

Research Article

## A MODERATED MEDIATION MODEL OF TRUST, SELF-CONSTRUAL AND COMPLIANCE WITH COVID-19 HEALTH REGULATIONS BASED ON COUNTRY DIFFERENCES

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*Earlier studies examined the extent to which self-construal has an impact on individual compliance with COVID-19 regulations. However, existing literature has paid little significant attention to the behavioural outcome of self-construal across countries and cultures. The aim of this study was; 1) to determine whether interdependent self-construal predicts compliance with COVID-19 public health regulation, 2) to examine if the association was mediated by individual social trust, and 3) to test whether these associations were moderated by the respondents' country of residence (US x Indonesia). General adult respondents from the US (N=231) and Indonesia (N=440) voluntarily participated to complete a survey about trust in the government, interdependent self-construal orientation and compliance toward COVID-19 public health regulation. The mediation analysis using Hayes PROCESS macro demonstrated a significant role of social trust in mediating the association between interdependent self-construal and compliance. In addition, the moderation analysis of participants' country differences (US x Indonesia) toward the link between interdependent self-construal and compliance showed a significant result. This current finding indicated that the effects of interdependent self-construal on compliance differed between the US and Indonesian groups. In contrast to those living in Indonesia, individuals residing in the US who showed greater access to inter-dependent self-construal demonstrated a greater tendency to adhere to the regulation when compared to those with a higher score in independent self-construal. Discussion and Implications of the study were discussed in the following paper.*

**Keywords:** cross-cultural, COVID-19, compliance, trust, moderated mediation

### 1. Introduction

The WHO officially lifted the emergency status of the COVID-19 pandemic on May 2023, which marks the end of the three-year COVID-19 pandemic. Accordingly, scholars believe that it is imperative to raise the insights gained from the COVID-19 pandemic to enhance our understanding of present health challenges to prepare for future possible health threats. Scholars indicated that one of the most critical aspects to successfully containing the outbreak is

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consistent public acceptance of the health advice (Eubank et al., 2020). Individual compliance with the COVID-19 public health regulation refers to an individual's willingness to follow the authority's guidelines designed to reduce the effects of a pandemic (Bargain & Aminjonov, 2020). These rules establish a foundation for the community's health behaviour during the pandemic. Unfortunately, these health regulations are frequently violated by members of the society. Previous studies have indicated that a wave of resistance to the regulation has emerged across nations around the globe (e.g., Bhanot & DeLisi, 2020; Chen, 2020). Individual compliance with laws is likely to be influenced by a variety of social and cultural factors. A study across 70 countries suggests that individual adherence to COVID-19 health protocol is much linked with how people embrace their social norms and values (Clark et al., 2020). The cultural paradigms of Collectivism and Individualism have attracted significant attention from researchers who seek to investigate and compare social-culture values that are pertinent to individual behaviour. This present study aims to explain and examine whether individual's social-cultural related factors including individual self-construal, social trust and country differences predict their adherence to COVID-19 health recommendations. Indonesia and the United States are widely regarded as exemplifying collectivistic and individualistic societies, respectively. Indonesia, as the fourth most populous country worldwide, exhibits a strong adherence to cultural norms centred upon communal harmony, which are deeply rooted in religious principles and traditional practices of the East. In the context of cultural analysis, it is noteworthy that the United States serves as a prominent representation of an individualistic society, whereby the core principles of personal freedom and materialism are fundamentally established.

**a. Self-Construal and Compliance.** In this study, we propose that the degree to which individuals describe themselves based on their social and cultural values, such as whether they are autonomous or dependent on others, predicts their perception of the regulation and how they will respond to it. Markus and Kitayama (1991) explain that people build their self-concept upon their social and cultural context. People who live in the western industrialized countries (e.g., the US) tend to develop independent self-concepts, which focus on personal over group goals and interests. On the other hand, people living in eastern developing countries (e.g., Indonesia) are more likely to have a social self-view, meaning that individual attitude, behaviour and identity are mainly determined and contingent upon others in the society. In this culture, an attempt to maintain social relationships is one of the important qualities held by the collectivist society (Cross et al., 2000). Driven by the personal construct theory (Horley, 2012), people develop mental schema/constructs about how the world works and then use these constructs to make sense of their observations and experiences. In the health context, it primarily influences a person's motivation to maintain a healthy lifestyle and adhere to a medication regimen (Istiqlal et al., 2022). These schema/constructs manifested in their attitudes and behaviour, including how they respond to health regulations and laws associated with the current pandemic situation (Paredes et al., 2022).

