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Compliance with the Covid-19 Protocol for the Overseas Madurese Community in Terms of the Direct and Indirect Effects of Locus of Control, Belief in the Covid Conspiracy Theory, and Anti-Vaccine Attitudes

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Abstract: Statistically, Indonesia was recorded as having the highest number of active COVID-19 cases in Asia in 2021. Several clusters of activities and crowds increased confirmed cases in several areas, including Madura, where the number of cases continues to rise. One of the reasons for the increasing number of Covid-19 cases in Madura is a lack of discipline in health protocols, such as wearing masks, keeping a safe distance, and washing hands. The increase in Covid-19 cases in Bangkalan, Madura, was also due to poor health protocol adherence (prokes). The government has issued several policies in response to the COVID-19 pandemic, including a vaccination policy. The vaccination policy is inextricably linked to community debates over efficacy, halal certification, independent vaccines, and red and white vaccines. The vaccination debate has resulted in a societal anti-vaccination attitude. The Madurese community has a distinct collective culture that includes hard, religious, and high conformity. Even when traveling abroad, this rich cultural value does not fade. Even though, in a pandemic situation, various joint activities lead to behavior that violates health protocols, changing collective behavior is extremely difficult. Aside from the strong and distinct cultural background in obedient behavior to health protocols, the value of religiosity psychologically encourages the Madurese community to form a locus of control in dealing with pandemic situations. The purpose of this study is to put the Covid-19 protocol compliance model to the test using locus of control and anti-vaccine attitudes. Based on a study of 245 people with characteristics of an overseas Madurese community. The study's findings indicate that the theoretical model of Covid protocol compliance for the overseas Madurese community was built through direct and indirect influences between the beliefs of the Covid conspiracy theory, locus of control, and anti-vaccine attitudes.

Keywords: Anti-vaccine attitudes, Compliance with the covid-19 protocol, Belief in the covid conspiracy theory, Locus of control.

Introduction

Covid cases increased sharply in Indonesia in mid-2021, with Madura being one of them. After random tests were performed on 6,742 people who went on vacation in June 2021, the number of new positive cases of Covid-19 increased by 4,123 (Pranita, 2021). Despite the fact that the number of cases has significantly

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increased, Madurese residents continue to go about their daily lives, ignoring the covid protocol. Even though Madura has been designated as a zone with 3rd level restrictions on community activities, community activities continue to take place as usual. The implementation of Community Activity Restrictions (called PPKM) 3rd level has a variety of social consequences, including work done from home (WFH), restrictions on public areas, economic activity restrictions, and others (Bhayangkara, 2022). However, the restrictions imposed by the government to slow the rate of increase in Covid cases in Madura were also rejected by residents, who continued to participate in joint activities such as tahlilan celebrations, which invited large numbers of people despite the Covid protocol, and even members of the regional government were urged not to announce the news of death to the public (Azmi, 2021). Furthermore, the Madurese people refuse to call it Covid and instead choose to replace it with (Ifansasti, 2021). This increase in cases was caused by residents' disobedience to the covid protocol (Pranita, 2021). Disobeying the covid protocol is not limited to the Madurese who live in their homeland. Adherence to the Covid Health protocol is also shared by Madurese who are living abroad.

The Madurese community is well-known as a nomadic community, and it is almost evenly distributed throughout Indonesia. Religious, tenacious, and communal characteristics are inherent, despite the fact that they have been absent for a long time (Aldo, 2019; Sholik et al, 2016). The Madurese community has a distinct collective culture that includes hard, religious, and high conformity (Salsabiela, 2021). Even when traveling abroad, the thickness of this cultural value does not fade. Even though, in a pandemic situation, various joint activities lead to behavior that violates health protocols, changing collective behavior is extremely difficult. Aside from the strong and distinct cultural background in obedient behavior to health protocols, the value of religiosity psychologically encourages the Madurese community to form a locus of control in dealing with pandemic situations. A person's belief in a pandemic and adherence to health protocols are based on individual differences, which include a locus of control component (Devereux et al., 2021). This is consistent with the findings of Lo Prasti et al's study, which demonstrated a person's proclivity to move outside the home during a national lockdown using individual endogenous variables related to a person's personality trait, locus of control, and moral disposition (Lo Presti et al., 2021).

