Resilience of COVID-19 survivors: The role of internal locus of control and social support

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Abstract

This study examines the role of internal locus of control and social support in the resilience of COVID-19 survivors. Being exposed to COVID-19 has made the survivors psychologically and socially worse. Survivors require a certain readiness to rise. Their capability to adapt to COVID-19 should be gained once they can determine their own attributions to COVID-19 exposure and social support. This study aimed to examine the relationship between internal locus of control and social support for the resilience of COVID-19 survivors. This study involved 100 survivors of COVID-19 with a purposive sampling technique. Data were collected using the scale of resilience, internal locus of control, and social support constructed under Likert's model. They were distributed via Google Forms on social media. This study found that 1) there is a relationship between internal locus of control and social support and the resilience of COVID-19 survivors; 2) there is a positive relationship between internal locus of control and the resilience of COVID-19 survivors; and 3) there is a relationship between social support and the resilience of COVID-19 survivors. Therefore, survivors' ability to control any condition while exposed to COVID-19 and social support can accelerate their resilience. Meanwhile, the internal locus of control plays a greater role than that of social support. This study is expected to be a scientific basis in psychology for counselling clients of COVID-19 survivors.

Keywords: Counselling, COVID-19, Locus of control, Resilience, Social support, Survivors.

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Transparency: The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

Institutional Review Board Statement: The Ethical Committee of the the Universitas 17 Agustus Surabaya, Indonesia has granted approval for this study on 4 July 2022 (Ref. No. 1273.1/K/F.Psi/VII/2022).

1. Introduction

Almost all countries have been exposed to the COVID-19 pandemic [1-3]. Since its initial surge, the number of COVID-19 survivors has increased [4, 5]. Even though the stigma against the survivors is decreasing every year as people have better knowledge about COVID-19, they are not completely free from this stigma Khairsyaf, et al. [6]; Sugiyama, et al. [7]; Suparti, et al. [8] and Wati and Hadi [9]. Wati and Hadi [9] noted that the stigma of the community against the survivors remains, especially when they should deal with the survivors in person. Even though society does not stigmatize the survivors in some situations, they do not have the courage to reveal themselves to the public as survivors for fear of being shunned by their surroundings Wati and Hadi [9]. Suparti, et al. [8] found that survivors of COVID-19 can suffer from fatigue, hypertension, headaches, depression, coughs, joint pain, chest pain, difficulty thinking, intermittent fever, and palpitations. These symptoms might last up to 12 weeks after experiencing COVID-19.

The World Health Organization declared that the world is facing a global emergency due to the virus [10-12]. According to The Guardian, of the 402 monitored patients after the coronavirus treatment, 55 percent suffered a mental illness. Surveys and clinical interviews revealed that 28% of respondents had PTSD (post-traumatic stress disorder), 31% had depression, 42% felt anxious, 40% had sleeplessness, and 20% had obsessive-compulsive symptoms. The finding increased concerns about the psychological impact of the corona virus [13]. Due to the problems induced by COVID-19, ability to bounce back is a condition that needs attention [14].

Resilience is one's ability to overcome and adapt to current issues caused by an obstacle or trauma by developing social and educational skills [15-17]. In addition, resilience may also be defined as the capacity to deal with challenges effectively, overcome hardship, and maintain optimism in the face of adversity[18]. Resilience describes how individuals recover from setbacks or trauma as well as how they can overcome challenges in life Eley, et al. [19]. Siebert [17] defines resilience as the ability to rise from the setbacks encountered. The American Psychological Association offers a resilience strategy that includes, among other things, moving toward our goals, accepting that change is a part of life, not viewing crises as insurmountable problems, taking decisive action, looking for opportunities for self-discovery, and cultivating a positive self-image [20].