The earlier study offers some explanations on how people from different cultural contexts (individualist vs collectivist) respond to regulations. According to Vaidyanathan and colleagues (2013), individual adherence to rules is likely influenced by how they anticipate the outcomes of complying with them, whether they apply mainly to the individual or others as well. It means that

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how people respond to regulation has ground in a socio-cultural context perspective. Existing literature implies that Asian societies, with a strong collectivistic culture, place a high value on hierarchical ties which often be articulated symbolically in noticeable cues (facial expressions, clothing, and body language) and authority figures (Ensari & Murphy, 2003). In addition, individuals who lived with this cultural background considered society not just as a source of psychological support, but also as a means of constructing one's identity based on the degree to which they conform to social norms/rules (Jetten et al., 2002). Collectivist people often place greater emphasis on the impact of compliance on others, rather than on one's own interest, as a motivating reason for them to adhere to social norms and standards (Oeberst & Wu, 2015; Tu et al., 2021). Hofstede (1991) indicates that collectivists in nature prioritize group membership and loyalty over individual needs and interests. Social structure is characterized by a hierarchical arrangement in which the allocation of power and responsibilities is frequently based on what the society deems appropriate or not. This process results in judgments that are primarily based on external references and attention to the interdependent relation. Cross and colleagues (2003) indicate how these collectivistic people define themselves known as the interdependent self-construal.

On the contrary, individualistic culture tends to adhere to rules and standards that they perceive to be beneficial to their personal well-being, with less emphasis on the thoughts of others (Lu & Gilmour, 2004). According to Jetten and colleagues (2002), the Western culture tends to place greater values on autonomy and individuality. As a result, people who live in this culture are inclined to value personal needs, autonomy and freedom as means of achieving social order (Ratelle et al., 2013; Rato & Davey, 2012). According to the self-construal theory (Kitayama et al., 2000), people who live with such attributes tend to be more independent and focused on personal goals rather than group goals, a characteristic known as an independent self-construal. The American (US) value system places a high value on this notion of self-sufficiency, whereby individuals tend to view themselves as autonomous units. They possess their own unique identity and are not a reflection of their social, communal, or societal affiliations.

Despite a common association of the two self-construal types above with distinct cultural backgrounds (collectivistic & individualistic), it is notable that individuals may possess a self-construal that differs from their present geographical location. According to the self-construal theory, an individual's degree of independence or interdependence orientation is not solely determined by their geographical location (Kitayama et al., 2000). Various factors, including cultural heritage, parental influence, educational institutions, and professional environments, play a crucial role in shaping individuals to develop either independent or interdependent traits. Both self-construal orientations above influence how people view their lives, the norms they hold close, and their interactions with laws and regulations.

Self-construal has been shown to have an impact on individuals' daily lives, including their responses to the ongoing pandemic situation. Previous research has shown that people with Interdependent self-construal tend to be more cooperative in various social contexts (Biddlestone et al., 2020). Balcetis and colleagues (2008) found that Americans with stronger interdependent self-construal donated more to food banks than those with independent self-construal persons. The rationale behind this effect is that an interdependent self-construal has a favourable impact on individuals, leading them to exhibit greater concern for others and develop

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a stronger sense of altruism (Poulin et al., 2021). Consequently, they tend to be more attentive to their social surroundings and exhibit a stronger sense of attachment to social contexts. In the case of individuals possessing an independent self-construal, the process of decision-making primarily pertains to personal matters, often disregarding the social context and the involvement of other individuals (Kühnen et al., 2001; Markus & Kitayama, 1991). Our study would extend further evidence (Biddlestone et al., 2020) that suggests interdependence self-construal would positively act as a significant predictor of individual adherence to health protocol. The two self-construal orientations have the potential to determine our responses to regulations and our capacity to conform to expected norms and behaviours. Based on the above explanation, we therefore hypothesized that individual differences in self-construal types would be associated with COVID-19 health compliance. In particular, people with higher access to interdependent self-construal would perform higher adherence to COVID-19 public health regulations.