The researcher conducted a preliminary study by interviewing three overseas Madurese residents of Malang's Madura village. According to the preliminary study findings, even though the covid was hitting, the overseas Madura community continued to hold joint activities such as recitation, takziah, tahlilan, and other joint activities that invited a large number of people without regard for the covid protocol. It is intriguing to examine internal factors such as the Madurese community's locus of control. The locus of control is a component of a person's self-evaluation in the face of an event. Rotter (Patten, 2005) defines locus of control as a person's perspective on an event, regardless of whether that person can or cannot control the events that occur to him. This viewpoint will encourage people to make decisions when confronted with situations such as the covid pandemic. According to Francis (2014), there are two types of locus of control: internal and external. Individual decisions and actions based on self-decision are referred to as internal locus of control, whereas external locus of control refers to the perception that all events originate from outside of oneself, such as luck, other people, or the environment. In the case of covid, the public has a different assessment in responding to the surge in covid to determine whether or not to follow the covid protocol.

In addition to locus of control, many studies believe that the covid conspiracy belief has an impact on compliance with the covid protocol. According to the study (Biddlestone et al, 2020), cultural and psychological factors are related to intentions to reduce the spread of COVID-19. Vertical individualism is found to be a negative predictor of intention to engage in social distancing, both directly and indirectly through belief in COVID-19 conspiracy theories and feelings of powerlessness. Vertical collectivism predicts social distancing intentions positively. Horizontal collectivism, through feelings of helplessness, indirectly predicts social distancing intentions.

Finally, horizontal collectivism both directly and indirectly predicts hygiene-related intentions by lowering feelings of helplessness. These findings imply that promoting collectivism may be an effective way to increase participation in efforts to reduce the spread of COVID-19. They also emphasize the significance of investigating the interactions between culture and personal feelings (helplessness) as well as information consumption (conspiracy theories) during times of crisis.

Despite widespread belief in the existence of a covid conspiracy in Indonesian society in general and the Madurese community in particular, the government is attempting to increase covid vaccination absorption in the community. The pros and cons of the covid vaccination program occur in the community, strengthening the belief that there is a covid conspiracy. The Madurese do not believe in the existence of covid (Al-Mansury, 2021). According to research (Talib et al., 2021), the most effective way to communicate about vaccines to the

public is through social media rather than traditional media, and this study discovered that there are still many people who have not been vaccinated. The community's anti-vaccination attitudes are an impediment, because many people are influenced by fake news and believe that the vaccination program is harmful. Based on the observed phenomena, this study aims to test the Covid-19 protocol compliance model for the overseas Madurese community using the covid conspiracy belief, locus of control, and anti-vaccine attitudes.

Procedure

The research is conducted online by distributing questionnaires created with Google Forms to the general public or individuals who meet the criteria for being used as research subjects. However, due to technological stuttering in the research respondents, data collection was also done offline after a while.

Techniques of Analysis

Using structural equation modeling to test research hypotheses (SEM) Structural equation modeling (SEM) is a cross-sectional, linear, and general statistical modeling technique. According to another definition, structural equation modeling (SEM) is a common and extremely useful multivariate analysis technique that includes special versions of a number of other analytical methods as special cases. Structural equation modeling (SEM) is a statistical technique for developing and testing statistical models, most commonly causal models. SEM is actually a hybrid technique that includes confirmatory aspects of factor analysis, path analysis, and regression as special cases. One advantage of SEM is the ability to model constructs as latent variables, or variables that are not directly measured but are estimated in the model of the measured variables and are assumed to have a relationship with these variables - the latent variables. Researchers can create models using SEM by testing the dimensions of a variable as well as testing between variables. In order to achieve goodness of fit, SEM can eliminate covariant error.

Method

This research employs a quantitative methodology. Quantitative research yields numbers in the analysis results, which are then processed statistically (Azwar, 2012). This study incorporates applied research or applied research. Applied research is concerned with applying theory to real-world conditions and problems, so that the results can be used to solve practical problems (Kumar, 2011). The four independent variables (x) are Covid conspiracy beliefs, Anti-Vaccine Attitudes, and Locus of Control, and the one dependent variable (y) is Compliance with Health Protocols. The purpose of this research is to develop a theoretical model of compliance with health protocols using the variables Covid Conspiracy Belief, Anti-Vaccine Attitude, and Locus of Control.