Referring to the problems, the researchers conducted interviews with three patients who had recovered from COVID-19 on September 2, 2020. The three interviewees were siblings from a positively diagnosed COVID-19 family in June 2020. They admitted that they felt hopeless, thought they would soon die, panicked, and tried to cover up this information from their neighbours when they tested positive for the Corona Virus. They were under a lot of pressure, had to abide by health regulations, isolated themselves, and feared eviction by their neighbours. Their mother had to be hospitalized for intensive care, and their father died.

Somebody who is reviving from adversity encounters 4 stages of resilience: succumbing, the time he/she feels like giving up on the problem; survival, the time he/she begins to learn to adapt to the existing pressure; recovery, the time he/she can revive from adversity; and thriving, the time he/she can return to their normal activities and are more enthusiastic about living the life [21].

COVID-19 survivors' resilience is a multi-faceted concept that encompasses psychological attributes Gerber, et al. [22], social interactions, and coping mechanisms [23]. By cultivating internal strengths like an internal locus of control, emotional regulation, and problem-solving skills and by seeking and receiving adequate social support, survivors can enhance their ability to recover, adapt, and thrive after experiencing the challenges of COVID-19. A combination of internal psychological factors and outside sources of support affect COVID-19 survivors' resilience [24]. Resilience in this context refers to the ability of individuals who have recovered from COVID-19 to adapt, recover, and resume normal activities despite the challenges posed by the disease.

The survivors of COVID-19 build resilience from individual physiological regulation, stress-response systems, the immune system, and culture [25]. Moreover, it depends on social support and individual mental health [14], religiosity [26], internal locus of control [27], and coping strategies [28, 29]. This study focuses on internal locus of control and social support.

This study focuses on the internal locus of control component, which is related to the resilience of COVID-19 survivors. There are two aspects to the locus of control: internal and external. When someone feels that they are in charge of everything that happens in their life, they are deemed to have an internal locus of control [30].It is the concept that one's own success is based on internal factors, abilities, interests, and efforts. Individuals who have an internal locus of control are more likely to be categorized as high achievers and are more success-oriented because they believe their actions may have a beneficial impact. Crews. Misamer, et al. [27] explained that a person with a strong internal locus of control is a diligent worker who takes initiative, concentrates on problem-solving, thinks effectively, and perceives success.

Every person has a unique level of resilience since it is influenced by a variety of circumstances, including how much social support they receive Grotberg [31].Hou, et al. [14] put emphasis on any social environment-based information that shapes personal views. People who see this positively are able to obtain confirmation of their responses or assistance as a sign of social support. One phrase used to describe the ways in which social connections improve a person's physical or mental health is "social support,"Harandi, et al. [32].Sarafino and Smith [33] include emotional support, esteem support, instrumental support, and informational support as some of the components of social support. The factors that affect social support are recipients of support, providers of support, composition factors, and network providers. Sarafino and Smith [33]. Santrock [34] and Rahmatina, et al. [35] considered that social support is information or responses from other parties who are cherished, and loved, who value and respect them, and who have an interdependent relationship with one another. Social support is the provision of support that can affect individual health

physically and psychologically for both individuals and social groups [36]. In addition, individuals who receive social support will believe that they are loved, cared for, valued, precious, and meaningful to their environment [33].

2. Method

2.1. Research Design
This is correlation and quantitative research, which is designed to determine the relationship between the independent variables-Internal Locus of Control (X1) and Social Support (X2)-and the dependent variable, Resilience (Y).

2.2. Participant
This study involved 100 people selected by a simple purposive sampling technique. The inclusion criteria are patients proven positive for Covid-19 (status: patient under surveillance, people under surveillance, or asymptomatic people) and over eighteen years of age.

