



**CORELATION BETWEEN NEUROTICISM AND SUPERSTITIOUS BELIEF IN
JAVANESE SOCIETY, INDONESIA: A CROSS-SECTIONAL STUDY**
*Hubungan Neuroticism dan Superstitious Belief pada Masyarakat Jawa, Indonesia: Studi
Cross-Sectional*

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ABSTRACT

Background: Superstitious beliefs which started from negative emotions appear to be related to the neuroticism personality in people who also have a tendency to negative emotions. Though both are not influenced by one another, they do share certain commonalities that are brought on by unfavourable feelings like worry, anxiety, and low self-esteem. **Purpose:** This study aims to reveal whether there is a relationship between the variable's neuroticism and superstitious beliefs. **Methods:** This study used a neuroticism and superstitious belief scale which was created based on its aspects. This study used a cross-sectional quantitative research approach with a correlational design. It was conducted with a population of Javanese people who live in Javanese culture or claim to have Javanese culture. The study used purposive sampling technique with a total of 219 samples. **Result:** The results of the hypothesis test for the variables neuroticism and superstitious belief showed that Pearson's r value was 0.991. It means there was a positive relationship between the two variables in the perfect category. **Conclusion:** This study concludes that the results of neuroticism and superstitious beliefs in Javanese society were generally in the moderate category.

Keywords: Javanese society, anxiety, neuroticism, superstitious belief

ABSTRAK

Latar Belakang: Superstitious belief yang berpangkal dari emosi negatif ini nampak memiliki keterkaitan dengan kepribadian neuroticism pada diri individu yang juga memiliki kecenderungan emosi negatif. Namun keduanya tidak mempengaruhi satu sama lain, melainkan memiliki kesamaan yang lahir melalui emosi negatif seperti kecemasan, ketakutan, kekhawatiran, serta ketidakpercayaan diri. **Tujuan:** Bertujuan untuk melihat adakah hubungan antara variabel neuroticism dan superstitious belief. **Metode:** Menggunakan skala neuroticism dan superstitious belief yang dibuat berdasarkan aspek-aspeknya. Penelitian ini menggunakan pendekatan penelitian kuantitatif cross sectional dengan desain korelasional. Dilakukan dengan populasi masyarakat Jawa yang hidup dalam budaya atau mengakui berbudaya Jawa. Teknik pengambilan sampel menggunakan purposive sampling dengan jumlah 219 sampel. **Hasil:** Uji hipotesis variabel neuroticism dan superstitious belief menunjukkan nilai Pearson's r menunjukkan angka 0,991 yang artinya terdapat hubungan positif antar dua variabel dalam kategori sempurna. **Kesimpulan:** Penelitian ini menunjukkan bahwa hasil neuroticism dan superstitious belief pada masyarakat Jawa secara umum berada dalam kategori sedang.

Kata Kunci: masyarakat Jawa, kecemasan, neuroticism, superstitious belief

INTRODUCTION

Javanese people, as one of the tribal entities in Indonesia, have a close culture and are attached to their tribal identity. Culture can take on both tangible and immaterial forms. An example of an immaterial form would be a belief system centered around an object that is claimed to possess supernatural abilities beyond reason or logic. Even though this tends to be contrary to the understanding of the modern era, in fact this is still a common phenomenon in society, especially in Javanese society (George & Sreedhar, 2006). Academically, this phenomenon is called superstitious belief or superstitious belief (Torgler, 2007). Foster and Kokko (2009) define superstitious belief as a belief without a basis that has no reason to be justified.

In order to provide more clarity on this issue, Jahoda (1986) divided superstitious beliefs into four categories. First, superstitious beliefs that are connected to religious beliefs and understanding of the universe. Second, superstitious beliefs related to social life, such as predictions about people's fate, karma for forbidden actions, and symbols of supernatural powers, including numerology. Third, superstitious beliefs which are related to irrational actions such as communicating with the spirits of dead people or what can also be called ESP or extra sensory perception. Lastly, the type of personal superstitious belief which involves special beliefs or rituals regarding lucky numbers, talismans, and so on. Even though there are typologies, Jahoda emphasized that superstitious belief does not stand on the basis of one typology, but rather there is a connection between typologies in the building of superstitious belief.

The four types of superstitious beliefs described by Jahoda are still found in Javanese society. Javanese people still believe in supernatural phenomena that can

influence their lives. For example, believing that black magic can harm individuals to the death. According to Zenita (2023) the people of Tulungagung, East Java, believed that Pring sedapur witchcraft is black magic that is capable of killing twelve descendants of its victims. Besides that, Javanese people also believe in counting birth days or weton. Kustanto (2023) stated that weton count is usually used as a calculation for applying various activities such as weddings and another long journeys. People maintain this belief as a result of their experiences with the superstition they adhere to (Farooq & Kayani, 2012). People who hold superstitious beliefs appear to be coerced into believing by occurrences that align with the prevalent superstitions (Naseh, 2001). However, Kramer and Block (in Hamerman & Johar, 2013) explained that the environment also has a big influence on superstitious beliefs. If the environment actively provides stimulus and access to superstitious beliefs, it will make it easier for people to accept these beliefs.