Participant

The population is the entire research subject that has been determined to be studied and investigated in research due to its unique characteristics and qualities. This study's population consists of all Madurese Overseas residents who are at least 18 years old. This study had a total of 245 participants. This study employs a non-probability sampling sample selection method, which means that not all elements or elements of the population have the same chance of becoming samples (Darmawan, 2014). Purposive sampling was used to retrieve data for this study. The purposeful sampling technique is used because the sample is determined based on certain characteristics or criteria that the researcher has set so that it is in accordance with this study. The use of this technique was chosen based on the special characteristics possessed by members of the population who are able to provide information as needed in this study, the characteristics needed are Madurese people who are overseas (outside of the island of Madura), at least 18 years old, and affected by the COVID-19 pandemic.

Measurement

A Likert scale was used to collect data for this study. The Likert scale is a scale with several alternative answers ranging from very positive to very negative, with a score assigned to each answer choice. Respondents were asked to select the value that was closest to them from the alternative values or answers available in each statement, which ranged from strongly agree to strongly disagree.

Compliance with Covid Protocols Scale

This study's scale for measuring the health protocol The compliance variable employs a proprietary scale (Plohl & Musil, 2021) with four answer options ranging from not at all (value 1) to always (value 4). Several health protocol compliance scale items include: (1) clean hands regularly and thoroughly with a hand sanitizer containing health alcohol; and (2) when coughing or sneezing, cover mouth and nose with bent elbow or tissue.

Vaccine Attitude Scale

The Vaccine Examination (VAX) was developed to assess vaccine attitudes (Martin & Petrie, 2017). This scale has four dimensions: mistrust of vaccine benefits, concerns about unforeseen future effects, commercial profiteering, and preference for natural immunity, with 12 items answered on a 6-point Likert scale ranging from strongly agree to strongly disagree. Cronbach's alpha was 0.94 in the study of the anti-attitude scale toward vaccines.

Items in Attitude Toward Vaccine include: (1) I worry about the unknown effects of vaccines in the future, and (2) Vaccination programs are a big con.

Locus of Control Scale

The researcher in this study used a multidimensional locus of control developed by Levenson, which was later translated by Liestiorini. (1) Although I might have good ability, I will not be given leadership responsibility without appealing to those in positions of power, and (2) In order to have my plans work, I make sure that they fit in with the desires of people who have power over me.

Covid Conspiracy Belief Scale

Egorova et al. developed the Covid conspiracy belief scale (2020). The Covid conspiracy belief scale has four items. All of the items are positive. An example of a product on this scale is The hysteria surrounding the coronavirus is being fueled to distract attention from other national problems.

Table 1. Composite reliability and alpha cronbach

Variable	Composite Reliability	Cronbachs Alpha
Compliance to Covid Protocol	0.888556	0.861686
Covid Conspiracy Belief	0.919849	0.885579
Locus of Control	0.888624	0.858466
Vaccine Attitude	0.875312	0.835039

Table 1 shows that the composite reliability value is greater than 0.7 and the Cronbach's alpha value is greater than 0.6, indicating that composite reliability and Cronbach's alpha are met, and all research instrument items are declared reliable for further testing.

Results and Discussion

Based on the research demographic data, the majority of the research respondents were male with a percentage of 59.6%. Most of them are aged 25-34 years with a percentage of 32.25%, this can be seen from the income of less than 1 million by 72.65% of respondents. Research respondents are overseas Madurese communities, with the largest distribution of cities where respondents live in East Java at 96.31% and the largest length of domicile is more than 10 years with a percentage of 70.61% and the largest from overseas is Pamekasan with a percentage of 54.29%. Research respondents have a special reason to migrate from Madura, the majority (55.51%) have reasons to work overseas.

