RESEARCH ARTICLE

Roles of *muthmainnah* personality and alexithymia in dealing with mental health problems among university students

Dwi Yan Nugraha[1], Fuad Nashori[2], Musa Muwaga[3]

[1] Department of Professional Psychology, Universitas Islam Indonesia, Special Region of Yogyakarta, Indonesia
[2] Department of Psychology, Universitas Islam Indonesia, Special Region of Yogyakarta, Indonesia
[3] Department of Psychology, School of Arts and Social Sciences, Kampala University, Kampala, Uganda

Corresponding Author:
Fuad Nashori (email: fuadnashori@uii.ac.id)

ABSTRACT

This study inquires the roles of *muthmainnah* personality and alexithymia in mediating the COVID-19 exposure to mental health problems in Indonesian university students quarantined at home during COVID-19. A total of 276 students completed the following scales: Islamic Personality Scale, Toronto Alexithymia-20 Scale, and Patient Health Questionnaire-9. Then, an examination on some possible relationships of obtained data was performed by structural equation modeling and mediation analysis. This study revealed that students with *muthmainnah* personality had lower levels of depression. Furthermore, the *muthmainnah* personality could mediate COVID-19 exposure to depression experienced by the students. In addition, this study revealed that students with probable depression had more severe alexithymia, such as difficulty identifying feelings, difficulty describing feelings, and externally oriented thinking. The alexithymia could mediate COVID-19 exposure to depression. These results implied that religious aspects could be utilized as strategies to determine and overcome the students' emotions and could significantly avoid or moderate mental health problems in the case of depression associated with COVID-19.

INTRODUCTION

The COVID-19 has become an ongoing crisis for each individual and society. Its spread has affected psychological health, for example, post-traumatic stress disorder (PTSD) and depression in threatening and deadly pandemic situations (Bibi et al., 2021). Some recent studies reported that mental problems, especially PTSD, anxiety, and depression, have widely occurred among university students, healthcare workers and ordinary people (Tang et al., 2020) throughout COVID-19 occurrence. Several previous studies mentioned that individuals with psychological problems in pandemic situations would become a moral burden and pressure for families and communities in their environment (Zhou & Wu, 2019) because they were trying hard to rebuild their lives. However, mechanisms underlying

transitions from threatening pandemic situations to mental health problems (depression) are rather unclear, and the impacts of COVID-19 on individual psychological aspects are poorly understood.

This study involves two main aspects that explain the transitions. The first is personality. Since an individual's personality can influence mental health problems. Personality becomes one of the important factors associated with psychological issues (Gohm & Clore, 2002). A study by Shaheen et al. (2014) indicated a significant negative relationship between extraversion, openness, friendliness, awareness, and psychological distress. Furthermore, the HEXACO personality model, particularly honesty-humility, can be an influential factor associated with interpersonal relationships (Hilbig et al., 2013) and has a relationship with happiness (Aghababaei et al., 2014), so it could overcome psychological problems that cause mental health problems. Considering that previous studies only confirmed personality types based on perspectives of Western psychology, this study focuses on personality types referring to perspectives of Islamic psychology, especially *muthmainnah* personality.

In addition, the *muthmainnah* personality is calm, increasing commendable behaviors and reducing bad behaviors. It encourages positive and commendable behaviors, such as honesty and humility (Mujib, 2017). Although conceptually, the *muthmainnah* personality and the HEXACO (Honesty-Humility) personality model have similarities, the *muthmainnah* personality is more concrete and complex in explaining commendable behavior (religiosity). It tends to lead to a direct relationship with God (spirituality). Individuals with commendable behaviors tend to be more mature in religiosity and have a strong correlation with one's personality (Aghababaei et al., 2014). One study mentioned that spiritual or religious personality values could reduce levels of depression in patients with deadly diseases and could improve their lives (Basri et al., 2015). Individuals with a *muthmainnah* personality will always feel calm even though they experience a fatal catastrophe such as COVID-19, and they also believe that God will help them (Hasanah, 2015). However, empirical studies on relationships between the *muthmainnah* personality and mental health problems need to be studied further.

In addition, the second aspect in explaining the mental health problems of individuals with COVID-19 is alexithymia, which is defined as the inability of individuals to identify emotions, expressions of social relationships and interpersonal interactions (Taylor et al., 1997) and a way of thinking that focuses on concrete stimuli (Parker et al., 1998). Three factors can be utilized to explain alexithymia: externally oriented thinking (EOT), difficulty describing feelings (DDF), and difficulty identifying feelings (DIF).

According to previous studies, alexithymia, especially DDF, has a significant association with depression (Leweke et al., 2012) or with DIF and EOT (Luca et al., 2013). University students are the population that is most susceptible to alexithymia. However, studies focusing on alexithymia and mental health problems in university students with COVID-19 quarantined at home are insufficient. Furthermore, other studies related to relation with mental health problems and alexithymia (DIF, DDF, and EOT) showed inconsistent results. Some studies have reported that DIF has a strong relation with psychological state.

On the other hand, DDF and EOT have little effect on psychopathology (Conrad et al., 2009). These previous studies imply that alexithymia may potentially contribute to mental health problems. Therefore, further studies are suggested to inquire whether particular features of alexithymia can examine the association between exposure to threatening situations and depression.