**b. Trust and Compliance.** In this study, we also discussed how trust in others might help individuals to comply with the government's COVID-19 regulations. Existing literature suggests that social trust is an important predictor of citizens' compliance with health regulations (Kye & Hwang, 2020). To make sure that its policies are successful, the government requires their citizens to support and adhere to health regulations on a regular basis. To illustrate this, the implementation of social restriction policy across Europe during the pandemic demonstrated that greater political trust was related to a large decline in non-essential mobility and adherence to social restriction (Bargain & Aminjonov, 2020). Similar findings by Almutairi and colleagues (2020) indicated that a high level of citizen trust leads to public compliance with the health protocols. Furthermore, a recent study by Siev and colleagues (2023) found that personal trust predicts individuals' optimism in vaccination efficacy. On the contrary, Nivette and colleagues (2021) indicated that non-compliance behaviour was strongly sourced from individuals' distrust toward authority, which resulted in low acceptance of social norms. Several studies above have examined the impact of trust on an individual's compliance with health regulations. These studies offer insights into how individuals who lack social trust may contribute to unfavourable outcomes of government health policies.

Scholars describe social trust as the individual's perception and belief regarding the competence and integrity of others (McKnight & Chervany, 2001). Social trust can be derived from a person's ideals about how they relate to others. According to (Woolcock, 2001), trust is a function of social capital and has been identified as an important component of organisational functions. Institutions' inability to maintain trust toward them has been linked to many consequences and causes of unfavourable institution downturns (Kye & Hwang, 2020). During any major emergency occurrence, it is important to establish trust among all parties involved in order to ensure the health and safety of everyone. If individuals find that their government provides accurate information, they are likely to believe that their government is trustworthy. Following that, this trustworthiness would promote the development of an emotional connection between citizens and their respective governments and could help to avert disagreements, conflicts, and conjectures in the emergency response efforts (Bargain & Aminjonov, 2020). In addition, it has been noticed by scholars that the correlation between trust and compliance would be affected by numerous factors. This idea is presented in many social studies, which

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therefore highlight the role of trust as a mediator variable in the relationship between individual commitment to regulations and values (Chang et al., 2022). In a more recent study, Jimenez and Iyer (2016) demonstrated a relationship between how people's trust in their government mediates their perception of fairness and tax compliance. In health settings, previous literature indicates trust has been considered an important factor linked between patient's perception toward physicians and their emotional connections (Schwaer et al., 2012). Prior studies have also demonstrated that an individual's cultural background plays a significant role in shaping this trustworthiness. Choi and colleagues (2022) have shown that the relationship between an individual's cultural orientation and their adherence to government regulations varies across nations. As a result, we think it is important to investigate the above link in different cultural sample groups.

**c. Self-Construal and Trust.** Following the above idea, we argue that trust and individual cultural background are interconnected. Who and how people believe in someone would depend on social and cultural factors such as shared values, communication strategies, and goal orientation (Doney et al., 1998). According to Tyler and DeGoez (1996), social trust is significantly influenced by an individual's intention degree to interact with others to meet their needs. For example, Lalot and colleagues (2022) found that social trust helps individuals with interdependent self to comply with the health regulation although they were unaware of the pandemic. In such a situation, people's compliance with public health standards emerged because of one's obedience to authority figures, instead of their concern about the potential health risks.

As previously stated, self-construal contains information about individual perceptions, experiences, and characteristics that relate to how the individuals define themselves. This sense of self is contingent upon the given social situation and context (Markus & Kitayama, 2010). One's self-construal is part of a personal cognitive process that has a significant influence on how we make a decision, including who we can trust and what indicators we use to determine whether someone is trustworthy. Scholars indicated that different self-construals contribute to an individual's social functions in different ways, including their degree of social trust (Moscardino et al., 2022). When making decisions, persons with a higher level of interdependence would give higher importance to the opinions of others. Their faith in others is more closely linked to decisions made by socially respected figures or family (Cross et al., 2003). People with higher interdependence emphasise the significance of relationships and attentiveness from one person to another, which becomes the foundation for the development of trust (Markus & Kitayama, 1991). This individual is more likely to trust others because doing so contributes to the satisfaction of their social needs. Collectivistic individuals pay great attention to social symbols and attributes to help them maintain their social relations, while on the other hand, independent person keeps their social life private and limited to close friends and family (Men et al., 2022). Individuals who display independent self are more reliant on objective information and personal benefits that may accrue from placing their trust in it. Independents experience fewer calls for emotions to connect with and hold to group beliefs (Van Baaren et al., 2003). As a result, the independent self has fewer reasons than the interdependent self to develop trust based on other norms and values. Hence, it is suggested that the association between self-construal and

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adherence could potentially be controlled by the degree of social trust that individuals have towards others and authority.