Based on psychology, superstitious beliefs are associated with low psychological conditions such as low self-efficacy and relatively high anxiety (James & Wells, 2002; Wiseman & Watt, 2004). Superstitious beliefs, which might arise from anxiety, seem to be associated with the neuroticism personality type among people who also tend to feel bad about themselves (Wiseman & Watt, 2004). However, the two do not influence each other, but rather have similarities that stem from negative emotions such as anxiety, fear, worry, and lack of self-confidence. Superstitious belief is a form of assistance for individuals to overcome their anxiety (Rice, 2003). People think that living out their superstitions will help them deal with the possibilities that may come their way. On the other hand, the personality trait known as neuroticism is a unique pattern of behavior that frequently results in

unfavorable feelings like worry, anxiety, and low self-esteem (McCrae & Costa, 2006).

McCrae and Costa (2006) examined that people who have a high neuroticism score tend to be irritable, have difficulty mingling, and tend to blame themselves. People with neuroticism only have two possibilities when facing a big challenge, either pushing or forcing themselves to be free from the pressure and then solving the challenge, or letting the anxiety accompany them and reaping failure (Sumartha, 2020).

Pomsri (2018) research found that modern society practices superstitious beliefs as a form of control to deal with stress. People with a neuroticism personality need superstitious beliefs to overcome anxiety, fear, worry and lack of self-confidence about something that has not happened (Pomsri, 2018). People believe that superstition is able to provide a sense of security in life that will occur, thus reducing the individual's feelings of anxiety, worry and lack of self-confidence.

Regarding the background of the problem above, it is interesting to examine deeper about correlation between these two variables in the Javanese society life. Therefore, the focus of this research is whether there is a correlation between neuroticism and superstitious beliefs in Javanese society.

METHOD

Study Design

This study used a cross-sectional quantitative approach with a correlational design. The variables in this study were neuroticism as the independent variable and superstitious belief as the dependent variable. According to its operational definition, neuroticism is one of the big five personality traits. It characterizes people who are easily agitated, depressed, anxious, inferior, struggle with self-control, and sensitive to psychological stress. On the other hand, the

operational definition of superstitious belief is the belief in anything (items, actions, or occurrences) based on an illogical mechanism that may result in favorable or unfavorable consequences down the road.

Population and Sample

The sample characters from this study were 1) people of Javanese ethnicity (born and developed in Javanese culture or recognizing the beliefs that exist in Java), 2) aged 19 years or over or in early adulthood to middle adulthood including adults were already have good mental abilities such as analogical reasoning (Hurlock, 1980). The sampling technique used in this study was purposive sampling with the Lemeshow formula which found a minimum score of 96. There were 219 subjects was obtained as samples.

Measurement and Analysis

The neuroticism research instrument in this study was prepared based on aspects of the neuroticism variable, such as anxiety, angry hostility, depression, self-consciousness, impulsiveness, and vulnerability. The superstitious belief instrument used in this study was created based on elements of the superstitious belief variable, including belief in specific objects, rituals, and events. The instrument used expert judgment authorization from the two lecturers regarding the suitability of the scale used, rather than an ethical scale permit.

The validity applied to the neuroticism and superstitious belief scales was expert judgment. It used two professional judgments and a validity test with the condition that it was valid if the Pearson Correlation value was greater than 0.300 (Azwar, 2008). On the neuroticism scale, 1 item was dropped, namely item number 10 because the total item index was 0.005. Hence, the number of valid items was 24 items. Then, the reliability of the superstitious belief scale was tested using the Cronbach's alpha technique with the results

obtained being 0.864. Meanwhile, the reliability of the neuroticism scale was tested using the Cronbach's alpha technique with results obtained of 0.848. This study analysis used inferential statistics.

RESULT

Table 1. Demographic Data of Study

Description	Category	Total	Percentage
Sex	Male	99	45%
	Female	120	55%
Age	18-40	139	63%
	41-60	80	37%
Domicile	Village	115	53%
	City	104	47%

Based on Table 1, data was obtained from 219 respondents in this study. There were 120 individuals, or 55% of the total, who were female. The age range of 19 to 40 years old accounted for 139 responses, or 63% of the total. This contrasted with other age groups. Out of the 115 responses, or 53% of the total, were citizens.