During COVID-19, most Indonesians, including university students, were encouraged to do home quarantine to inhibit its spread. This policy is issued to provide a reference for psychological services on campus. However, those who are quarantined at home are more prone to experience depression

(Nugraha et al., 2021). Therefore, incidences of mental health problems are highly recommended to be observed, both from perspectives of Islamic psychology (*muthmainnah* personality) and alexithymia disorder (psychopathological perspective in Western psychology).

Previous research has rarely mentioned *muthmainnah* personality and alexithymia to explain mental health issues in students who were placed under home quarantine after being exposed to COVID-19. Thus, using structural equation modeling, this study aims to investigate how alexithymia and *muthmainnah* personality mediate the relationship between COVID-19 exposure and mental health issues.

METHOD

The current study collected the data through a web-based survey involving 276 undergraduate students from five universities across Indonesia who had been diagnosed with COVID-19 and quarantined at home for 14 days (Figure 1). The survey was in a G-Form link accessed by the voluntary participants. Detailed information related to this study was explained to all participants on the first page of the G-Form. They were only asked to fill in their identity by initials. The procedures can be seen in Figure 1.
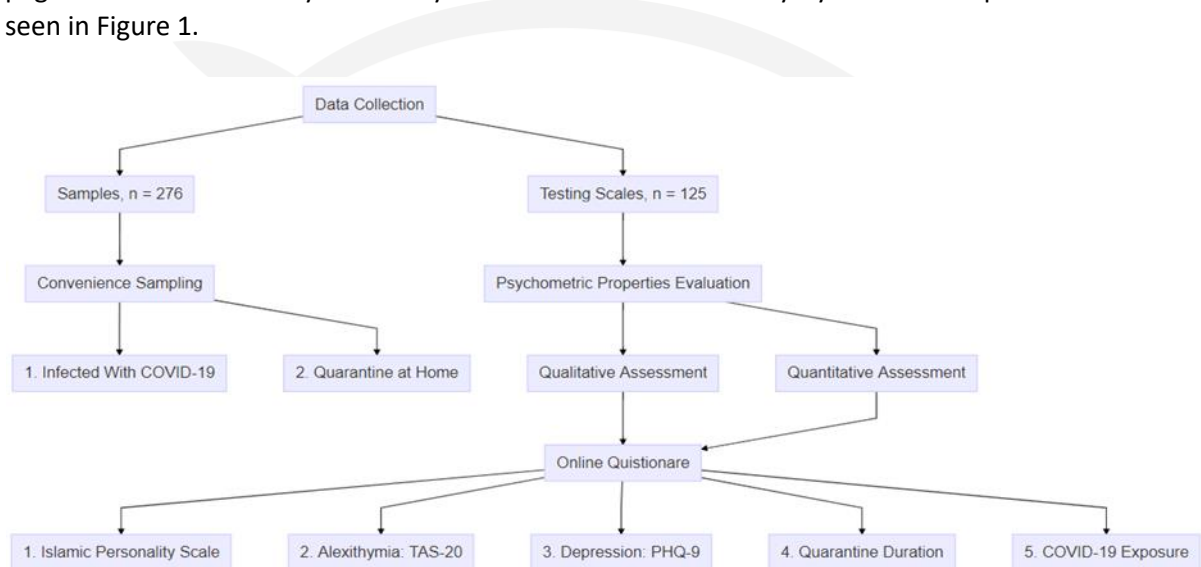

Figure 1. Research procedures

The Islamic Personality Scale (IPS). The instrument used to measure the *muthmainnah* personality experienced by the students was the Islamic Personality Scale (IPS), consisting of 62 statement items (Farmawati & Hidayati, 2018). However, this study only used 21 statement items focusing on the *muthmainnah* personality. Those items were rated on a Likert-type scale (1-5/strongly disagree to strongly agree), with a Cronbach's alpha score of 0.941.

The instrument used to measure the alexithymia experienced by the students was the Toronto Alexithymia-20 Scale (TAS-20), consisting of 20 statement items (Bagby et al., 1994). This scale measured the DIF, DDF and EOT. Those items were scored based on a Likert-type scale (1-5/strongly disagree to strongly agree), with an omega reliability value of 0.838 for the total scale, 0.832 for the DIF subscale, 0.856 for the DDF subscale, and 0.881 for the EOT subscale.

The instrument used to measure the depression levels of the students was the Patient Health Questionnaire-9 (PHQ-9) scale consisting of 9 statement items (Kroenke et al., 2001). Those items were rated on a Likert-type scale (0-3/ never to almost every day). The PHQ-9 total score ranged from 0 to 27; 10 possibly indicated depression (Manea et al., 2012), with a Cronbach's alpha value of 0.913.

The Quarantine duration was measured by a question: "How long have you been quarantined at home since you were infected with COVID-19?" Their answers were grouped into five categories: four weeks, two to four weeks, one to two weeks, under one week, and none. The COVID-19 exposure was measured using a modified disaster exposure scale referring to the DSM-IV criteria (Tang et al., 2020). This scale has nine question items with a dummy answer model (0 = No, and 1 = Yes). The total score was calculated by adding answers to each question to determine the exposure levels, with a Cronbach's alpha value of 0.985.