There is a very limited study to date that has explicitly explored the relationship between self-construal orientations and trust to predict individual compliance to COVID-19 health regulations based on country differences. Therefore, this study aims to test whether individual differences in self-construal and compliance with health regulations differ based on an individual's level of trust. We proposed a moderated mediation model by hypothesising that Individual trust determines the extent to which interdependent/independent self-construal influences one's compliance with the COVID-19 health protocols. Drawing from the explanation above, we believe that interdependent individuals are more likely to possess a higher level of confidence in societal norms and respected authoritative figures, which consequently impacts their adherence to compliance regulations. In a society that values individualism, those who possess independent traits are more inclined to comply with the rules based on their self-interest motives.

### **1.1. Present study and hypotheses**

As social and cultural context played an important role in the link between self-construal and compliance, it would be important to predict how social situation variation, such as social trust, mediated this link. Self-construal is part of cultural expression and serves as a function of an individual's expressions of values derived from their social ecology, which is closely linked to individual demographic background (Chiu et al., 2010). Differences in self-construal may be important to predict whether people will trust their government and further adhere to public health recommendations (Nisa et al., 2021). However, in-depth analysis involving country-level analysis, measured by an individual's place of living, might moderate these variables' connections.

Bargain and Aminjonov's (2020) study put a spotlight on persistent differences in people's attitudes based on their demographical context. They suggest that policymakers should take into account local or broad regional level data to understand differences in citizen level of compliance measures. Although stated earlier that those with greater access to interdependent self-construal are more likely to comply with the regulation based on their social norms (e.g. Tu et al., 2021), in certain cases, inconsistency in rule-setting by trusted authorities can lead to a tendency by the citizens to disregard regulations. Wong and Jensen's (2020) study among Singaporeans toward compliance during the pandemic indicated that a high level of trust actually leads to a low level of perceived risk which in turn results in a low level of public health compliance. This study demonstrates that trust in authority was associated with a belief that handling the pandemic was the job of the government rather than personal responsibility. In other words, instead of increasing compliance, strong public trust turn leads to public apathy among people with higher access to interdependent self-construal (e.g. Singaporeans). One point encouraging the interest of researchers relates to how people's country of residence modifies the way in which self-construal is associated with trust and compliance. Thus, we proposed that both associations between self-construal and compliance and trust are contingent upon the participant's country of living (Indonesia vs US).

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In this study, we investigated how individual self-construal predicted public health adherence mediated by an individual's social trust. Further, we also aim to examine whether these direct and indirect effects of self-construal are moderated by individual country differences (US vs Indonesia). The following hypotheses are proposed; H1: Interdependent self-construal would positively predict individual adherence to COVID-19 health regulation; H2: Social trust would mediate the relationship between interdependent self-construal and adherence to COVID-19 health regulation; H3: Different individual country residence (US vs Indonesia) would moderate the mediation relationship between interdependent self-construal and adherence to COVID-19.

## 2. Method

### 2.1. *Participants*

Despite a high number of confirmed cases in the US, more people are reportedly hesitant or refuse to comply with the public health order regarding COVID-19. The emergence of protests refusing to wear masks and applying social distancing had emerged around the world. A recent survey reported that most Americans who refuse to follow healthcare protocols think the regulation would affect them financially (Jean-Baptiste et al., 2020). Another reason was also associated with their lack of trust in the government (Wintermeyer, 2020). While in Indonesia, amid an intensive public health push, Fauk et al (2022) suggest that many people disregard the public health recommendations, such as wearing masks and keeping social distance. Indonesia's health authorities revealed that it was only 13 weeks for Indonesia to reach its peak of COVID cases from its lowest point, equivalent to a 283% increase in cases during the middle of 2021. This increase was due to the high mobility of people during the Eid holidays in June 2021. The data showed that 40% of the total Jakarta population at that time had ignored the basic health precautions (keep distancing, washing hands and wearing masks) during the COVID-19 second wave in Indonesia (Pemprov DKI Jakarta, 2021).

As a result, the inclusion criteria for our participants were both male and female adults (above 18 years old) who lived either in the US or Indonesia. Ethical clearances were sought from the University of Minnesota, Duluth, and Universitas Negeri Jakarta prior to data collection (January – February 2021). Ethical and permission letter for conducting the study in Indonesia was issued by the Dean of the Faculty of Psychology, Universitas Negeri Jakarta (Number: 22/UN.39.5/FPPsi/LL/I/2022).

