

Psychosocial Impact and Protective Factor of COVID-19 Confirmed Patient During Isolation Enactment: A Systematic Review

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Abstract

Background: An individual who is positively confirmed COVID-19 is required to undergo a long-term isolation. As a consequence, this condition can cause physical and psychosocial impacts. This review article aims to identify psychosocial impacts COVID-19 patients and protective factors the patients during isolation enactment. **Method:** This article is a systematic review by doing article identification from four data bases (ScienceDirect, ProQuest, EBSCO and PubMed) published between January to October 2020. The articles were selected using PRISMA based on assigned inclusion and exclusion, keywords on psychological impact, COVID-19, and confirmed patient. **Results:** Based on the 28 article analysis divides psychosocial domain into four aspects; they are emotional impact, social, and behavior. Protective factor was divided into four aspects, they are social support (family, social, medical team, and government support), personal ability (religious, cognitive, affective, psychomotor aspects), positive belief (internal and external), and material asset (facility and financial). **Conclusion:** Psychosocial impacts of confirmed COVID-19 patients during isolation enactment can be minimized through psychologist intervention by increasing patients' protective factors. Based on the finding, the suggestion was the part of nursing in isolation COVID-19 important to increase health condition of mental patients undergo isolation.

Keywords: confirmed patient, COVID-19, isolation, protective factor, psychosocial impact

Introduction

Coronavirus disease (COVID-19) is caused by the acute respiratory syndrome of coronavirus 2 (SARS-Cov-2) ¹. SARS-CoV, MERS-CoV, and 2019-nCoV

can cause disease in human ^{2,3}. COVID-19 is almost the same as SARS and MERS in characteristics, but spreads to human faster ⁴. COVID-19 infection from human to human is infected through direct contact and splat (droplet) when someone coughs or sneezes ⁵. Infection can be happened easily to vulnerable group ⁶. COVID-19 was found first in Wuhan, China ⁷ and spreads to almost the entire world ⁸.

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Confirmed cases of COVID-19 in the world up to August 2020, reach 19,936,210 cases with death cases of 732,499 ⁹, the highest death cases in the age >85 years old with 10%-27% ¹⁰. In Indonesia as of May

22, 2020, a total of 20,796 people have tested positive for COVID-19 and the mortality rate has reached 6.4 %¹¹. The effects of COVID-19 are very similar to all countries by considering the consequences of mental health or psychologically¹². The Psychology impact of COVID-19, such as fear and Anxiety are caused by its high infection risk, high morbidity and mortality, and the vaccine has not been found¹³. Anxiety symptoms increased substantially compared to before the COVID-19 pandemic among vulnerable persons with a pre-existing medical condition¹⁴. Research in China shows that there are 53.8% major psychological impact, 16.5% reports major depression symptoms, 28.8% reports major Anxiety symptoms, and 8.1% reports high level stress to the society during the pandemic¹⁵.

Society Health Status is generally divided into 4, They are suspect case, probable case, confirmed case, and definition of contacts⁹. A person is stated positive COVID-19 through swab test (RT-PCR)⁶. A patient needs treatment in the hospital if the patient has severe or medium sick with difficulty or comorbid, suffer disease, certain condition, or serious¹⁶. During isolation time, the patients only get medicine based on the symptoms, supportive treatment and complication prevention because the medicine of the target has not been found yet¹⁷.

Isolation treatment prohibits patients to meet their family and communications done through social media⁶. Based on those conditions the patient encountered many psychosocial impacts during the isolation. Thus, it is important to identify those impacts as a base to give intervention based on the patients' symptoms. Intervention given also needs consideration to the protective factor of the patients. Patients who a protective factor, family support, friends, and medical personnel can minimize the depression and Anxiety risk during isolation¹⁸. Psychosocial support⁷, mental health¹⁷, and adaptive coping source can prevent major depression symptoms that experienced by the patients⁷. Nurse can also gives intervention by supporting the patient to maximize protective

factor that had as an effort to minimize psychological impact during isolation time¹⁹. Psychosocial impact and protective factors are important to discuss because of the most articles only explained specific psychological impact¹⁹. It has not comprehensively explained the psychosocial impact and protective factors of the COVID-19 confirmed patient during isolation undergoing. Based on the problem that has explained, this article aims to identify psychological impact and protective factors that had by the patient during isolation time, so it can used as a base to give psychological intervention.

