

# The role of gratitude and optimism on the resilience of COVID-19 survivors

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## Abstract

COVID-19 survivors need to maintain their mental health to return to their regular life after recovering from COVID-19. One of the psychological resources that promote mental health is resilience. Resilience has been studied, but it is still rarely studied in COVID-19 survivors. Resilience can be affected by gratitude and optimism. This study examines the role of gratitude and optimism in the resilience of COVID-19 survivors. This study is a quantitative, correlational study. The population was students of COVID-19 survivors at the University of Muhammadiyah Surakarta. The sampling technique used was purposive sampling. The sample included 114 students who survived COVID-19, consisting of 36 men and 78 women aged 18–23. Data were collected using a gratitude scale, an optimism scale, and a resilience scale. Data analysis was conducted by multiple regression. The results show that gratitude and optimism have a role in the resilience of COVID-19 survivors. Gratitude has a positive effect on resilience, and optimism also positively affects resilience. Gratitude and optimism have a 35.9% role in the resilience of COVID-19 survivors. However, gratitude has a higher position than optimism in enhancing the resilience of COVID-19 survivors. The implication of this research is to increase resilience in COVID-19 survivors by increasing gratitude and optimism.

## Keywords

COVID-19 survivors, gratitude, optimism, resilience, stress

## Introduction

Indonesia is one of the countries affected by the COVID-19 outbreak. The data on September 17th, 2022, stated that 6.405.044 people were confirmed positive; 6.218.708 were declared cured, and 157.876 died due to the COVID-19 outbreak (Kawal COVID 19, 2023). COVID-19 virus exposure has an impact not only on physical conditions and mental health but also on the quality of patients' lives (Aslamiyah & Nurhayati, 2021). When a person is tested positive for COVID-19, they will undergo an isolation treatment, regularly supervised by medical teams. It reduces face-to-face communication, leading to depression and anxiety (Romanov, 2020). The types of anxiety experienced by the person are related to health conditions, being away from family, anxiety about death, and feelings of discomfort (Amirullah & Kartinah, 2020).

A person who has recovered from COVID-19 or is called a COVID-19 survivor can experience some psychological disorders due to experiencing long Covid. Long COVID is a term used to describe a situation experienced by COVID-19 survivors who still feel the effects of COVID-19 for a longer time. Stigma from the community regarding COVID-19 survivors is also a factor in COVID-19 survivors experiencing psychological disorders (Rizaldi & Rahmasari, 2021). Research by Janiri (2021) stated that 30.2% of 381 COVID-19 survivors experienced post-traumatic stress disorder (PTSD). In Indonesia, 63.5% of the 294 COVID-19 survivors experienced long Covid. They experienced physical aches, coughs, diarrhea, and psychological disorders such as sleep disorders, anxiety, and depression (Susanto

et al., 2021). Data obtained from PDSKJI (Association of Indonesian Mental Medicine Specialists) state that 80% of the 182 COVID-19 survivors experienced psychological disorders: 46% had severe symptoms, 33% had moderate symptoms, 2% had mild symptoms, and the rest were asymptomatic (Supriatin, 2021).

Survivors of COVID-19 need to maintain their mental health to return to their regular lives after recovering from the COVID-19 virus. One psychological resource that promotes mental health is resilience (Caroli & Sagone, 2016; Vos et al., 2021). The results of previous studies indicate that not all COVID-19 survivors have good resilience.

Resilience is an individual's ability to handle stress, anxiety, and depression (Connor & Davidson, 2003). Resilience is a factor that plays a crucial role so that individuals can survive in overcoming problems and maintaining their health. Resilience has the following aspects: (1) Personal competence means the individual's ability to remain persistent and not easily give up even though there are challenging obstacles; (2) Self-confidence means the individual's ability to be able to control his or her emotions and be able to focus on thinking even in stressing situations; (3) Positive self-acceptance

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means the individual's condition to accept circumstances positively, adapt to changing living conditions, and develop positive relationships with others; (4) Self-control means the individual's ability to control a difficult situation and to direct their life according to their goals; (5) Spiritual influence means the individual's belief in the destiny God has given and a belief that God will help them to overcome the problematic situation (Connor & Davidson, 2003).