### 2.2. *Measures*

All original scales were available in English, and they were back-translated into Indonesian for the Indonesian samples. All information was treated as confidential, where no personal information was collected (anonymized) (e.g.: name & address). Information requests in door prizes were collected separately.

**Demographic and COVID-19 health regulation compliance.** A set of surveys containing informed consent, demographic data and COVID-19 regulation compliance was prepared. Participants

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completed a demographic survey inquiring about their age, marital status, gender, and income. We asked participants about their tendency to comply with the COVID-19 health regulations using a 5-point Likert style ranging from 1 (Strongly disagree) to 5 (Strongly agree). The scale contains 10 items asking if participants agree to comply with various COVID-19 health protocols, e.g., wearing a mask, social distancing, and keeping social distance.

**Self-Construal.** Self-construal is used to measure independent-interdependent self-orientation variance between two population samples (U.S. and Indonesia). Self-construal was measured using the Adult Sources of Self-Esteem Inventory (ASSEI) scale. The Indonesian version of the ASSEI scale has been adapted by the third author (Pekerti & Arli, 2017) from the original English version of ASSEI (Elovson & Fleming, 1989). A short version of ASSEI contains 10 items that assess the salience of both independent and inter-dependent self-construal orientations (5 items each). The scale rates on a 0 to 10 scale of importance of a respondent's self-esteem (e.g., "Looks and physical attractiveness" and "Having influence over the events or people in your life"). The Indonesian version of short ASSEI has sound psychometric properties (Cronbach's alpha for both factors were .80 and .86) and met the construct validity test (Minimum factor loading .60) (Pekerti & Kwantes, 2011). Both construal types were indexed using the sum of their corresponding items. Following prior practice (Hannover et al., 2006) we created an interdependence-independence difference index (IIDDI) to assess the accessibility of self-construal by z-standardizing each of the two construals and then subtracting each participant's independence score from his or her interdependence score. Thus, higher scores indicate a more accessible interdependent self-construal. Both the independent and interdependent sub-scales were found to be reliable, with Cronbach's alphas of .70 and .72, respectively, and inter-item correlation coefficients ranging from .37 to .55 and .43 to .56, showing that all items in both sub-scales are valid.

**Social Trust.** Social trust was measured using the General Trust Scale (GTS) developed by Han et al (2021) consisting of three simple items asking citizens' trust in their government's effort to manage the COVID-19 pandemic (Item 1: In general, how much do you trust the government of your country to take the right measures to deal with the coronavirus pandemic?; 2) I think that this country is able to fight the coronavirus; 3) I think that this country is able to fight the economic and financial consequences of coronavirus). All items were rated on a 5-point Likert scale, ranging from 0 (not trust at all) to 5 (trust completely). It has been translated and adapted into the Indonesian language and cultural context. The Indonesian version of the GTS was found to be reliable ( $\alpha = .84$ ) and Inter-item correlation values range between 0.64 to 0.75 indicating all items are valid.

### **2.3. Data analysis**

We analysed the data using SPSS Statistics version 28.00 (2022). First, the normality assumption test was performed to check the skewness and kurtosis values. Pearson's correlation analysis was sought to test the overall relationship among the variables studied. We performed the Indirect effect test using the regression analysis approach of the Hayes model test to assess



the mediating effect of social trust on the relationship between self-construal and compliance. The moderated mediation hypothesis was tested using the bootstrapping approach to estimate the conditional indirect effects of self-construal on compliance through social trust differentiated by the participant's country of origin, as well as a direct link between social trust and compliance moderated by country differences. The PROCESS macro, model 8 (Preacher & Hayes, 2008) with bias-corrected 95% CI was used to test the significance of the mediated effects of trust that moderated by respondent's country origins (US vs Indonesia). Significance effects are evident when there is no zero within the confidence intervals results (Hayes, 2015).