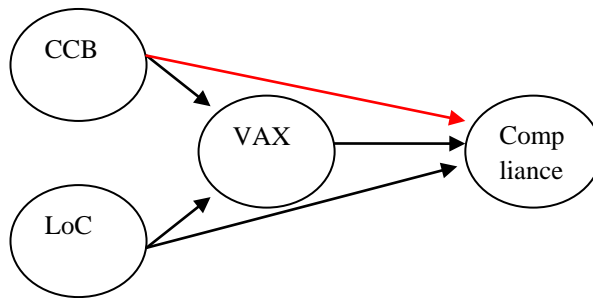
Based on the objectives and specifications of the research, testing is carried out in stages (iterations) using the SmartPLS software, to obtain fit test results. The SEM Model Factor Analysis shows the test results in Table 1

show that all outer loading construct indicators have a loading value > 0.5, so it can be concluded that this measurement meets convergent validity. The discriminant validity results show that the root square of average variance extracted (AVE) value is greater than 0.5. The results of the reliability test showed reliable results because the value of composite reliability (ρ_c) was above 0.7. For the inner Q-Square model greater than 0, it can be interpreted that the predictor is latent so that it can be said that the model is feasible to estimate.

Tabel 2. Evaluation of structural model conformity index criteria

Criterion	Result			Critical Value	Model Evaluation
<i>Outer Model</i>					
<i>Discriminant validity (Average Variance Extracted (AVE))</i>		AVE	Root square AVE	≥ 0,5	Good
	Compliance to Covid Protocol	0,446	0,668		
	Covid Conspiracy Belief	0,742	0,862		
	Locus of Control	0,473	0,688		
<i>Composite Reliability (ρ_c)</i>	Compliance to Covid Protocol	0,889		≥ 0,7	Good
	Covid Conspiracy Belief	0,920			
	Locus of Control	0,889			
	Vaccine attitude	0,875			
<i>Inner Model</i>					
<i>Q-Square</i>	Compliance to Covid Protocol	0,015		≥ 0	Good
	Vaccine attitude	0,146			

The results of the analysis on the influence test between these constructs are as described by paying attention to the path diagram of the results of the PLS analysis, so that the relationship between these constructs can be described in a simple way, as shown in the Figure below.



The interpretation of the results of the hypothesis testing proposed in this study is explained as follows:

Tabel 3. Result from hypothesis test

H	Role	Koef Path	T value	Note
H1	Covid Conspiracy Belief → Vaccine attitude	0,268	02,49***	Significant
H2	Covid Conspiracy Belief → Compliance to Covid protocol	-0,105	0,847	Not Significant
H3	Vaccine attitude → Compliance to Covid protocol	0,180	1,050	Significant
H4	locus of control → Vaccine attitude	0,531	4,910***	Significant
H4a	locus of control internal → Vaccine attitude	0,399	2,573***	Significant
H5	locus of control → Compliance to Covid protocol	-0,096	0,633	Significant

Source: Primary data (2021)

*, **, *** signifikan in level 10%, 5%, 1% value t Table in level 10%= 1, 645, 5%= 1,960, 1%= 2,326.

Table 4. Demographic data of research respondents

Data	Category	Ammount	%
Sex	Man	146	59.6%
	Woman	99	40.4%
Age	17 – 24 years old	53	21.63%

	25 – 34 years old	79	32.25%
	35 – 44 years old	73	29.80%
	45 – 54 years old	32	13.06%
	More than 55 years old	8	3.26%
Wandering City	East Java	236	96.31%
	Central Java	2	0.82%
	Jakarta	2	0.82%
	Bali, Sulawesi South, Sumatera		1.23%
	North	3	
	Yogyakarta	2	0.82%
Domicile Length	Less than 1 year	17	6.94%
	1 - 5 year	14	5.71%
	5 - 10 year	41	16.74%
	More than 10 year	173	70.61%
Origin	Bangkalan	74	30.20%
	Sumenep	17	6.94%
	Pamekasan	133	54.29%
	Sampang	21	8.57%
Reasons to wander	Married	58	23.67%
	Work	136	55.51%
	Others	51	20.82%

Table 5. Demographic data of research respondents: income, last education, and occupation