Individual resilience is influenced by several factors. Factors that influence resilience are coping (Hallen et al., 2020; Morales-Rodríguez, 2021), parenting style (Du et al., 2021), optimism (Roslan, 2021; Ruíz-González & Molinero, 2018), social support (Machisa et al., 2018; Nurdin et al., 2021), and gratitude (Du et al., 2021; Llenares et al., 2020; Nurdin et al., 2021). This study focused on gratitude and optimism.

Gratitude is an individual's tendency to respond to the perceived benefits of others (McCullough & Tsang, 2002). Gratitude occurs when the individual realizes something good has happened to him/her, and there is a role for others for the benefits received (Watkins, 2014). Gratitude has some components: (1) A sense of appreciation (SA) towards other people as well as God and life; (2) Positive feelings towards the life they have; and (3) The tendency to act positively (EP). It expresses positive feelings and appreciation (Emmons, 2004; Watkins et al., 2003).

Gratitude is closely related to resilience because grateful individuals will feel positive emotions (You et al., 2018). Positive emotions are important in predicting an individual's resilience in dealing with stressful conditions (Du et al., 2021). The results show that gratitude positively correlates with resilience (Llenares et al., 2020; Nurdin et al., 2021).

Another factor that affects resilience is optimism. Optimism is a positive feeling about the future and an individual's circumstances that describe his/her life experiences positively (Seligman, 2008). Optimism begins with positive thoughts manifested in the form of behavior. Optimism consists of three aspects: (1) Permanence (a mindset about how long an event is good or bad that occurs him), (2) Pervasiveness (a perspective about an event that comes from its scope), (3) Personalization (a mindset about who causes an event that is experienced) (Seligman, 2008).

An optimistic individual will rise from a low point and start his/her effort again, while a pessimistic individual will give up and experience depression when faced with problems (Seligman, 2006). There is an interactive relationship between resilience and optimism (Souri & Hasanirad, 2011). Resilience produces optimism and optimism leads to resilience. Optimism and resilience accompany each other in bad events.

The initial survey conducted by researchers showed that COVID-19 survivors who were students experienced various psychological problems. These problems include: (1) often finding it difficult to sleep because of anxiety that he or she will be infected by COVID-19 again, will pass it on to his or her family, and neglects his/her college assignments; (2) feeling anxious when leaving the house and afraid when he or she saw people crowding, therefore deciding not to go to the house for months; (3) feeling uncomfortable because of the terrible stigma, i.e., neighbors stay away from him or her after recovering from COVID-19. These conditions indicate that

COVID-19 survivors experience long COVID symptoms and psychological distress (Susanto et al., 2021; Supriatin, 2021). Therefore, resilience is needed for COVID-19 survivors.

Gratitude and optimism are needed to increase resilience in COVID-19 survivors. COVID-19 survivors who can be grateful will use personal and emotional resources when facing stressors. This can increase their resilience so that patients can become healthier and more prosperous. Research shows gratitude can increase resilience (Du et al., 2021; Llenares et al., 2020; Nurdin et al., 2021). Likewise with the condition of the COVID-19 survivors who have optimism, when faced with daily stress, optimistic individuals have a positive view of themselves and try to explain negative situations more positively. This helps eliminate the negative effects of the stressor, which leads to increased resilience. Research shows optimism can increase resilience (Roslan, 2021; Ruíz-González & Molinero, 2018).

Research on gratitude, optimism, and resilience has often been carried out; however, it is still rare to examine the role of gratitude and optimism in resilience, especially in the subject of COVID-19 survivors. Based on the description, COVID-19 survivors experience various psychological problems that need to be faced. To cope with psychological issues and return to regular life, resilience is the primary key. Resilience is a person's ability to resolve and overcome adversity in his/her life because everyone will experience trials in his/her life (Grotberg, 2020). Survivors of COVID-19 can become resilient individuals who need gratitude and optimism. When survivors of COVID-19 feel grateful, they will have a positive feeling that can make them resilient. Gratitude is the power to heal, energize, and improve psychologically, spiritually, physically, and cognitively (Wilson, 2016). Individuals who have good resilience are also always optimistic and believe that everything that happens will change for the better (Roslan, 2021).

The formulation of the research problem is, "Do gratitude and optimism have a role in the resilience of COVID-19 survivors?" This study was designed to examine the role of gratitude and optimism in the resilience of COVID-19 survivors. The hypotheses proposed in this study are: (1) There is a role of gratitude in the resilience of COVID-19 survivors; (2) There is a role of optimism in the resilience of COVID-19 survivors; (3) There is a role of gratitude and optimism in the resilience of COVID-19 survivors.