Methods

This systematic review study discerned psychological impacts and protective factors of confirmed COVID-19 patients during isolation enactment. We employed PRISMA checklist to select article that has been found from database²⁰.

Literature Searching Strategy and Selection Process

The strategy used to search for relevant article in this study was based on PRISMA guidelines (Figure.1). The article discussed about psychosocial impacts and protective factor of the confirmed COVID-19 patients who undergo the isolation and it can be developed a systematic process. Literature searching was done within the widely reputable publication databases such as ScienceDirect, ProQuest, EbscoEBSCO, and PubMed. Besides, we also used Boolean and keywords combination of "psychological impact AND COVID-19 AND confirmed patient".

The boundaries of the review question were defined through the development of inclusion and exclusion criteria using the PICOS (P = Population, I = Intervention or Issue of interest, C = Comparators, O = Out comes, S = Study type) format. The population were confirmed COVID-19 patients who undergo isolation. Issue of interest was a psychosocial impact and had not comparators. Out comes related to the psychosocial aspect and protective factor COVID-19

patients who undergo isolation. And study type the literature was not limited on research articles, but all kinds of articles, included letter of editor, review, and research articles. The articles written in English and published in the data based during January 2020 to October 2020.

Assessment of study quality and risk of bias

Study Quality Valuation and Refraction Risk from each article used JBI Critical Appraisal Tools that was suitable in this systematic review. Based on the appraisal using The JBI Appraisal Tools got we collected 28 articles that are suitable with the systematic review. Appraisal on JBI was divided on answering choice ‘yes’, ‘no’, ‘unclear’, or ‘not applicable’ by 1 value given for ‘yes’ and ‘0’ for

another answer. The research that fulfilled 60% appraisal critical criteria is worthy and got into this systematic review. We exclude a low-quality study to avoid refraction in based on the validity and review recommendation.

Results

Our systematic review obtained 1983 articles considering of 642 articles from ScienceDirect, 731 articles from ProQuest, 14 articles from Ebsco and 596 articles from PubMed. We identified 97 articles for text filtration completely to evaluate its worthiness. Then, we found 28 articles that are suitable with the inclusion criteria that have been determined and worthy to be reviewed. Literature filtration process is explained on Figure 1.