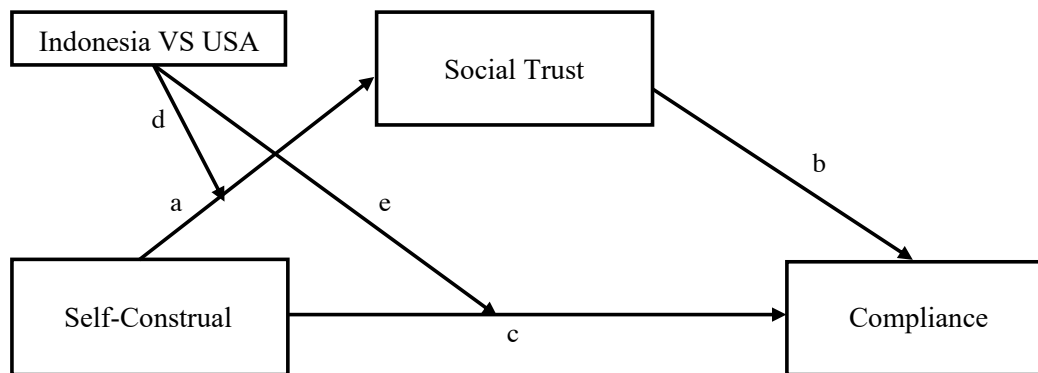


Figure 1. The moderated mediation model of the study (Hayes model 8)

### 3. Result

#### 3.1. Descriptive results

The data were gathered from a convenience sample of 617 adults living in the US and Indonesia during March – September 2021. Of these total participants, 231 (37,43%) were living in the US and 440 (65.57%) lived in Indonesia. In Indonesia, participants were recruited from the general adult population (190 male, 249 female and 1 identified as non-binary) using an online survey method (google form). Most of them (53.6%) were married (236) and came from 18 – 24 years old (137) and 35 – 44 years old (137) sample groups. While the US sample was recruited using the Amazon M-Turk platform (160 male and 71 female). Similar to the Indonesian sample, more than half of the samples were married (53.7%) and came from the 25 – 34 years old group (117) and 35 – 44 years old group (65).

Pearson correlation for all variables is provided in Table 1. Using absolute values of skewness, we found that all variables' skewness values fell below 2, ranging from 0.2 to -1.02 for the Indonesian sample and from -.51 to -1.02 for the US sample. For both Indonesian and US samples, the kurtosis values were also less than 2, ranging from -.60 in the lower range and -.58 in the higher range. This suggests that the two populations satisfy the normality assumption. Pearson correlation analysis confirmed that COVID-19 health regulation compliance was strongly associated with participant trust ( $r = .17, p < .00$ ), country differences ( $r = .20, p < .00$ ), gender ( $r = .20, p < .00$ ), and age group ( $r = .21, p < .00$ ), while it is moderately associated with

interdependent self-construal ( $r = .08, p < .00$ ) and negatively related to marital status ( $r = -.09, p < .00$ ). Additionally, marital status ( $r = .12, p < .00$ ), age ( $r = .08, p < .00$ ), and the interdependent self-construal ( $r = .10, p < .00$ ) were all strongly associated to trust.

**Table 1. Means, standard deviations, and Pearson correlations of variables**

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1 Country	-	.47	---						
2 Gender (male)	-	.50	.24**	---					
3 Age group	-	1.26	-.07	-.05	---				
4 Marital status	-	1.94	.00	.07*	.52**	---			
5 Interdependent (SC)	18.23	4.72	.13**	.07*	.00	-.09*	---		
6 Trust	10.27	6.43	-.01	-.01	.08*	-.12*	.10*	---	
7 Compliance	10.27	3.08	.20**	.21**	.21**	-.09*	.08*	.17**	---

As can be seen from Table 1, although the  $p$  values of the association between variables were significant, the correlation coefficients were relatively small. As a result, the independent variable and moderators have a high degree of relative independence, which supports subsequent moderation analysis.

#### *Direct effects*

As indicated by Table 2, the direct effect of interdependent self-construal (vs independent self-construal) on public health compliance was confirmed ( $\beta = .228; p = .006$ ) as the CI excludes zero [.064; .391]. Hypothesis 1 is therefore validated. The result indicated that people with higher access to interdependent self-construal were likely to comply with public health protocols.

#### *Indirect effects*

Following the significant relationship between interdependent (vs independent) self-construal on compliance, we tested whether there was a mediation effect of interdependent (vs independent) self-construal on compliance when the individual sense of social trust is considered. Our mediation test using bootstrapping ( $N = 5000$ ) demonstrated that social trust had a statistically significant ( $\beta = -.29; p = .003$ ) mediating effect on the relationship between interdependent (vs independent) self-construal and compliance (95% CI = [-.495; -.098]) (see Table 2). This finding supports the hypothesis 2 which indicated that social trust would mediate the association between interdependent self-construal (vs independent) and individual compliance towards COVID-19 health regulation. Furthermore, to test our third hypothesis, the moderated mediation model hypothesis was tested using the PROCESS Hayes macro model 8 (Hayes, 2013). We examine if the respondent's country differences (US vs Indonesia) moderate the indirect effect of interdependent self-construal on compliance through social trust. Our analysis found that the index of moderated mediation was .040 (95% CI = -.002: .093) (see Table 2), which means that country differences did not moderate the indirect effect between interdependence and compliance involving an individual's social trust. As such, our hypothesis 3 was not supported.