## Method

### Participants

The population of this study was students of the Muhammadiyah University of Surakarta who had been confirmed positive for COVID-19. The sample of this study was 114 COVID-19 survivors comprising 36 men and 78 women aged 18–23 and obtained using the purposive sampling technique. Purposive sampling is a sampling technique by determining certain criteria (Sugiyono, 2021). The criteria are UMS students who have been exposed to COVID-19 and those who have been declared cured. All of the research samples were willing to become participants as stated in the informed consent. For more detail information see Table 1.

Table 1 shows that this study involved 114 participants, consisting of 34 male participants (30%) and 80 female

**Table 1.** Demographic Data

Faculty	Men		Woman		Total	
	F	%	F	%	F	%
Psychology	9	8	31	27	40	35
Educational Sciences	5	4	5	4	10	9
Health	2	2	1	1	3	3
Technique	1	1	5	4	6	5
Medical	2	2	0	0	2	2
Law	8	7	7	6	15	13
Pharmacy	0	0	6	5	6	5
Economic	3	3	22	19	25	22
Geography	2	2	1	1	3	3
Communication Science and Informatics	2	2	2	2	4	4
Total	34	30	80	70	114	100

participants (70%). The participants were 18–24 years old (Mean = 21.5; SD = 2.31). Most participants come from the Faculty of Psychology (35%), Economics (22%), and Law (13%).

### Research Instruments

The data collection methods used were the gratitude, optimism, and resilience scales. Gratitude was measured using the Indonesian Gratitude Scale (IGS) developed by Listiyandini et al. (2015) with components of a sense of appreciation for other people as well as God and life, positive feelings about the life one has, and a tendency to act positively as an expression of positive emotion and appreciation. This scale consisted of 20 items with a validity value of 0.83–0.91 and a Cronbach reliability coefficient = 0.890. Examples of gratitude scale items are “The health that I have comes from God”, “The kindness given by others plays little role in my life”, and “One form of my gratitude to God is to do everything wholeheartedly”.

Optimism was measured using the Optimism Scale (OS) based on three aspects, which are permanence, pervasiveness, and personalization (Seligman, 2008). This scale consisted of 15 items with a validity value of 0.75–0.83 and Cronbach’s alpha = 0.806. Examples of optimism scale items are “I believe in getting a better life after recovering from COVID-19”, “I feel down after being exposed to COVID-19”, and “Others will not stay away from me after I recover from COVID-19”.

Resilience was measured using the Connor-Davidson Resilience Scale (CD-RISC), adapted to Indonesian (Anggraini et al., 2017). This scale consisted of 17 items with a validity value of 0.83–0.92 and Cronbach’s alpha = 0.835. Examples of resilience scale items are “I believe that everything that happens has a reason”, “I can get back up after being in a state of illness or other suffering”, and “The experience of dealing with stress can make me stronger”.

### Data Analysis Technique

The data obtained were analyzed statistically using multiple regression techniques. Multiple regression is a technique to test the relationship between one dependent variable and two or more independent variables (Arifin, 2017). The dependent variable of this research is resilience, while the independent variables are gratitude and optimism.

Before the regression analysis, it is necessary to test the classic assumptions first. The classic assumption test uses normality, linearity, multicollinearity, and heteroscedasticity tests. The normality test was by looking at the Kolmogorov-Smirnov value  $Z = 0.567$ ;  $p = 0.91$  ( $p > 0.05$ ), so the data are normally distributed. Then, the linearity test result showed that gratitude and resilience have a linear relationship because the Deviation from the Linearity value is  $0.953 > 0.05$ , and the optimism variable with resilience also has a linear relationship because the Deviation from the Linearity value is  $0.306 > 0.05$ . It can be concluded that the data are linear. Furthermore, based on the heteroscedasticity test, it can be concluded that the regression model does not indicate a heteroscedasticity effect. Points that spread irregularly and spread high above or below the number 0 and irregular points that do not form a certain pattern are proof that heteroscedasticity does not occur in this study.

### Result

Table 2 shows that COVID-19 survivors have a very high level of gratitude 72%, (M = 67.5), optimism 72.8% (M = 50.49), and resilience 57% (M = 55.55). This means that the three variables studied are equal with the same score level being Very High.