Differences in mean scores of the *muthmainnah* personality survey, total alexithymia, and the three alexithymia subscales were compared between the students who reported and did not report possible depression. An independent-sample t-test and Cohen's were applied to determine their differences and significance. After arranging age and sex, stepwise linear regression was performed to scrutinize the effects of the *muthmainnah* personality and the alexithymia subscales on depression. In addition, this study classified the exposure into nine types (Figure 2), referring to the nine-question items. Using a forest plot technique, this aimed to determine the overall impact of each exposure type that primarily contributed to depression. All obtained data were statistically analyzed by using JASP version 0.16.1.0. The second-order factor structure equation modeling analysis seeks to determine effects between the variables and to confirm the theoretical model based on empirical data that was built by examining several indexes of goodness-of-fit, such as Chi-Square or p-value > 0.05, CFI, and TLI > 0.90, RMSEA < 0.08. A mediation analysis was also conducted to test whether *muthmainnah* personality and alexithymia were able to mediate exposure to COVID-19 to depression by using Mplus version 8.00.

RESULT

Three hundred undergraduate students responded to the survey; however, 24 were excluded from this study because responses were illogical and ambiguous. As a result, the sample of this study comprised 276 students aged 18-23 (M = 20.865; SD = 1.241 years), consisting of 134 males and 142 females. In detail, 276 students (100%) reported that they maintain home quarantine for different periods: for less than 1 week (n = 14; 5.1%), 1-2 weeks (n = 29; 10.5%), 2-4 weeks (n = 34; 12.3%) and more than 4 weeks (n = 199; 72.1%).

Students with scores of > 10 according to the PHQ-9 scale pointed out depression (n = 175; 63.406%). Differences in *muthmainnah* personality and alexithymia between students with depression and those without depression are demonstrated in Table 1. Students with depression risks had significantly increased levels of total alexithymia and alexithymia subscales, twice higher than those who did not experience depression. In addition, students with *muthmainnah* personality tended to have no mental health problems (M = 22.436; SD = 8.490).

Table 1. Differences in *muthmainnah* personality and alexithymia between students with depression and students without depression

Variable	With Depression (n = 175) (M ± SD)	Without Depression (n = 101) (M ± SD)	t	95% CI for Mean Difference		d
				Lower	Upper	
Muthmainnah personality	1.686 ± 7.399	22.436 ± 8.490	-4.864***	-6.672	-2.827	-0.608
Alexithymia	29.103 ± 10.624	18.673 ± 11.913	7.511***	7.696	13.163	0.939
DIF	9.366 ± 4.460	6.327 ± 4.343	5.505***	1.952	4.126	0.688
DDF	9.749 ± 3.304	6.149 ± 3.986	8.075***	2.722	4.478	1.009
EOT	9.989 ± 3.559	6.198 ± 3.990	8.150***	2.875	4.706	1.018

Note: *p < 0.05, **p < 0.01, ***p < 0.001; DIF = Difficulty identifying feelings, DDF = Difficulty describing feelings, EOT = Externally oriented thinking.

The Pearson correlation coefficient (Table 2) examined relationships between variables in this study. Its results indicated a significant and positive correlation between alexithymia and mental health problems ($r = 0.429$; $p < 0.001$). A significant and positive weak correlation occurred in the DIF and depression ($r = 0.342$; $p < 0.001$). Then, a significant and positive moderate correlation occurred between the DDF and depression ($r = 0.442$; $p < 0.001$) and between the EOT and depression ($r = 0.456$; $p < 0.001$). Meanwhile, *muthmainnah's* personality had a significant and negative correlation to depression ($r = -0.236$; $p < 0.001$). Symptoms of depression in the students would not appear and increase if they tended to have a *muthmainnah* personality.

Table 2. Correlation between *muthmainnah* personality, alexithymia, DIF, DDF, EOT, exposure and depression symptoms in the students

Variable	1	2	3	4	5	6	7
1. *Muthmainnah* personality	-						
2. Alexithymia	-0.307***	-					
3. DIF	-0.263***	0.961***	-				
4. DDF	-0.315***	0.959***	0.894***	-			
5. EOT	-0.306***	0.945***	0.850***	0.861***	-		
6. Exposure	0.150*	0.143*	0.111	0.104	0.196**	-	
7. Depression	-0.236***	0.429***	0.342***	0.442***	0.456***	0.179**	-
Mean	19.423	25.286	8.253	8.431	8.601	0.228	13.460
SD	8.130	12.18022	4.64689	3.96241	4.14122	1.01734	4.82213
Maximum	45	45	15	15	15	7	25
Minimum	9	9	3	3	3	0	4
Reliability	0.941	0.838	0.832	0.856	0.881	0.913	0.985

Note: *p < 0.05, **p < 0.01, ***p < 0.001; DIF = Difficulty identifying feelings, DDF = Difficulty describing feelings, EOT = Externally oriented thinking.