In addition, data classification was implemented to identify each variable's high and low values. There were three categories used in this study: high, medium, and low.

Commonly, categorization was carried out for each dimension for every variable. Furthermore, the empirical meaning was computed.

Table 2. Result of Statistical Analysis of Variable

Variable		Interval	N	Mean
<i>Neuroticism</i>	T	$87 \leq X$	29	78,19
	S	$69 \leq X < 87$	151	
	R	$X \leq 69$	39	
<i>Superstitious Belief</i>	T	$95 \leq X$	35	85,08
	S	$75 \leq X < 95$	129	
	R	$X \leq 75$	55	

Based on the Table above, neuroticism in general has an empirical mean of 78.19 which was included in the medium category. This was because the interval $69 \leq$ generally fell into the medium category.

Then, it was also known that superstitious belief has an empirical mean of 85.08 which was included in the medium category. This was because the interval $75 \leq$ Java was included in the medium category.

Table 3. Results of Statistical Analysis of Neuroticism Aspects

No	Neuroticism Aspect	Percentage			Empirical Mean
		T	S	R	
1.	<i>Anxiety</i>	25	151	43	12.38
2.	<i>Angry Hostility</i>	21	124	74	15.53
3.	<i>Self-Consciousness</i>	39	141	39	12.40
4.	<i>Depression</i>	11	158	50	12.70
5.	<i>Vulnerability</i>	16	144	59	12.66
6.	<i>Impulsiveness</i>	53	56	110	9.37

The factor that most influenced the degree of superstitious belief was belief in particular events as can be observed from the empirical mean value for each feature of superstitious belief. This was demonstrated by the fact that the mean empirical value of faith in certain events or occurrences was 30.30, the higher when compared to other factors.

Table 4. Result of Statistical Analysis of *Superstitious Belief Aspects*

No	<i>Superstitious Belief Aspects</i>	Percentage			Empirical Mean
		T	S	R	
1.	Belief in particular event	39	141	39	30.30
2.	Belief in particular ritual	14	150	55	27.59
3.	Belief in particular things	32	144	43	27.26

Through the empirical mean value of each aspect of superstitious belief, belief in particular events were the aspect that contributed the most to determining the level of superstitious belief. This can be seen through the empirical mean value of belief in particular events which was 30.30, the highest compared to other aspects.

Furthermore, a normality test was conducted using One Sample Kolmogorov-Smirnov. Data was claimed normally

Subsequently, a One Sample Kolmogorov-Smirnov normality test was performed. Nuryadi *et al.* (2017) considered regularly distributed if the significance value was greater than 0.05. Since the research's Asymp. Sig.(2tailed) value of 0.200 was higher than $\alpha=0.05$, the data can be considered normally distributed.

distributed if the significance value was > 0.05 (Nuryadi, *et al.* 2017). In this study, the Asymp. Sig. (2-tailed) value was 0.200, which was higher than $\alpha = 0.05$. Thus, the data can be declared to be normally distributed.

The next step was a hypothesis test to determine whether or there was a correlation between neuroticism and superstitious belief in Javanese society or not. The results of the hypothesis test in this study were as follows:

Table 5. Hypothesis Test Result of *Neuroticism* and *Superstitious Belief*

Variable	n	Correlation Coefficient	Significance
<i>Neuroticism</i>	219	0,991	0,000
<i>Superstitious Belief</i>			

The Table above described that the correlation coefficient (r) was 0.991 with a significance of 0.000. It can be interpreted that there was a positive correlation between neuroticism and superstitious beliefs with the level of perfect relationship, and this correlation was significant because $p < 0.05$ ($0.000 < 0.05$).

The correlation figure in the results above was positive with a perfect level because r reached 0.991. Hence, the

correlation between the two variables was in the same direction. This means that the higher the neuroticism, the higher the superstitious belief and vice versa. Based on these results, the hypothesis which stated "There is a relationship between neuroticism and superstitious beliefs in Javanese society" was accepted.

DISCUSSION

Javanese people still believe in superstitious beliefs; this is proven by the

results of research conducted on 219 subjects showing that Javanese people's superstitious beliefs were generally in the medium category. This study examined that the biggest aspect in determining the level of superstitious belief was the aspect of belief in particular events. This was based on the empirical mean result of 30.30, which was the highest compared to other aspects. People still believe that certain events will have an impact on them. Research by Suganda *et al.*, (2020) revealed that individuals still believe in making investments, it is best to do it on Wednesday Pon or Friday Kliwon, because that day is considered a holy day that will bring good luck. In addition, research by Antipov and Pokryshevskaya (2020) argued a tendency towards numerology for events such as marriage, engagement, and birth. It was explained that the willingness to choose good days for these events was because these events were important for people. Thus, they needed to think about the long-term impact. Arrosi (2015) explained that superstitious belief in Javanese society was not just to achieve the goal of "peace" but was more complex. It is part of an individual's strategy to facilitate good opportunities or good luck in the future.