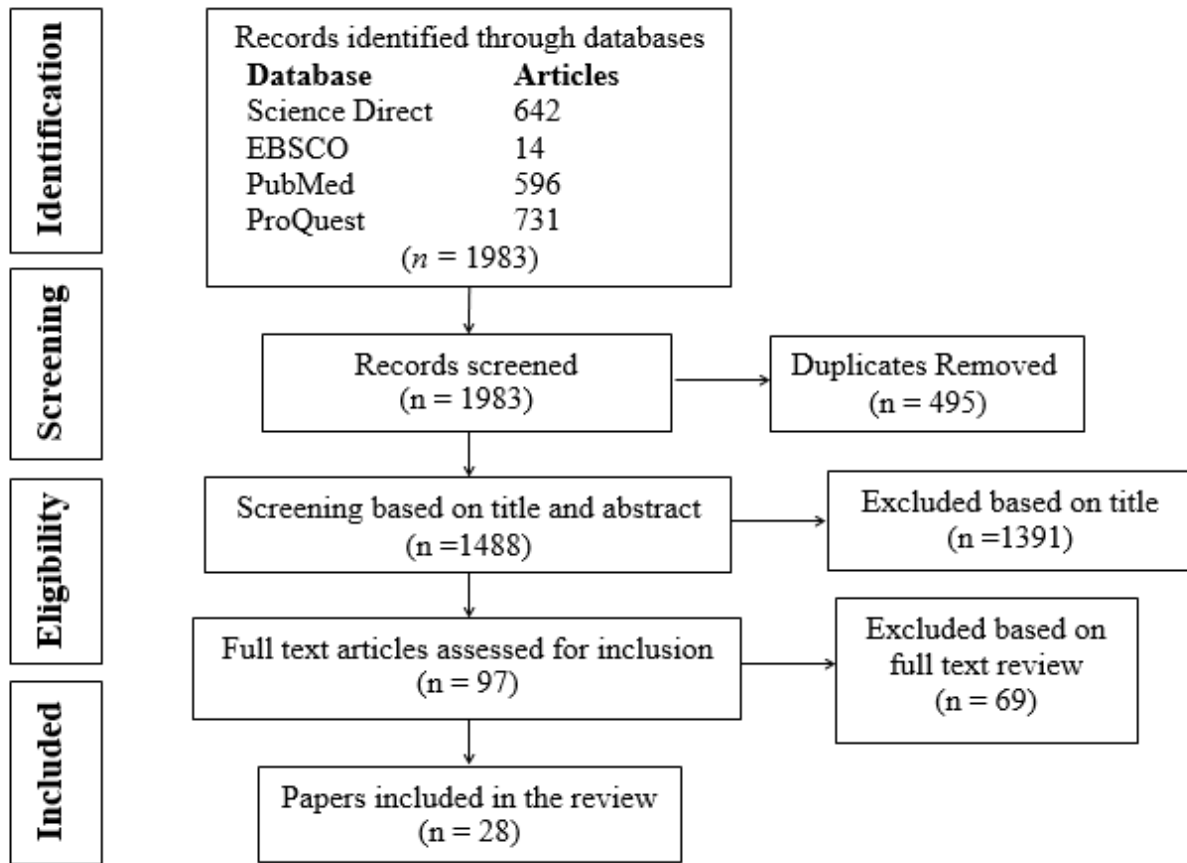


Figure 1. Reporting items for study flow diagram

Table 1 shows the summary of systematic review. (57.1%) were written by Chinese scholars and the rest, There were 20 research articles (71.4%) and 8 non- 4 USA articles, 3 Indian articles, 3 Ecuador articles, 1 research articles (28.6%) consisting of 4 review Algerian article, and 1 Jordan article. articles and 4 letters of editor. Most of the articles

Table 1. Summary of Article Included in the Study (n=28)

Authors and years	Study design	Psychosocial Impact			Protective Factor			
		Emotional	Social	Behavior	Social Support	Personal Ability	Positive believe	Material Asset
(Rongfeng et al., 2020)	Cross Sectional	√	√	√	√			
(Madani et al., 2020)	Cross Sectional	√		√	√			
(Xie et al., 2020)	Case Control	√		√	√			
(Bruns et al., 2020)	Clinical Practice Report	√	√	√	√	√		
(Dai et al., 2020)	Cross Sectional	√		√	√			
(Guo et al., 2020)	Mix Methode	√	√		√	√		
(Sun et al., 2020)	Qualitativ	√	√	√	√	√	√	
(Chen et al., 2020)	Cross Sectional	√	√				√	
(Chen et al., 2020)	Qualitativ	√	√	√	√	√		√
(Werner et al., 2020)	Literature Review	√			√			√
(Yang et al., 2020)	Cohort Study	√		√	√			
(Diaz & Baweja., 2020)	Letter of Editor	√						
(Liu et al., 2020)	Letter of editor	√	√	√	√			
(Paz et al., 2020)	Letter Of editor	√						
(Zhang et al., 2020)	Cross Sectional	√			√	√	√	
(Mo et al., 2020)	Article Review	√	√	√	√			
(Paz et al., 2020)	Cross Sectional	√				√		

Cont... Table 1. Summary of Article Included in the Study (n=28)

Authors and years	Study design	Psychosocial Impact			Protective Factor			
		Emotional	Social	Behavior	Social Support	Personal Ability	Positive believe	Material Asset
Samrah et al., 2020)	Cross Sectional	√	√		√	√	√	
(Ma et al., 2020)	Cross Sectional	√	√			√		
(Liu et al., 2020)	Cross Sectional	√	√					
(Hu et al., 2020)	Cross Sectional	√	√					
(Sahoo et al., 2020)	Cross Sectional	√	√	√	√	√	√	
(Mi et al., 2020)	Letter of editor	√						
(Mazza et al., 2020)	Cross Sectional	√	√	√				
(Upadhyay et al., 2020)	Descriptive Research	√						√
(Dubey et al., 2020)	Clinical Research & Review	√	√	√	√	√		
(Zhong et al., 2020)	Case Control	√				√		
(Garcia et al., 2020)	Case Report	√		√	√			√