Apart from the non-significant results of our moderated mediation analysis, we ran additional simple moderation analysis using PROCESS Hayes macro model 1 to check if country differences moderate the direct effect between interdependent self-construal and compliance (see Table 3).

**Table 2. Hypothesis results table**

Hypotheses	Estimate ( $\beta$ )	SE	<i>p</i> -value	Bootstrap CI <sub>95</sub>	Conclusions
Interdependent self-construal → Compliance	.228	.83	.006	.064 and .391	Hypothesis accepted
Social trust → Interdependent self-construal - Compliance	-.296	.10	.003	-.495 and -.098	Hypothesis accepted
Country differences → Interdependent self-construal → Compliance	Index moderated mediation = .040	-	-	-.002 and .093	Hypothesis not accepted

**Table 3. Moderated results table**

Country differences as moderator	Direct effect ( $\beta$ )	SE	<i>p</i> -value	Bootstrap CI <sub>95</sub>	Conclusions
Country differences (US X Indonesia) → Interdependent self-construal - compliance	2.96	.54	.000	1.887 and 4.034	Country differences DID moderate self-construal → compliance
Country differences (US X Indonesia) → Interdependent self-construal – social trust	-.24	.255	.34	-.742 and .208	Country differences DID NOT moderate self-construal → social trust

The analysis demonstrated significant results of the moderation effect of country differences toward interdependent self-construal and compliance ( $p = .000$ ; CI 95% [1.887; 4.034]. Interestingly, this moderated effect was found to be significant only for those who lived in the US ( $p = .007$ ; CI 95% [.047; .315], but not in the Indonesian sample ( $p = .225$ ; CI 95% [-.197; .046]. It means that the way interdependent self-construal affects compliance was different between the US and Indonesian samples. For those living in the US, a person with higher access to interdependent (low independent) self-construal is likely to exhibit higher compliance behaviour toward the COVID-19 health regulation compared to those who had higher scores in independent self-construal. In contrast, for those who live in Indonesia, differences in self-construal orientation do not significantly affect their adherence to the COVID-19 public health protocol.

## 4. Discussion and conclusion

### 4.1. Discussion

Empirical evidence explaining why people comply/do not comply with the COVID-19 health regulations is now widely available, however, information explaining whether this social phenomenon varied in country-level analysis is lacking (Nisa et al., 2021). This study would like to test the idea that the extent to which one views themselves as connected (interdependent) or separated from others (independent) would affect their likelihood to obey or disobey the COVID-19 public health protocols. This study is also interested if this direct link was mediated by the individual social trust towards the authority in managing the pandemic. Furthermore, most of

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the studies investigating the above variables have been exclusively studied in Western countries, but little is known about whether these relationships apply in Eastern nations. To address this gap, we conducted a moderated mediation analysis aiming to examine if the direct link between one's self-construal and compliance as well as the mediation effect by social trust moderated by the respondent's country residences.

Our findings suggest that individuals with higher levels of interdependence self-construal were likely to be associated with higher adherence to COVID-19 health regulation. This finding is consistent with prior studies which demonstrate a significant correlation between interdependent self-construal and compliance with regulation/law (e.g., Tu et al., 2021; Vaidyanathan et al., 2013). Markus and Kitayama (1991) implied that self-construal helped people to define whether they are independently or interdependently linked with others. This concept influenced the way individuals perceived the regulation and whether they would comply or not (Vaidyanathan et al., 2013). People who have a strong sense of social awareness see themselves as connected with others, as a result, they demand social approval of others which leads to agreement with the social norms (Oeberst & Wu, 2015).

