ernst Kretschmer, a German psychologist, at the beginning of the nineteenth century. Personality typology according to Kretschmer does not solely address the issue of physical and constitutional constitution. He also addressed the problem of temperament, as evidenced in his work: *Körperbau und Character* (1921). Of the two types of typology, there is a relationship with each other, so his opinion is very interesting for other experts and had received a positive response. Kretschmer typology is best known for the connection between physical and spiritual typology, in which man is essentially a creature of monodualism psychophysics, which is the essence of human life (Knight, 1957; Savitz and Ramesar, 2006).

Based on his experiences while working as a psychiatrist, Kretschmer researchers connect body shape with temperament traits, with Picnic classification, Leptosome, Athletic, and Dysplastic.

Type picnic has a horizontal body size more than normal circumstances, so it looks short-chubed. Leptosome Type or Asthenic have upright sizes more than ordinary circumstances, so the body looks tall. Athletic type has a horizontal size and upright in a balanced ratio, so the body looks aligned. This type is a blend of picnic and asthenic. Type Dysplastic is a deviation from the three types that have been mentioned before. Kretschmer considers this type of dysplastic to deviate from a normal constitution (Knight, 1957; Savitz and Ramesar, 2006).

The dominant temperament in a person can determine whether or not he or she has a mental illness (Karam et al., 2006). At first Kretschmer divides the basic human temperament into two major constitutional groups: cyclothymes and schizothymes (Vazquez and Gonda, 2013). Kretschmer's theory is strongly influenced by Kraepelin's opinion which classifies psychosis sufferers into two groups, namely schizophrenia and manic-depressive. People who have the temperament of schizothymes, mental traits correspond to schizophrenic sufferers; there is a tendency toward autism, self-closing, living with oneself. As for Persons with cyclothymes, their psychic characteristics correspond to manic-depressive sufferers. In relation to body shapes, manic depressive sufferers are mostly stature-minded

and schizophrenic patients are mostly leptosome, athletic, and dysplastic (Dembi ska-Krajewska and Rybakowski, 2014; Maremmani et al., 2005; Martinova et al., 2016).

Based on the theory of Kraepelin and Kretschmer, human temperament is divided into 4 namely depressive temperament, cyclothymic temperament, hyperthymic temperament, and irritable temperament (Maremmani et al., 2005). In its development in keeping with the development of modern psychology, Hagop Akiscal and his colleagues add a type of temperament that is anxious temperament with continuous characteristics of avoiding harm, dependence, shame, inability to relax, unsafe, uncontrollable worrying of the usual, hypervigilance, tension gastrointestinal disorders, and irritability (Rovai et al., 2013; Strong et al., 2007; Vázquez et al., 2012). Anxious temperament is described as an ongoing concern and a tendency to express psychological tension, in the form of psychosomatic symptoms (Spauwen, 2013).

Physical changes that occur in adolescents during puberty are increased height and weight. The greatest influence on the development of their mental state is the growth of the body (the body becomes longer and taller). Then, the reproductive organs begin to function and secondary sexual signs begin to grow. In late adolescence, these physical changes have started toward steady and social maturity is formed, including in overcoming anxiety. Thus late adolescence begins to show the stability of anxiety.

In a preliminary study conducted on late adolescent psychology students aged 18-19, we found many respondents who showed anxious temperament. The students have a typology of Kretschmer picnic, asthenic, and athletic. Most students love high cholesterol foods. A study says that the fat concentration is inversely related to the size of anxiety trait (Suarez, 1999). This study aims to analyze the role of cholesterol eating habit in affecting anxious temperament in each body shape according to Kretschmer.

2 METHODS

This research uses descriptive quantitative method. Data collected from all psychology students at one university in Bandung aged 18-19 years. In this study, we excluded 12 subjects as they were undergoing mood disorder therapy; had unstable psychosocial and environmental problems in the previous six months, such as the death of a family member, death or loss of close friends, severe health problems in the

family, and family disruption by separation or divorce; and refused to sign informed consent. Subjects who meet the inclusion criteria in this research were 95 people.

The data were collected through a modified anxious temperament questionnaire consisting of 21 items, a questionnaire on cholesterol eating habits, and Body Mass Index measurements based on height and weight. The questionnaire for measuring the modified anxious temperament from related items sourced from TEMPS-A (Temperament Evaluation of Memphis, Pisa and San Diego Autoquestionnaire). Questions consist of anxiety, alertness, tension, sleep quality, and gastrointestinal symptoms. The responses to questions were analyzed using Likert scale which consists of (1) strongly agree; (2) agree; (3) disagree; and (4) strongly disagree. The analysis was performed using SPSS 20.00 for Windows.

3 RESULTS AND DISCUSSION

3.1 Results

3.1.1 Respondents' Characteristics

Characteristics of respondents' eating habit can be seen in Figure 1 below.