Demographic data	Category	Ammount	%
Monthly Income	Less than Rp. 1.000.000,-	178	72.65%
	Rp. 1.000.001,- s/d Rp. 5.000.000,-	58	23.68%
	Rp. 5.000.001,- s/d Rp. 10.000.000,-	5	2.04%
	More than Rp. 10.000.000,-	4	1.63%
Last education	Elementary School	30	12.25%
	Junior high school	146	59.59%
	High School	21	8.57%
	Associate degree	10	4.08%
	Bachelor Degree	30	12.24%
	Master Degree	8	3.27%
Occupation	Self-employed	131	53.47%
	Businessman	41	16.74%
	civil servant	9	3.67%
	Housewife	30	12.24%
	Student	28	11.43%
	Teacher	3	1.22%
	Student	1	0.41%
	Doesn't work	2	0.82%

Based on demographic data, it is clear that male workers or male migrants outnumber female workers or female migrants. This is because men are the head of the family, so their desire to migrate outside the region to make a decent living is much greater. in comparison to women who are housewives Demographic data also shows that the average immigrant is of productive age, which is between the ages of 25 and 40. This is because at that age, an individual's desire to improve a more decent standard of living is much greater than the age of non-productive people, such as children and the elderly, and the reason they migrate is obvious: to work, because the Madurese have cultural traits that are associated with migrants and hard workers (Ismi, 2021).

From a regional standpoint, we can see that Pamekasan contributed a greater number of Madura immigrants than several other regions, namely Bangkalan and Sumenep. According to demographic data, these Madurese migrants live on average in East Java, which is an industrial and population center with a high economic level, so their opportunities to trade and earn a decent living will be much greater. Because of these Madura immigrants, East Java is considered a more promising location when compared to other locations such as DKI

Jakarta to Jogjakarta, Central Java, West Java, and others, because the distance is not too great and the economic potential is quite large.

The demographic data studied show that the majority of the population from Madura who migrated to Java is economically less stable. The number of immigrants with a monthly income of less than one million is greater than the number of immigrants with an income above the average UMR. The data on these migrants' monthly income is positively correlated with their most recent education, with the majority of them being junior high school graduates or the equivalent. Education is generally positively correlated with a person's income; if he has a low education, his monthly income will tend to be low because of the potential to have a business or work opportunity or have an economic business that is less hampered due to lack of education or lack of experience in the business or work involved, and it is not surprising that the majority of these migrants are entrepreneurs, namely those who start their own businesses and are mostly traders where they migrate from Madura to work in the hope of having a more decent income outside the island of Madura.

The implementation of strict covid protocols is the main key to reducing the number of covid cases; compliance is required in carrying out the covid protocol through several behaviors such as maintaining distance, using masks, maintaining personal hygiene, and others. The study's findings indicate that the covid conspiracy belief, anti-vaccine attitude, and locus of control form the theoretical model of compliance with the covid protocol for the overseas Madurese community. This study demonstrates how crucial the vaccine's attitude is to adherence to the covid protocol. In encouraging compliance with the covid protocol, the vaccine's attitude can act as an intermediary variable for the covid conspiracy belief and locus of control.