Pearson correlation analysis (Table 2) indicated that the students exposed to COVID-19 tended to experience depression ($r = 0.179$; $p < 0.01$). Then, the absence of white dots and the gathering of black dots (Figure 2, the biased data) implied that the biased data in this measurement tended to be low (0.06 or 6%), with an effect of the exposure on the total depression of 12% ($\beta = 0.12$; 95% $CI = 0.06 – 0.17$). In addition, students exposed to stressful messages of social media (Figure 2) tended to have more severe depression with an effect of 20% ($\beta = 0.20$; 95% $CI = 0.08 – 0.33$).
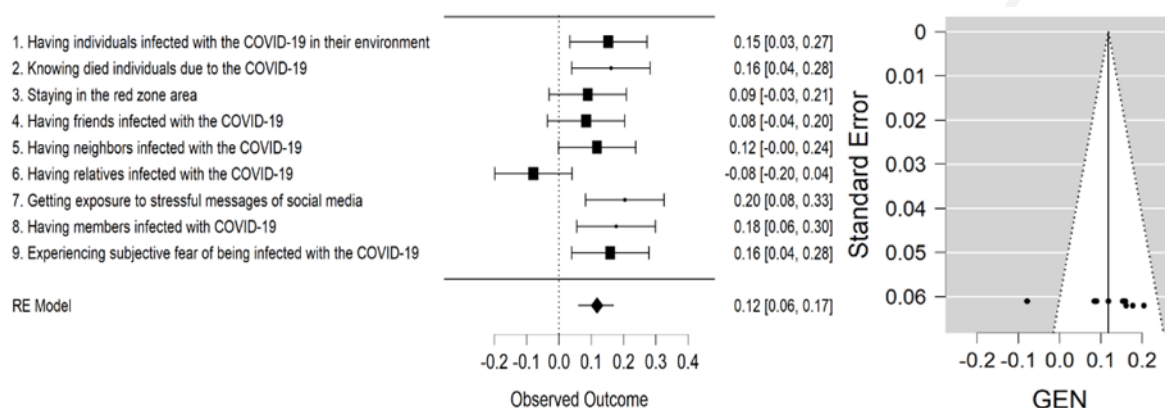

Figure 2. Forest plot of COVID-19 exposure on depression

Stepwise Regression for Depression Symptoms in *Muthmainnah* Personality and Alexithymia Subscales with Aage and Gender Arrangement

To examine alexithymia subscales that had an independent predictor to predict mental health problems (depression), a stepwise linear regression analysis was performed by using the alexithymia subscales (Table 3) and *muthmainnah* personality. The DIF, DDF and EOT were independently

associated with depression symptoms (ΔR2 = 0.247), as found in the fifth step of the test. DIF (β = 0.464; $p < 0.001$), DDF (β = 0.458; $p < 0.001$) and EOT (β = 0.458; $p < 0.001$) could explain some variants of depression symptoms. In addition, *muthmainnah* personality was also able to explain mental health problems experienced by the students (ΔR2 = 0.065; = -0.239; $p < 0.001$), as found in the second step of the test.

Table 3. Stepwise regression based on sex, age, *muthmainnah* personality, DIF, DDF, and EOT in the students treated with the hypnotherapy method is as follows:

Variable	Step 1: ΔR^2 = 0.011	Step 2: ΔR^2 = 0,065	Step 3: ΔR^2 = 0,130	Step 4: ΔR^2 = 0,211	Step 5: ΔR^2 = 0,247
	Beta[a]	Beta[a]	Beta[a]	Beta[a]	Beta[a]
Sex	-0,063	-0,061	-0,048	-0,050	-0,061
Age	-0,119*	-0,125*	-0,017	-0,067	-0,052
Muthmainnah personality		-0,239***	-0,160**	-0,109	-0,089
DIF			0,291***	-0,308*	0,464***
DDF				0,664***	0,458***
EOT					0,412***

Note: *$p < 0,05$, **$p < 0,01$, ***$p < 0,001$; a = Standardized estimate, AR2 = Adjusted R2, DIF = Difficulty identifying feelings, DDF = Difficulty describing feelings, EOT = Externally oriented thinking.