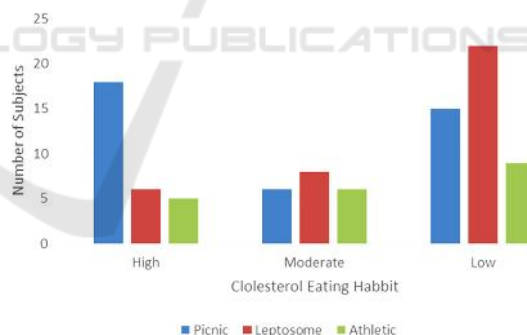


Figure 1: Eating habit characteristics.

Subjects consisted of 39 picnic people, 36 Leptosome and 20 athletic. No respondents were found to be dysplastic. High cholesterol eating habits are the most common in the type of Picnic and low cholesterol eating habits, especially in the type of Leptosome followed by the type picnic.

3.1.2 Two Way ANOVA analysis

The mean characteristic of anxious temperaments in the study is shown in Figure 2.

Figure 2: Estimated Mean of Anxious Temperament.

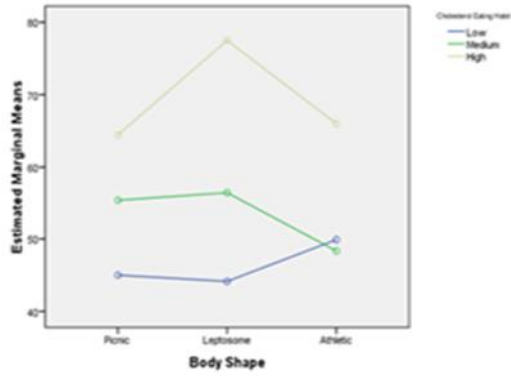


Figure 2 shows a high temperament average especially in the leptosome body-shaped group that consumes high cholesterol. To know the difference of anxious temperament in each body shape group and cholesterol eating habits, data analysis using Two Way ANOVA is done and presented in table 1 below.

Table 1: Statistical Analysis of Body Shape and Cholesterol Eating Habits against Temperament.

Tests of Between-Subjects Effects					
Dependent Variable: Anxious Temperament					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	9752.518 ^a	8	1219.065	13.251	.000
Intercept	232889.424	1	232889.42	2.531 E3	.000
Bodyshape	349.839	2	174.920	1.901	.156
Cholesterol	7372.084	2	3686.042	40.066	.000
Bodyshape * Cholesterol	1089.178	4	272.294	2.960	.024
Error	7911.966	86	92.000		
Total	293929.000	95			
Corrected Total	17664.484	94			

a. R Squared = ,552 (Adjusted R Squared = ,510)

Based on table 1, there is no significant relationship between body shape and anxious temperament. However, there is a significant association between cholesterol and anxious temperament.

3.2 Discussion

In this study there is no significant relationship between body shape and anxious temperament. Kretschmer research distinguishes the tendency of temperament on abnormal behavior. In this case, the subjects of this study were people who have no behavioral abnormalities.

The behavior that manifests the characteristics of energetic and temporal temperaments comes from the interaction of all the physiological and biochemical mechanisms involved in regulating speed and excitation. The energetic characteristic is a consequence of the individual neuro-endocrine mechanisms responsible for regulating the level of stimulation. Temporal properties can be explained by neuro-physiological mechanisms that regulate the rate of appearance and extinction of nerve processes, and also by certain neurotransmitters, such as dopamine (Capelli and Helme-Guizon, 2008).

In this study we can see that anxious temperament is high in the typology of picnic, leptosome, and athletic. This is consistent with research in India that non-vegetarian eating habits affect low temperament (Harikrishnan and Thomas, 2009).

Temperament refers to individual differences in behavioral styles and may be directly correlated with neurobiologists. Personality is defined as a person's mindset, feelings and behavior. Although temperaments and personalities have traditionally been conceptualized as different domains, several years of research has shown evidence of a link between temperament and personality (Neeleman et al. 2004)

In this study, anxious temperament is strongly influenced by cholesterol in leptosome typology. People who have a tall skinny figure but have a high cholesterol eating habits show more concern, tension, insomnia, and complain of gastric pain. The temperamental characteristics have also been studied according to the Cloninger (1986) model of integrated biosocial personality theory, which initially describes three inherited temperamental dimensions: newty seeking (NS), harm avoidance (HA) and reward dependence (RD). It has been postulated that each of these three dimensions correlates with dopaminergic, serotonergic and noradrenergic activity (Maremmani et al., 2005). Cholesterol is the main ingredient in the manufacture of dopamine and serotonin. Possible on the leptosome type, commonly eaten cholesterol is not dumped in the form of fat in the body organs and dumped under the skin as well as on the picnic type, but is used as a dopamine and serotonin-forming agent.

4 CONCLUSIONS

Cholesterol Eating habit affects anxious temperament in all body shape types, either picnic, leptosome, or athletic. The highest anxious temperament level in leptosome type charts has a high cholesterol eating habit. It is strongly recommended that leptosome type reduce the eating habits of cholesterol because it can increase the temperament of anxiety. The results of this study can be the basis for further research to see the effect of cholesterol on dopamine and serotonin hormone on each personality type.

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