The Madurese community will face the pros and cons of the covid vaccination program in 2021, with even less trust and an attempt to reject the existence of covid, which causes various restrictions for the community. The study's findings indicate that anti-vaccine attitudes play a role in covid protocol compliance. Similarly, Latkin et al., (2021) discovered a link between COVID-19 prevention behavior (wearing masks and keeping a safe distance) and vaccination attitudes. According to Lazarus et al. (2020), some countries have low rates of covid-19 vaccination due to societal characteristics and trust in the government. Madura is known for having a high religiosity character and a high adherence to religious leaders (Ismi, 2021). The government compliance survey is less relevant in terms of attitudes toward covid-19 vaccination, especially since the issue of halal certification is highly debated in a society with a strong religious component. Previous research has demonstrated the impact of vaccine attitudes on health protocol adherence (Hornsey et al, 2018; Kwok et al, 2021; Talib et al, 2021, Akhrani et al, 2022). The barrier to vaccine attitudes in the Madurese community is a lack of sufficient understanding and literacy about the risk of covid, which results in a reluctance to vaccinate or implement health protocols. Moreover, the number of hoax news received by the Madurese community related to Covid which is reinforced by the fact that the level of public education is still low, making it difficult for people to distinguish factual news and hoax news. Regarding belief in the covid conspiracy theory, the results of this study show that there is no direct role in the Covid protocol compliance variable. However, the belief that there is a covid conspiracy can play a role in compliance with the covid protocol if it is through an anti-vaccine attitude. In contrast to the results of the research by Jolley & Douglas (2014), the individual's belief in the anti-vaccine theory is directly related to a decrease in the individual's desire to get the vaccine. In this study, to produce compliance with the covid protocol, the covid conspiracy belief must go through an anti-vaccine attitude. The results of this study are the same as those conducted by Goldberg & Richey (2020) where anti-vaccine attitudes are explained as a result of an individual's psychological predisposition to conspiracy theories. The form of anti-vaccine belief in the conspiracy theory is that any information that comes from the government will be considered as something that deserves to be suspected. The government is considered to have made too many blunders and mistakes in the eyes of the people. So with these mistakes and shortcomings, people's trust in the government erodes (Ismi, 2021; Akhrani et al, 2022). For the Madurese, there is no such thing as a corona virus and rejecting the covid disease as a trending illness. Most of them are middle to lower class people in terms of economy. Traders in the market to street vendors also refused to be disciplined by officers because they felt that they were disadvantaged if they obeyed and believed in the issue of the pandemic. Conspiracy COVID-19 beliefs (among them, conspiracy beliefs about chloroquine), as well as conspiracy mentalities (i.e., propensity to believe in conspiracy theories) negatively predicted participants' intention to be vaccinated against COVID-19 in the future. Lastly, conspiracy beliefs predict support for chloroquine as a treatment for COVID-19. Interestingly, there is no conspiracy belief that points to the dangers of vaccines. The implications for the pandemic and potential responses are discussed (Bertin et al, 2020).

The locus of control, interestingly exhibits direct or indirect influence. Locus of control cannot have a direct effect on health protocol compliance, but it can have an effect if it is produced through the intermediary variables of vaccine attitudes. According to Aharon et al. (2018), the interaction between internal and external

HLOC (Health Locus of Control) can be a predictor of vaccination attitude. Similarly, the findings of Rapisarda et al. (2021) explain the relationship between Locus of Control and vaccine attitudes. According to the findings of Szczerbiska et al. (2017), there are drawbacks to the association of internal locus of control with anti-vaccine attitudes. According to the findings of this study, the PA (positive attitude) subscale of the Attitudes Towards Vaccinations Scale is positively related to the internal locus of health control. In terms of adherence to the covid protocol, the findings of this study are supported by research conducted by Joo-Hyun et al., (2011) who found that respondents who rated hand washing as important for influenza prevention also rated it highly in terms of internal locus of control. In the context of kidney disease research, locus of control has a significant relationship with adherence to therapy and medication use (Suryani et al, 2021; Ansyar et al, 2020). The Madurese have a distinct culture of obstinacy, autonomy, and religion. This personality can be seen in the community's reaction to the pandemic. On the one hand, firm belief reinforces anti-vaccine attitudes and leads to adherence to the covid protocol. However, when confronted with religious leaders, the Madurese community's harsh attitude softens. The religious nature of the Madurese community strengthens the community's behavior, including in dealing with the pandemic. Given the local wisdom that underpins every decision made by the Madurese community, a cultural approach is required to encourage people to follow the covid protocol during the pandemic. Religious leaders' involvement will be more effective in educating the public than a structural political approach, such as the government's current approach. When the government imposes restrictions on community activities and is accompanied by pandemic policies that change on a regular basis, trust in the government suffers significantly.

Conclusion

Vaccine attitudes are an important variable in explaining covid protocol compliance. The vaccine's attitude is an intermediate variable in explaining the role of the covid conspiracy belief and locus of control on covid protocol compliance. The Covid conspiracy belief cannot explain Covid protocol compliance directly, whereas the locus of control can explain Covid protocol compliance directly or indirectly through the vaccine attitude.

Recommendations

Given the strong cultural identity of the Madurese community, even when they are living abroad, the involvement of religious leaders is regarded as an important value that must exist in educating the Madurese community to comply with the covid protocol.

Scientific Ethics Declaration

The authors declare that the scientific ethical and legal responsibility of this article published in EPESS journal belongs to the authors.

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