2.3. Data Collection
Reivich and Shatte's theory of construct, which included seven suggested aspects—emotional regulation, impulse control, realistic optimism, causal analysis, self-efficacy, empathy, and reaching out—was the basis for the resilience scale used to gather data [21]. It consisted of 42 items, and 22 of which were declared valid with the index corrected item total correlation range of 0.317–0.644 and a Cronbach alpha reliability value of 0.909. With a Cronbach alpha reliability score of 0.909 and an index adjusted item total correlation range of 0.317–0.644, 22 of the 42 items were deemed genuine. The internal locus of control scale was developed using the following indicators: self-efficacy, belief in one's ability to control behaviour and actions, and belief that one's own efforts are what led to success. These indicators were first put forth by Levenson [37] then elaborated upon by Phares and Chaplin [38]. It consisted of 24 items, of which 17 were declared valid, and reliable, with an index-corrected item total correlation of 0.317–0.644 and the Cronbach alpha reliability value of 0.916. The social support scale was adapted from Sarafino and Smith [33] with four proposed aspects: emotional support, appreciation support, instrumental support, and information support. It consisted of 32 items, and 27 were declared valid with index-corrected item total correlation values of 0.304 – 0.675 and the Cronbach alpha reliability value of 0.916.

2.4. Data Analysis
The research employed multiple regression analysis techniques to find out the partial and simultaneous relationship between the independent variables and the dependent variable. In addition, the study used stepwise regression analysis to determine which model exerted more influence or which independent variable provided a greater or more dominant influence on the dependent variable.

3. Results
Based on the scale that has been distributed, 100 people participated in this study with an age range of 18-50 years. The demographic description of the respondents can be seen in Table 1.

Table 1.
Description of respondent demographics.

Variable	Total (n=100)	%
Gender		
Man	64	64%
Woman	36	36%
Age		
18 – 30 years	48	48%
31 – 40 years	38	38%
41 – 50 years	14	14%
Status		
OTG (*Orang tanpa gejala* or asymptomatic people)	31	31%
ODP (*Orang Dalam Pengawasan* or People under surveillance)	69	69%

This study's gender distribution shows that there are 64 males (64%), and only 36 women (36%). Their ages vary from 18 to 50 years old. Participants with an age range of 18-30 years are 48 (48%), those with an age range of 31-40 years are 38 (38%), and those with an age range of 41-50 years are 14 (14%). Based on the status, 31 patients (31%) are OTG (asymptomatic people), and 69 (69%) are patients with ODP status (people under surveillance). According to the demographic information, the majority of respondents are male (64%), fall between the ages of 18 and 30 (48%), and have ODP status (69%).

In addition, the statistical data in this study also show the origin of the participants, as shown in Table 2.

Table 2.
Description of respondents based on their origin in Indonesia.

Origin	Total (n=100)	%
Java	32	32%
Borneo	44	44%
Sulawesi	4	4%
Sumatra	14	14%
Etc.	6	6%

Table 2 demonstrates that patients from Sumatra, Sulawesi, Java, and Kalimantan make up the majority of the study's participants, with up to 4 (4%), 44 (44%), and 32 (32%), respectively, from these regions. The remaining 6 (6%) are patients from islands other than Java, Kalimantan, Sulawesi, and Sumatra.

Before testing the hypothesis with multiple regression analysis, an assumption test was first carried out, consisting of normality and multicollinearity tests. The results of the normality test showed that the significance value is $0.200 > 0.05$, meaning that the data in this study are normally distributed. The results of the multicollinearity test showed that the tolerance values of the internal locus of control and social support are 0.604 and 0.604, respectively which is over 0.10. The values of VIF for internal locus of control and social support are 1.657 and 1.657, respectively indicating that the VIF values for these two variables are less than 10.00. The results of the multicollinearity test indicated the absence of multicollinearity for the independent variables in this study. The details can be seen in Tables 3 and 4.

Table 3.
Kolmogorov Smirnov normality test.

Variable	Unstandardized residual
N	100
Asymp. sig. (2-tailed)	0.200

Table 4.
Multicollinearity test.

Variable	Collinearity statistics	
	Tolerance	VIF
Internal locus of control	0.604	1.657
Social support	0.604	1.657

Furthermore, the hypothesis test was conducted to determine the relationship between internal locus of control and social support with resilience either partially or simultaneously. The test implemented multiple regression analysis.

Table 5.
Simultaneous test results on multiple regression analysis.