For other aspects, such as rituals and objects, the percentage of belief among most Javanese people was at a medium level. The use of objects to gain good luck or avoid bad luck was common in Java. For example, the phenomenon of agate was believed to be able to provide supernatural advantages, including providing charisma, strength, and repelling evil for the wearer (Merdeka.com). Javanese people still believe in carrying out certain rituals to ward off evil or to bring good luck. One of the rituals that Javanese people still carry out was the slup-slupan or procession of moving to a new house (Arifa, 2022). The house moving procession consisted of a series of activities ranging from prayer to other processes which were believed to be

able to provide blessings and be able to ward off bad things when occupying a new house.

The results of this study showed that neuroticism in Javanese society was generally in the medium category. The aspect of angry hostility made the biggest contribution in determining the level of neuroticism in Javanese society. This result was based on the empirical mean value for the anger hostility aspect of 15.53, the highest compared to other aspects. People with angry hostility tended to behave rudely and were easily influenced by other people (Goldberg, 1992). Javanese people felt easily conflicted, angry and suspicious of other people based on this study. This was influenced by the social prejudice that existed within them. Individuals who have negative prejudices tended to view other individuals or groups with hatred and consider them as threats (Dixon *et al.*, 2012).

In the other five aspects, the highest percentage was in the medium category. This means that Javanese people have feelings of anxiety, depression, impulsiveness, and low self-control. Individuals who have excessive desires and low self-control will find it difficult to tolerate the frustration of responses that occurred when they did not match their desires (Widiger & Costa, 2013). Javanese people have anxiety about themselves in facing what will happen in the future. When the future does not match, it gives rise to feelings of disappointment which results in frustration.

The results of this study explained a positive correlation between neuroticism and superstitious beliefs which supported the research of Mikloušić *et al.* (2012). It stated that that study showed a significant positive correlation with superstitious beliefs. This was because those who did not believe in superstition were described as controlled and practical individuals. They tended to be

impulsive, introspective, neurotic, and even schizoid (Windholz & Diamant, 1974).

This study elaborated that Javanese individual with anxiety tended to have superstitious beliefs. This was in line with what Jahoda (1969) expressed in his research. It stated that individuals carry out superstitious beliefs to reduce the level of anxiety that grew in certain situations. Individuals who carried out positive superstitious beliefs believed that superstition was able to provide good luck. Hence, it can reduce the feeling of anxiety they feel (Rice, 2003)

Javanese people with neuroticism believe in being superstitious in their lives. This was because people with a neuroticism personality tried to prevent negative events that they felt will occur in the form of superstitious actions or beliefs, which were likely to be a concern for people who score high on neuroticism (Perdue, 2013). Individuals with neuroticism personalities trusted superstition the most because superstition implied determination, predictability, and a sense of control (Saroglou, 2002).

Superstitious beliefs were able to reduce the fear and worry that arise through uncertain situations. This opinion was supported by Akova (2011) that superstitious beliefs are used as a balance to fear and tension as well as strength and a source of peace for individuals to prevent a future that has a negative impact. Superstitious belief is used as an individual's way of reducing anxiety and increasing self-confidence in uncertain situations and environments through belief in fate, luck, spiritual beliefs, and rituals (Gazali *et al.*, 2019).

During the process of conducting the study, the author discovered several limitations that could affect the study being carried out. The following were several

things that were limitations or shortcomings in this research:

1. Use of a neuroticism scale which was developed through aspects of neuroticism which have not been tested for construct validity.
2. The number of sample respondents in this study was limited compared to the population, so future researchers needed to increase the number of samples for better research results.

CONCLUSION AND SUGGESTION

The conclusion in this study was that the results of neuroticism and superstitious beliefs in Javanese society were generally in the medium category. Then, the results obtained showed that there was a negative correlation between neuroticism and superstitious beliefs. Besides that, it is hoped that future researchers will be able to look for correlation between superstitious beliefs and other personalities and other variables. Future researchers are also expected to be able to use validated personality scales and increase the number of respondent samples to find better research results.

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AUTHOR CONTRIBUTION

Rara Asra Luthvi Saskia has duties and responsibilities in her field, determining the topic, location and research samples, collecting data and carrying out data analysis. Amri Hana Muhammad has duties and responsibilities as a supervisor who provided

approval for research topics and samples, as well as providing meaningful input and corrections at each stage of the study.

CONFLICT OF INTEREST

There is no conflict of interest in this study.

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