The SEM was applied to explain the transition processes of how *muthmainnah* personality and alexithymia explain mental health problems (Figure 3). The theoretical model was supported by empirical data (*CFI* = 0.948; *TLI* = 0.938; *RMSEA* = 0.067) and a significant model (*x2* = 704.184; *df* = 312; $p < 0.001$) indicating a model fit index, which implied that the proposed model was acceptable although the *p*-value < 0.05. This study did not fully involve the *p*-value parameter in determining the fit model. The more samples are used, the closer the p-value is to zero. Based on this, this study considered other parameters indicating good quality or having met the criteria.
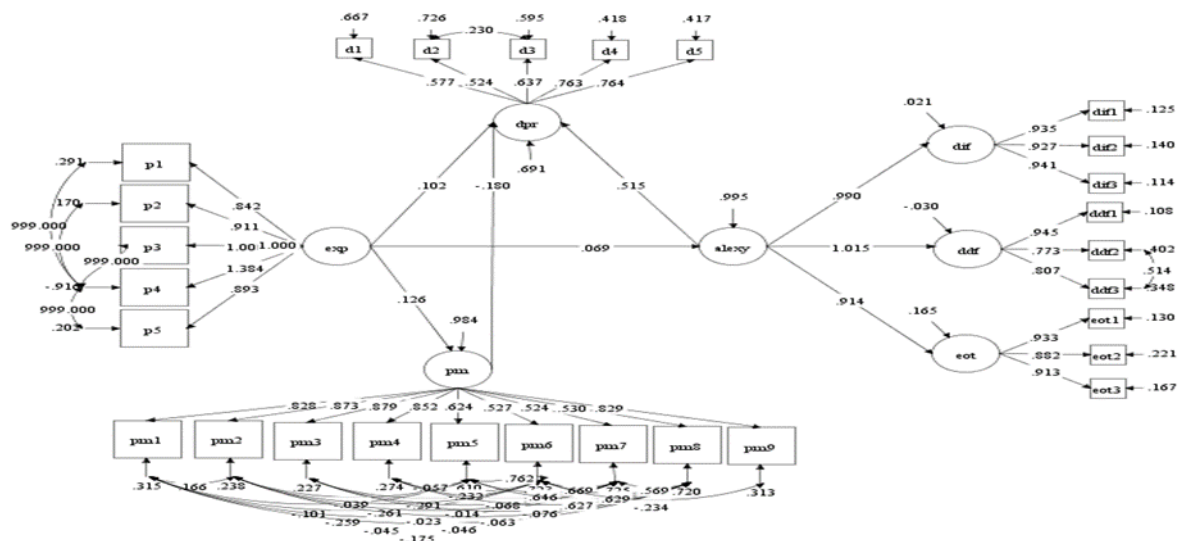

Figure 3. SEM with standardized coefficient

In addition, the SEM (Figure 3) also confirmed that *muthmainnah* personality (β = -0.180; $p < 0.01$) and alexithymia (β = 0.515; $p < 0.001$) could directly affect mental health problems and demonstrated the possibility of mediating variables in explaining how COVID-19 exposure affect the mental health problems (depression) in the students.

The SEM indicated a fit model, so the next phase of analysis identified which variables had the most role in explaining the effects of exposure on mental health problems. Therefore, a mediation analysis was performed by dividing it into two mediation models.

The path analysis found a goodness-of-fit index for each mediation model presented in Table 4. Based on the two mediation models (Figure 4), this study measured the mediation model separately for two reasons. The first was that Model 1 showed a poor or inadequate fit index. Only two statistical parameters were accepted: CFI (0.948) and SRMR (0.043). This differed from Model 2a and Model 2b, indicating a model fit index fit with several fulfilled statistical parameters, such as (CFI = 1.000; TLI = 1.000; RMSEA = 0.000). The second was that the AIC value (5580.249) in Model 1 was higher than in Model 2a (3448.040) and in Model 2b (3643.826). Thus, Model 2 (a and b) were the most recommended models. In other words, Model 2 (a and b) was more appropriate to the theoretical model based on the empirical data.

Table 4. Values of log-likelihood, AIC, BIC, and estimation of model-fit indices for different mediation models

Model	log-likelihood	AIC	BIC	χ^2 (df)	CFI	TLI	RMSEA
[1]Model 1	-2776.187	558.249	5620.073	5.874 (1)	0.948	0.686	0.133
[2]Model 2a	-1717.020	3448.040	3473.382	55.037 (3)	1.000[a]	1.000[a]	0.000[a]
[3]Model 2b	-1814.913	3643.826	3669.168	57.702 (3)	1.000 [a]	1.000[a]	0.000[a]

Note: a = Model-fit. x2 = Chi-Square, df = Degrees of freedom, CFI = Comparative fit index, TLI = Tucker–lewis index, RMSEA = Root mean squared error of approximation, AIC = Akaike, BIC = Bayesian.
1Model 1 = full mediation (muthmainnah personality dan alexithymia)
2Model 2a = Mediation of muthmainnah personality
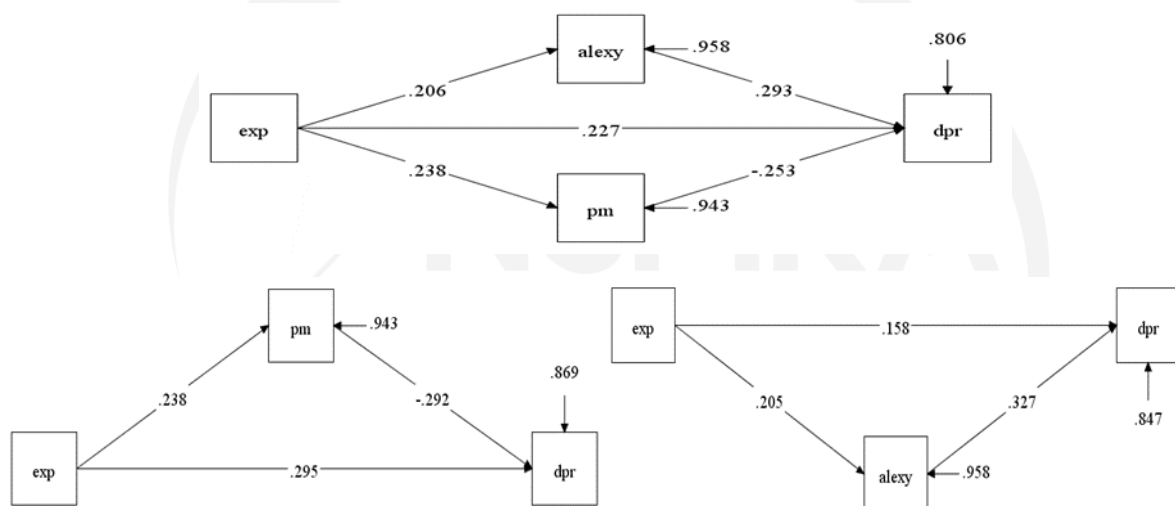3Model 2b = Mediation of alexithymia