Predictor variables	R square	F	Sig.
Internal locus of control and social support	0.693	109,449	0.000

Table 5 displays the findings of multiple regression analysis, indicating a significance value of 0.000 or less than 0.05. Consequently, empirical data either acknowledges or supports the research hypothesis regarding the relationship between resilience, social support, and internal locus of control. Furthermore, Table 5 indicates a R Square value of 0.693, which translates to a 69.3% association between internal locus of control and social support and resilience. This figure shows that social support and internal locus of control account for 69.3% of resilience, with other factors not included in the research accounting for the remaining 30.7%.

The results of partial testing for the relationship between internal locus of control and resilience or between social support and resilience can be seen in Table 6.

Table 6.
Partial test results on multiple regression analysis.

Coefficients[a]

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. error	Beta		
1	(Constant)	15.532	4.027		3.857	0.000
	Internal locus of control	0.648	0.090	0.522	7.204	0.000
	Social support	0.280	0.051	0.399	5.505	0.000

Note: a. Dependent variable: Resilience.

Table 6 demonstrates that the partial connection between resilience and internal locus of control has a significance value of 0.000 or less than 0.05. In the meantime, the significance value in the relationship between social support and resilience is 0.000, which is likewise below 0.05. The findings suggest that the theories on the connections between social

support and resilience and internal locus of control and resilience are either accepted or scientifically supported. The correlation between internal locus of control and resilience is 0.648 according to the regression coefficient (b1), yet the correlation between social support and resilience is 0.280.

Furthermore, to determine effective contribution and the relative contribution of each predictor variable to the dependent variable, we can see in Table 7.

Table 7.
Relative contribution and effective contribution test results.

Variable	Relative contribution (RC)	Effective contribution (EC)	R square
Internals locus of control (X1)	58.1%	40.3%	0.693
Social support (X2)	41.9%	29%	

The table shows that internal locus of control has a relative contribution of 58.1% while social support has a relative contribution of 41.9%, which represents the comparison between internal locus of control and social support for resilience.

The effective contribution value for internal locus of control is 40.3%, and the effective contribution of social support is 29%, which represents their predictive power, respectively. Meanwhile, the value of the effective contribution of both internal locus of control and social support is 69.3%, as indicated by the R Square value of 0.693. It demonstrates that social support and internal locus of control together constitute a predictive potential of 69.3% for resilience, with additional variables unrelated to this research accounting for the remaining 30.7%.

4. Discussion

Resilience can be defined as an individual's ability to revert back and succeed in adaptation from adversity by developing social, educational, and vocational skills to deal with stress [17, 39]. Therefore, survivors of COVID-19 who have good resilience skills will quickly recover, adapt, and return to their normal activities. Resilient individuals can manage their emotions, navigate through negativity, maintain optimism, identify the root of problems, exhibit empathy, believe in their ability to handle challenging situations, and maintain a positive perspective in the face of adversity.

The journey of COVID-19 survivors toward resilience is a tapestry woven from a multitude of intricate threads that shape their ability to recover and adapt. Research, as highlighted by Kaye-Kauderer, et al. [25], underscores that this process encompasses a symphony of individual physiological mechanisms, stress-response systems, the robustness of the immune system, and the influence of culture. These factors collectively form the foundation upon which resilience is built. At the core of this resilience tapestry lie the physiological mechanisms that contribute to an individual's overall well-being. A finely tuned physiological regulation system, guided by factors like healthy lifestyle choices, adequate rest, and proper nutrition, can serve as a cornerstone for a faster and more effective recovery. Furthermore, the intricate dance of the stress-response systems within the body plays a vital role. Those who can navigate the ebb and flow of stress hormones are better equipped to manage the emotional toll of the disease, and this, in turn, aids in their ability to rebound and return to normalcy.