Furthermore, according to prior research, the relationship between self-construal and compliance is contingent upon individual social trust toward the authority. Our findings supported the idea that trust provides the mediation effect between self-construal and compliance. This finding could be explained through Nivette and colleagues' (2021) study, which demonstrates that individual compliance was dependent on one's level of social trust. An individual sense of compliance might not only arise because of variance in how individuals define themselves but also to whom they trust and believe. In many cases, compliance arises not solely because people care about the rules, but it often occurs because of someone they really trust (Lalot et al., 2022). Our study extended prior knowledge by showing that trust is not only directly associated with individual compliance, as evidenced previously by Kye and Hwang (2020), but it also served as a mediation variable which is linked between self-construal and compliance. As our moderated mediation model was not supported by the analysis, we did not discuss such results in detail.

However, the current additional moderation analysis showed that country differences are indeed associated with how self-construal and compliance are associated. This finding extends Nisa and colleagues' (2021) study suggesting further analysis on the role of country-level determinants and cultural characteristics on people's compliance toward COVID-19 health regulation. The present study demonstrated that the moderation effect was significant only for the US sample, which suggests that in the Indonesian sample, whether people are identified as independent or interdependent did not necessarily influence their compliance with health protocols. We assumed that the way self-construal is perceived was different between US and Indonesian samples due to their social and cultural differences. As a collectivist society, Indonesia tends to be dominated by self-interdependent individuals, and when the pandemic hit, these people faced systematic changes in the way they interacted with each other. Such conditions limit their chances to gather and meet with one another. As a result, whenever there is an opportunity for them to get together, such as during the seasonal holidays and celebrations, which are likely to cause crowds and massive mobility, recommended public health regulation is likely to be disregarded. On the other hand, favourable behaviour outcomes toward public health

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protocols were demonstrated by the US respondents with more access to interdependent self-construal. This finding in the US was parallel with a previous study showing individual's feeling of being bound by others helps them to be even more concerned with the law/regulations (Granot et al., 2018). Researchers often point to the fact that interdependent people pay attention to their social environment and integrate their identities into them (Nisa et al., 2021). Individuals with a more accessible independent self-construal, on the other hand, would treat decision-making as a private issue apart from others and their social surroundings. This means that those with a more accessible interdependent self-construal see social situations as communal issues, whereas people with an accessible independent self-construal interpret social situations as individual concerns.

#### **4.2. Limitations**

Important to note that this study may cast a caution on the universality of the self-construal concept and its relationship to compliance behaviour. When predicting one's adherence based on an individual's self-concept orientation, it is important to consider the individual's social, cultural, and demographic context. Social attachment may not necessarily result in expected behaviour in a particular society. People with a strong interdependent self-concept who live in a strong collectivistic society, such as Indonesia, may develop a subjective collective behaviour leading to a refusal of information that contradicts with their aspirations to be always close to each other. COVID-19 health regulation requires people to keep social distance, limit mobility and stay at home. This regulation might contradict with the actual social norms applied to the respective society, which in turn potentially evokes social rejection. In addition, we are well aware that unequal sample sizes between two groups may pose generalisation concerns regarding the results; thus, additional research with a larger sample size for both groups is important.

#### **4.3. Conclusions**

The present study seeks to answer whether the association between individual self-construal (interdependent vs independent) and compliance with community health standards was mediated by social trust in a person's country-level differences. Our study's findings suggest that there appears an important connection between what individuals consider as important to their self-concept together with level of social trust towards their level of compliance with health protocol. By examining the participant's view about their self-concept, this current study enriches knowledge about how self-construal is linked to compliance at the community level, which is, based on previous findings, inundated with the level of social trust and demographic variability. This study denotes multiple fronts in the field of community psychology. First, it serves as empirical evidence of the important role of an individual's self-construal and its alignment with their community values on personal adherence to health regulations. Second, the self-construal effect on regulation compliance can still substantially vary at the cross-country level. The present finding reveals that individuals who exhibit interdependence in the United States were more likely to demonstrate compliance with regulations, in contrast to individuals who exhibit similar characteristics in Indonesia. Considering that the effect of demographic differences on

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compliance varies between respondents in both countries, we assumed the proposed hypothesis model would be more relevant to be applied to people living in a country with a well-developed sense of independence and interdependent cultural identity. Finally, these findings are important for policymakers and health practitioners as they potentially help them understand how they should deliver the health messages and effectively apply them at the community level. From a practical standpoint, this study's findings could be extended into an experimental study to examine whether individuals with a primed interdependent self are more likely to be compatible with health messages that emphasise altruistic motivation, whereas individuals with a lower sense of others are more likely to construct health recommendations as part of their own concerns and interests.

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