Figure 4. Path diagram representation of two mediation models with standardized path coefficients

In connection with the two reasons referring to the findings of the goodness-of-fit analysis, this study focused on testing the mediation model separately. The mediation analysis (Model 2a) reported a significant direct effect of the exposure on depression (β = 0.295; 95%CI = 0.170 – 0.399) and directly affected muthmainnah personality (β = 0.238; 95%CI = 0.071 – 0.383). Indirect effects were also identified as exposure → *muthmainnah* personality → depression showed significant results (β = -0.070; 95%CI = -0.126 – -0.021). Furthermore, Model 2b demonstrated that exposure significantly affected depression symptoms (β = 0.158; 95%CI = 0.062 – 0.230) and directly affected alexithymia (β = 0.205; 95%CI = 0.102 – 0.284). In addition, the indirect effect showed that exposure → alexithymia → depression obtained significant results (β = 0.067; 95%CI = 0.032 – 0.101).

DISCUSSION

COVID-19 exposure affects mental health problems, especially depression, in common people in Indonesia, which is significantly unidentified, so this study examines whether *muthmainnah* personality and alexithymia can demonstrate these transition processes. This is the first study to identify how the *muthmainnah* personality and alexithymia mediate COVID-19 exposure to depression in the students quarantined at home. The regression analysis in this study indicated that *muthmainnah* personality was able to explain the depression experienced by the students independently. The students with the *muthmainnah* personality can remain composed, think positively about their experiences, and maintain a busy schedule of religious and spiritual activities. Therefore, they can prevent or reduce symptoms of depression (Basri et al., 2015).

The mediation analysis of this study revealed that the *muthmainnah* personality could mediate COVID-19 exposure to depression. The students infected with COVID-19 need to quarantine at home for a minimum duration of fourteen days, resulting in suffering from mental health problems (Nugraha et al., 2021). However, if these students have high religious values in themselves, the depression may be low. They maintain their composure and positive mindset despite facing a potentially dangerous situation because they firmly believe that what they are going through is a provision from God.

The students with *muthmainnah* personality use trust as a coping strategy in dealing with stressors that lead to depression. According to Han (2019), trust can reduce psychological problems. Those with a muthmainnah personality believe that help will come only to those who fully hope in God. Based on a psychological perspective, how individuals believe is influenced by levels of their expectations and beliefs as manifestations of cognitive processes (Evans & Krueger, 2009). Trust may affect individual awareness that God regulates all affairs, contributing to a positive mental state (Giordano & Lindström, 2016).

Next, students with probable depression significantly demonstrated significantly increased alexithymia as well in DIF, DDF and EOT subscales compared to students without probable depression. The regression analysis of this study illustrated that the DIF, DDF and EOT had independent associations with depression. Furthermore, a correlation occurred between the DIF, DDF and EOT scores and depression, and this suitably supports some preceding studies investigating relationships between alexithymia and depression symptoms (Tang et al., 2020). In addition, the students with alexithymia, specifically DIF DDF and EOT, had difficulties defining and expressing their emotions due to failure to relate their affective states to certain situations, thoughts, and expectations (Tang et al., 2020). Students with a high score of DIF, DDF or EOT may experience difficulties distinguishing between emotion and verbalization unconsciously (Leising et al., 2009), thereby leading to a regular negative phase that can generate depression (Tang et al., 2020).

In addition, Nicolo and Colleagues (2011) found that increased levels of alexithymia correlated with increased levels of psychopathology and problematic interpersonal relationships. Their studies showed that patients with alexithymia could be avoidant, dependent, passive, and depressive. Students who find it difficult to identify and describe their emotions (alexithymia) tend to think irrationally (Culhane & Watson, 2003), leading to negative interpretations of social interactions. Therefore, this current study provides information that alexithymia is strongly associated with depression, confirmed by a previous study by Tang et al. (2020) and can benefit the examination of vulnerable groups with mental health problems.

Furthermore, the mediation analysis (Model 2b) also demonstrated that alexithymia could mediate COVID-19 exposure to depression, which aligns with a previous study reporting that alexithymia could mediate exposure to depression (Tang et al., 2020). Model 2b reveals two important pathways to explain the transition roles of alexithymia. The first pathway is the amount of COVID-19 exposure to

alexithymia (Tang et al., 2020). During the home quarantine, the students restrained, resisted or withdrew themselves from their feelings as a coping strategy to reduce anxiety and stress as a result of the outbreak (Parker et al., 1998). However, leaving for a long time results in a bad emotional state, leading to alexithymia (Tang et al., 2020). A previous study pointed out that alexithymia was found in individuals who tried to cope with their emotions due to exposure to stressors (Karukivi et al., 2010). Then, a previous study also revealed that threatening events could cause emotional disturbances (Craparo et al., 2014), so individuals try to overcome them by withdrawing and suppressing their feelings.