Notably, the immune system also serves as a sentinel in the quest for resilience. Its strength and effectiveness in combating the virus contribute significantly to a survivor's journey toward recovery. The improvement of one's overall health, stress management, and physiological factors can potentially speed up the healing process. Yet resilience extends beyond the boundaries of the individual body. It intertwines with external factors that weave their way into the fabric of recovery. Social support, as illuminated by Hou, et al. [14], emerges as a vital thread. The network of family, friends, and the broader community provides more than just emotional validation—it offers a lifeline that nurtures a sense of belonging and provides practical assistance. The presence of a robust support system can not only alleviate feelings of isolation but also serve as a bedrock upon which resilience can be nurtured.

Equally significant are the threads of individual mental health and religiosity. As revealed by Yustifah, et al. [26], a strong religious foundation can provide a sense of purpose and hope, acting as a guiding light during the darkest moments of recovery. Additionally, mental health emerges as a determining factor, shaping one's ability to cope with the challenges posed by the virus. Effective coping mechanisms and a positive mental outlook can be the compass that guides survivors toward healing and adaptation.

Amid this intricate tapestry of resilience, two focal threads come to the fore—internal locus of control and social support. Misamer, et al. [27] highlight that an internal locus of control, a belief in one's agency to influence outcomes, is a key enabler of resilience. This thread empowers survivors to actively participate in their recovery journey by making informed decisions and taking control of their actions. Additionally, as this study's findings show, social support plays a significant role. It weaves a safety net that catches survivors during moments of vulnerability, bolstering their emotional well-being and providing the encouragement necessary to keep moving forward.

In essence, resilience among COVID-19 survivors is an intricate interplay of physiological factors, stress response, immunity, culture, mental health, religiosity, internal locus of control, and coping strategies. These threads intertwine to create a complex, multi-dimensional portrait of recovery. The chosen focus of this study on internal locus of control and social support acknowledges the potent role these threads play in guiding survivors toward resilience. Each thread, woven with care, contributes to the overall strength and adaptability that define the journey of those who have emerged from the challenges of COVID-19.

This study suggested a positive and significant relationship between internal locus of control and resilience. In other words, the internal locus of control is a prominent predictor of resilience. It is in line with the opinion of Kreitner and

Kinicki [40] that individuals with tendencies towards an internal locus of control should have had the belief to control all events and consequences in their own lives. Internal locus of control within an individual depicts the belief that he or she has a control over success and failure in life[27, 33]. It implies that control over these events lies within oneself, and he or she is responsible for that. In other words, survivors of COVID-19 who believe in their own abilities believe that they can regulate their behaviour and actions and that the success of their hardwork will be helpful in achieving resilience.

Furthermore, Everall, et al. [41] state that having an internal locus of control makes a person robust in their internal life, which demonstrates confidence and trust. Besides, it inspires them to develop aspirations, plans, dreams, and objectives for the future. Individuals that possess an internal locus of control tend to be more focused on achievement since they believe their actions may have a beneficial impact and are typically labelled as high achievers [42]. The traits of someone with a strong internal locus of control include the following characteristics: hard worker, initiator, and problem solver with effective thinking and perception of success [27].

The study result corresponds to that of the research by Kaye-Kauderer, et al. [25] finding that resilience among individuals may lead to low health problems and welfare. Welfare is achieved when the individual has a high internal locus of control. Someone with an internal locus of control tends to be in control of their actions and make changes to achieve their expectations[43]. Concerning endeavours to overcome challenges post-Covid-19 recovery, those with a strong internal locus of control believe they can influence their circumstances through their actions. Consequently, they invest more effort in striving for independence from external influences, considering others who might hold sway over them. Individuals with an internal locus of control effectively wield their own influence, trusting in their capacity to steer their lives and attributing the power to shape their behaviour to themselves [44].