Table 3 shows the Pearson correlation coefficient test to measure the closeness of the relationship between variables. The Pearson bivariate correlation analysis shows a significant positive correlation between gratitude and resilience ( $r = 0.546$ ;  $p = 0.000$ ) and optimism and resilience ( $r = 0.516$ ;  $p < 0.00$ ). These results are in Table 4.

The multiple regression analysis in Table 4 shows that the regression coefficient of gratitude is positive (0.387), meaning that the higher the gratitude, the higher the resilience

**Table 2.** Gratitude, Optimism, and Resilience Category (N=114)

Category	Gratitude (M=67.50)		Optimism (M=50.49)		Resilience (M=55.55)	
	F	%	F	%	F	%
Very low	0	0.00	0	0.00	0	0.00
Low	1	9.00	1	9.00	1	9.00
Medium	6	5.30	6	5.30	12	10.50
High	24	21.10	24	21.10	36	31.60
Very High	83	72.80	83	72.80	65	57.00



**Table 3.** Bivariate Pearson Analysis

	1	2	3
Resilience	-	0.55**	0.52**
Gratitude	0.55**	-	-
Optimism	0.52**	-	-

\*\*p < 0,01

of the COVID-19 survivors. On the other hand, the lower the gratitude, the lower the resilience of the COVID-19 survivors. Gratitude significantly and positively affects resilience ( $t = 4.074$ ;  $p = 0.000$ ;  $p < 0.01$ ). Thus, the first hypothesis is accepted. The regression coefficient value of optimism is positive (0.366), meaning that the higher the optimism, the higher the resilience of the COVID-19 survivors. Conversely, the lower the optimism, the lower the resilience of the COVID-19 survivors. Optimism has a significant positive effect on resilience ( $t = 3.310$ ;  $p = 0.000$ ;  $p < 0.01$ ). Thus, the second hypothesis is accepted. Gratitude and optimism simultaneously predict the resilience of COVID-19 survivors as indicated by the value of  $F = 31.961$ ;  $p = 0.000$  ( $p < 0.01$ ), so the third hypothesis is accepted. Gratitude and optimism affect resilience by 35.9%, so other variables not examined by researchers influence 64.1% of resilience. Gratitude plays a 20.3% role and optimism plays a 15.6% role in the resilience of COVID-19 survivors. The multiple regression analysis is in Table 5.

## Discussion

This study shows the role of gratitude and optimism in resilience in COVID-19 survivors. It is reinforced by the results of the analysis of gratitude with resilience and optimism with resilience in COVID-19 survivors. The results show a very significant positive effect between gratitude and resilience, so the first hypothesis in this study is accepted. A COVID-19 survivor who feels grateful will realize the benefits of something that happened to him/her (Watkins, 2014). Gratitude has components of a sense of appreciation for other people as well as God and life, positive feelings about the life one has, and a tendency to act positively as an expression of positive emotion and appreciation. COVID-19 survivors who feel grateful will appreciate whatever is received. When infected with COVID-19, survivors accept this condition as a gift and destiny from God. The individual believes that God will help him/her deal with the difficult situation. Belief in destiny, gifts, and the existence of help from God will also change negative emotions to be more positive. This can be a positive energy to increase an individual ability to control a difficult situation. Grateful individuals will also display more positive behavior, so they remain persistent and do not give up easily even when facing difficult obstacles. Positive emotions make individuals more resilient in dealing with stressful conditions (Du et al., 2021). On the other hand, COVID-19 survivors who are less grateful cannot feel the benefits of the confirmed COVID-19 incident, so their emotions are negative. These negative emotions make individuals less resilient in dealing with stressful conditions. Thus, gratitude plays a significant role in the resilience level of COVID-19 survivors. The results of this study strengthen previous research reporting that gratitude has a positive correlation

with resilience (Du et al., 2021; Kong et al., 2021; Llenares et al., 2020; Nurdin et al., 2021; Scott et al., 2021; Wilson, 2016).