The second pathway is that alexithymia may increase the risks of depression, and this strengthens the preceding studies (Tang et al., 2020). The students experiencing alexithymia rarely will have relationships in their social environment because they tend to be passive and avoidant and to think badly about their situation (Wells et al., 2016), so they tend to have a hostile interpersonal style (Grynberg et al., 2010), because of their inability to respond appropriately to the feelings or emotions they experience (Taylor et al., 1997). Having rare social relationships may trigger depression (Stice et al., 2004), and individuals with depression tend to experience emotional problems, such as having difficulty identifying and subjectively describing their feelings (Tang et al., 2020).

This finding provides new information about the roles of *muthmainnah* personality and alexithymia in 63.406% of students (n = 175) who experienced depression when quarantined at home after being infected with COVID-19. Therefore, the provision of medical treatment should include these factors to overcome mental health problems. Then, this study can significantly provide a strong basis for the government to implement some policies in the form of psychological and spiritual interventions to support the treatment and recovery of mental health problems due to COVID-19, especially for students. The high risk of depression among the students in this study can be a consideration for the government and university leaders to involve psychologists and therapists to prevent and treat Indonesian students who have experienced depression.

CONCLUSION

This study indicated that *muthmainnah* personality and alexithymia, especially in the DDF, DIF and EOT subscales, were significantly associated with mental health problems (depression) experienced by the students quarantined at home due to the COVID-19. To some extent, this study may be biased due to its method. Therefore, future studies may use other methods, such as an experimental method, by conducting emotional management interventions for adolescents with depression due to COVID-19. Also, whether low alexithymia (DIF, DDF, and EOT) can reduce psychological problems needs to be studied further.

DECLARATION

Data access statement

The data described in this article can be obtained by requesting the author for acceptable and reasonable reasons.

Declaration of Interest's statement

The authors declare no conflict of interest.

Additional information

No additional information is available for this article.

REFERENCES

Aghababaei, N., Mohammadtabar, S., & Saffarinia, M. (2014). Dirty dozen vs. the H factor: Comparison of the dark triad and Honesty–Humility in prosociality, religiosity, and happiness. *Personality and Individual Differences*, *67*, 6–10. https://psycnet.apa.org/doi/10.1016/j.paid.2014.03.026

Bagby, R. M., Parker, J. D., & Taylor, G. J. (1994). The twenty-item Toronto Alexithymia Scale-I. Item selection and cross-validation of the factor structure. *Journal of Psychosomatic Research*, *38*(1), 23-32. https://doi.org/10.1016/0022-3999(94)90005-1

Basri, N. A., Hong, G. C., Oon, N. L., & Kumagai, S. (2015). Islamic religiosity, depression and anxiety among Muslim cancer patients. *IAFOR Journal of Psychology & The Behavioral Sciences*, *1*(1), 1-12. http://dx.doi.org/10.22492/ijpbs.1.1.04

Bibi, A., Blackwell, S. E., & Margraf, J. (2021). Mental health, suicidal ideation, and experience of bullying among university students in Pakistan. *Journal of Health Psychology*, *26*(8), 1185–1196. https://doi.org/10.1177/1359105319869819

Conrad, R., Wegener, I., Imbierowicz, K., Liedtke, R., & Geiser, F. (2009). Alexithymia, temperament and character as predictors of psychopathology in patients with major depression. *Psychiatry Research*, *165*(1-2), 137–144. https://doi.org/10.1016/j.psychres.2007.10.013

Craparo, G., Gori, A., Mazzola, E., Petruccelli, I., Pellerone, M., & Rotondo, G. (2014). Posttraumatic stress symptoms, dissociation, and alexithymia in an Italian sample of flood victims. *Neuropsychiatric Disease and Treatment*, *10*, 2281–2284. https://doi.org/10.2147%2FNDT.S74317

Culhane, S. E., & Watson, P. J. (2003). Alexithymia, irrational beliefs, and the rational-emotive explanation of emotional disturbance. *Journal of Rational-Emotive and Cognitive-Behavior Therapy*, *21*(1), 57-72. https://psycnet.apa.org/doi/10.1023/A:1024133218634

Evans, A. M., & Krueger, J. I. (2009). The psychology (and economics) of trust. *Soc. Personal. Psychol. Compass*, *3*(6), 1003–1017. http://dx.doi.org/10.1111/j.1751-9004.2009.00232.x

Farmawati, C., & Hidayati, N. (2019). Penyusunan dan pengembangan alat ukur Islamic Personality Scale (IPS). *Jurnal Psikologi Islam dan Budaya*, *2*(1), 19-30. http://dx.doi.org/10.15575/jpib.v2i1.4318

Giordano, G. N., & Lindström, M. (2016). Trust and health: Testing the reverse causality hypothesis. *J Epidemiol Community Health*, *70*(1), 10-6. https://doi.org/10.1136/jech-2015-205822