The partial test in this study also found that social support is a positive and significant predictor of resilience, meaning that high social support would make individual resilience better. This is in line with what Sarafino and Smith [33] suggested: that appropriate social support will greatly help individuals meet their needs when experiencing conditions considered strenuous. Individuals can find effective ways to get out of problems and feel valued and loved, which will increase their self-confidence and allow them to live a better life. Social support has been empirically proven to pose a vital role in the process of individual resilience because it helps in improving psychological well-being and self-adjustment, increases self-esteem, reduces pressure in dealing with one's life problems, and exerts a positive impact on resilience. The combination of the beliefs of the COVID-19 survivors that they can control various aspects of daily life and the support of other people (friends, family, or the community) will certainly have a good effect on the survivors' resilience.

The result of this study is consistent with that of Grotberg [31] that the an individual's level of resilience is determined by the extent to which they get social support. In addition, Nisak [45] says that social support encompasses both nonverbal and vocal forms of information as well as genuine actions or aid provided by others in the subject's social circle, such as items that offer emotional support or simply being there. A person can overcome their issues in life if they have social support. He or she is strengthened and made more resilient by the people in their immediate vicinity. Social support is defined by Hou, et al. [14] as the assistance and reinforcement an individual receives from their social contacts.

The idea that there are individuals who will assist in the event that a certain circumstance is thought to generate issues gives rise to social support. Help in this situation can boost good emotions and self-esteem. Due to this psychological condition, an individual's actions and reactions can affect their general state of well-being. Hefferon and Boniwell [46] assess that social support can affect individual behaviour. When he or she has positive support from the closest ones, social support enables them to feel energized and confident in their ability to tackle challenges. Getting supportive feedback will have a beneficial effect on developing resilience. Sources and traits that can assist and shield people from severe hardship are found in the relationship between social support and the resilience of those who can effectively adjust in difficult conditions [47].

This study empirically reveals the predictors of internal locus of control and social support. Internal locus of control provides a dominant contribution of 40.3% to resilience, while social support contributes only 29%. Meanwhile, internal locus of control and social support together make an effective contribution of 69.3%, which confirms that they are significant predictors for increasing resilience among COVID-19 survivors. However, internal locus of control is a predictor with a greater contribution. It implies that internal locus of control is a significant aspect to give to COVID-19 survivors, whether they are in ODP or OTG status. They can strengthen their belief in their own ability to increase resilience when infected with Covid-19, so they recover more quickly because they know that this is only a substantial component of their own recovery.

5. Conclusion

The current study highlights the crucial role of resilience in the context of COVID-19 survivors' recovery and adaptation. Resilience is defined as the ability to successfully navigate adversity by developing social, educational, and vocational skills to manage stress. Those who possess strong resilience skills are better equipped to quickly regain their normal functioning post-COVID-19. Resilience is reflected in emotional regulation, optimism, problem-solving abilities, empathy, and a positive outlook toward challenges. The study establishes a significant relationship between the internal locus of control and resilience. Internal locus of control, the belief in one's ability to control life events, emerges as a key predictor of resilience. Individuals with an internal locus of control are more likely to take charge of their circumstances, leading to greater resilience. This finding resonates with research emphasizing that an internal locus of control fosters confidence, goal-setting, and ambition for the future.

Furthermore, the study underscores the substantial influence of social support on resilience. Adequate social support aids individuals in meeting their needs during challenging situations, enhancing psychological well-being, self-esteem, and

the ability to cope with life's difficulties. The combination of a strong internal locus of control and robust social support significantly contributes to individuals' resilience in the face of adversity. Empirical results indicate that internal locus of control makes a greater contribution (40.3%) to resilience compared to social support (29%). When combined, these factors account for a substantial 69.3% contribution to resilience among COVID-19 survivors. Notably, the internal locus of control emerges as a more potent predictor, highlighting its significance in strengthening individuals' belief in their capacity to recover and thrive post-infection. In summary, the study demonstrates that both internal locus of control and social support play pivotal roles in fostering resilience among COVID-19 survivors. While social support contributes significantly, the belief in one's own control over life events appears to be the predominant factor. By bolstering these aspects, COVID-19 survivors can cultivate their resilience, accelerating their recovery and reintegration into normal life.

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