The results also show a very significant positive effect between optimism and resilience, so the second hypothesis in this study is accepted. Optimistic COVID-19 survivors will be able to think more positively about their experiences, including confirmed COVID-19 incidents. Optimism has three aspects: permanence, pervasiveness, and personalization. Hopeful COVID-19 survivors view that bad events affected by COVID-19 are only temporary and have more positive beliefs about the future (Seligman, 2006). This helps individuals control the negative emotions that are felt so they can focus on facing difficult conditions. They will remain persistent, and not give up easily. COVID-19 survivors believe that the experience of being infected with the virus will not affect all aspects of their lives. This helps him/her in adapting to changing conditions that occur. COVID-19 survivors also think that the illness they have suffered is not the result of their own mistakes, but due to an outbreak that is easily transmitted and experienced by many people. This will make the individual more accepting of circumstances positively. This condition will encourage COVID-19 survivors to be more resilient in overcoming their problems. On the other hand, pessimistic COVID-19 survivors will view bad events from being affected by COVID-19 as long-lasting and have negative beliefs about the future. Hence, they are less likely to make efforts when facing difficulties (Seligman, 2006). Therefore, optimism also plays a crucial role in the resilience level of COVID-19 survivors. The results of this study also support previous research, which showed a strong relationship between optimism and resilience (Choirunnisa & Supriatna, 2019; Ruíz-González & Molinero, 2018).

Gratitude and optimism simultaneously account for 35.9%. Gratitude plays a 20.3% role and optimism plays a 15.6% role in the resilience of COVID-19 survivors. Based on this, gratitude plays a more critical role than optimism in increasing the resilience of COVID-19 survivors. Thus, positive feelings and awareness of the benefits of something that happened, including being confirmed by COVID-19, affect resilience more than the optimism shown by COVID-19 survivors. Gratitude is a positive emotion that makes individuals more resilient in dealing with stressful conditions (Du et al., 2021).

Survivors of COVID-19 have a very high level of resilience. Thus, the COVID-19 survivor has overcome the difficulties in his/her life after being exposed to COVID-19 and can return to regular life. The characteristics of an individual with a high level of resilience are having positive feelings, the ability to solve difficulties in their lives well, and optimal self-confidence (Uyun, 2012). A very high resilience is supported by a very high level of gratitude and optimism.

Survivors of COVID-19 have a very high level of gratitude, which means they can appreciate other people, God, and life, have positive feelings about their life, and act positively as an expression of positive emotions and appreciation for what they have (Emmons, 2004; Watkins et al., 2003). Survivors of COVID-19 also have a very high level of optimism. It means that COVID-19 survivors view good events as permanent and negative events as only temporary. The success obtained comes from themselves and has positive beliefs about the future so that they try to achieve the expected goals despite

**Table 4.** Multiple Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	R	R <sup>2</sup>	F	t	p
	B	SE	$\beta$					
(Constant)	11.04	5.57		0.60	0.35	31.96	1.98	0.001
Gratitude	0.37	0.09	0.37				4.07	0.000
Optimism	0.39	0.12	0.30				3.31	0.001

facing difficulties (Seligman, 2006). The high optimism takes place due to the increasingly controlled COVID-19 pandemic conditions in November 2021 when data were collected. It has entered the new normal so that most people are aware of their coexistence with COVID-19, and the need to adapt during this pandemic (Finaka, 2021).

The limitation of this study is that the sample size is less than proportional for each faculty. The number of male and female samples is also unequal, i.e., most were women. This happens because the sample selection was not done randomly.

## Conclusion and Implications

To conclude, the findings of this study show that gratitude and optimism have a role in the resilience of COVID-19 survivors. Gratitude plays a more significant role than optimism in increasing the resilience of COVID-19 survivors. The resilience of COVID-19 survivors is very high. It is also supported by a very high level of gratitude and optimism.

The implication of this study is that to maintain the COVID-19 survivors' resilience, they need to manage feelings of gratitude and optimism. For instance, if the participant shows optimism, they always have a positive outlook in which there is a lesson to be learned from the hardships experienced during exposure to COVID-19, believing that the COVID-19 pandemic will end soon and always being grateful for having managed to survive and recover from COVID-19. Cultivating optimism and gratitude is not only the responsibility of those with COVID-19 themselves but they can also be fostered by their significant others through providing good social support.

## Declaration

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### Author contributions

Rini Lestari: Designing the research, writing introduction, method and discussion section.

Juliani Prasetyaningrum: Directing the research process, writing discussion and conclusion section.

Aqilah Larasati Imadanty: Data collection, analysis and editing.

### Conflict of interest

The authors declare there is no conflict of interest.

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