Gohm, C. L., & Clore, G. L. (2002). Four latent traits of emotional experience and their involvement in well-being, coping, and attributional style. *Cognition & Emotion*, *16*(4), 495-518. http://dx.doi.org/10.1080/02699930143000374

Grynberg, D., Luminet, O., Corneille, O., Grèzes, J., & Berthoz, S. (2010). Alexithymia in the interpersonal domain: A general deficit of empathy? *Personality and Individual Differences*, *49*(8), 845-850. https://psycnet.apa.org/doi/10.1016/j.paid.2010.07.013

Han, S. (2019). Social capital and perceived stress: The role of social context. *Journal of Affective Disorders*, *250*, 186–192. https://doi.org/10.1016/j.jad.2019.03.034

Hasanah, M. (2015). Dinamika kepribadian menurut psikologi islami. Jurnal Ummul Qura, 6(2), 110-124.

Hilbig, B. E., Zettler, I., Leist, F., & Heydasch, T. (2013). It takes two: Honesty–humility and agreeableness differentially predict active versus reactive cooperation. *Personality and Individual Differences*, *54*(5), 598–603. http://dx.doi.org/10.1016/j.paid.2012.11.008

Karukivi, M., Hautala, L., Kaleva, O., Haapasalo-Pesu, K. M., Liuksila, P. R., Joukamaa, M., & Saarijärvi, S. (2010). Alexithymia is associated with anxiety among adolescents. *Journal of Affective Disorders*, *125*(1-3), 383-387. https://doi.org/10.1016/j.jad.2010.02.126

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: validity of a brief depression severity measure. *Journal of General Internal Medicine*, *16*(9), 606-613. https://doi.org/10.1046/j.1525-1497.2001.016009606.x

Leising, D., Grande, T., & Faber, R. (2009). The Toronto Alexithymia Scale (TAS-20): A measure of general psychological distress. *Journal of Research in Personality*, *43*(4), 707–710. https://psycnet.apa.org/doi/10.1016/j.jrp.2009.03.009

Leweke, F., Leichsenring, F., Kruse, J., & Hermes, S. (2012). Is alexithymia associated with specific mental disorders? *Psychopathology*, *45*(1), 22-28. https://doi.org/10.1159/000325170

Luca, M., Luca, A., & Calandra, C. (2013). Psychomotor retardation and externally oriented thinking in major depression. Neuropsychiatric Disease and Treatment, 9, 759-766. https://doi.org/10.2147/ndt.s44650

Manea, L., Gilbody, S., & McMillan, D. (2012). Optimal cut-off score for diagnosing depression with the Patient Health Questionnaire (PHQ-9): A meta-analysis. *Canadian Medical Association Journal*, *184*(3), E191-E196. https://doi.org/10.1503%2Fcmaj.110829

Mujib, A. (2017). *Kepribadian Dalam Psikologi Islam*. Raja Grafindo.

Nugraha, D. Y., Wibowo, H., Fadli., & Anindita, R. Y. (2021). Post-traumatic stress disorder (PTSD) and its relationship to depressive symptoms one month after covid-19 infection in a sample of Indonesian society quarantined at home. *Ilkogretim Online*, *20*(4), 512-528. https://doi.org/10.17051/ilkonline.2021.04.56

Parker, J. D., Taylor, G. J., & Bagby, R. M. (1998). Alexithymia: Relationship with ego defense and coping styles. *Comprehensive Psychiatry*, *39*(2), 91-98. https://doi.org/10.1016/s0010-440x(98)90084-0

Shaheen, F., Jahan, M., & Shaheen, S. (2014). Role of personality factors in experiencing psychological distress among adolescents. *Journal of Education and Psychological Research*, *3*(1), 14–20. http://dx.doi.org/10.37708/psyct.v13i1.391

Stice, E., Ragan, J., & Randall, P. (2004). Prospective relations between social support and depression: differential direction of effects for parent and peer support? *Journal of Abnormal Psychology, 113*(1), 155–159. https://doi.org/10.1037/0021-843x.113.1.155

Tang, W., Hu, T., Yang, L., & Xu, J. (2020). The role of alexithymia in the mental health problems of home-quarantined university students during the COVID-19 pandemic in China. *Personality and Individual Differences*, *165*, 110131. https://doi.org/10.1016/j.paid.2020.110131

Taylor, G. J., Bagby, R. M., & Parker, J. D. A. (1997). *Disorders of affect regulation: Alexithymia in medical and psychiatric illness*. Cambridge University Press. https://psycnet.apa.org/doi/10.1017/CBO9780511526831

Wells, R., Rehman, U. S., & Sutherland, S. (2016). Alexithymia and social support in romantic relationships. *Personality and Individual Differences*, *90*, 371–376. https://psycnet.apa.org/doi/10.1016/j.paid.2015.11.029

Zhou, X., & Wu, X. (2019). Temporal transitions in patterns of posttraumatic stress disorder and depression among adolescents following the Wenchuan earthquake. *Child Psychiatry & Human Development*, *50*(3) 494–504. https://psycnet.apa.org/doi/10.1007/s10578-018-0859-8