The confirmed COVID-19 patients who are discussed are varied, from symptoms patients and asymptomatic patients. The isolation undergone by the patients are quarantined at home, hospital, and independently isolated. Psychosocial impacts experienced by the confirmed COVID-19 patients during isolation were divided into three impacts explained in Figure 2.

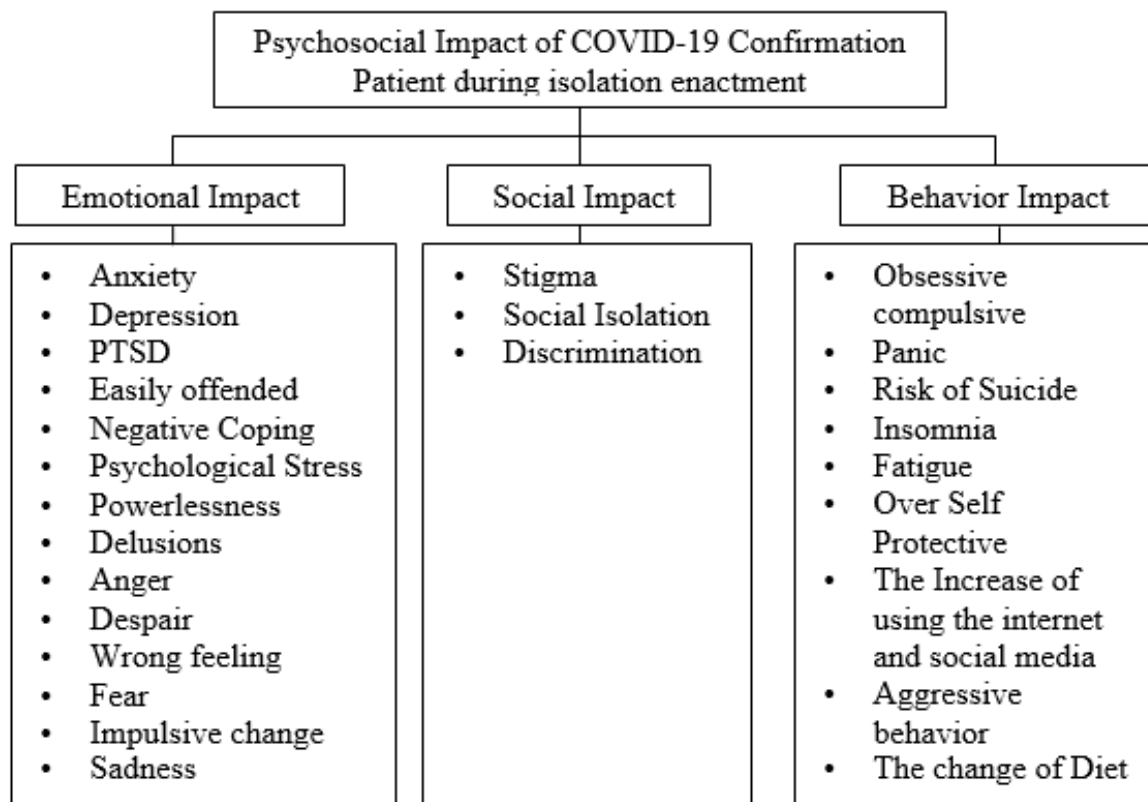


Figure 2. COVID-19 Confirmed Patients' Psychosocial Impact Analysis

Based on the analysis 20 articles (71.4%) informed that the protective factors among the patients during isolation enactment can minimize the psychological impacts. Protective factors in among confirmed COVID-19 patients during isolation at home or in the hospital were divided into four factors explained in Figure 3.

Discussion

Psychological Impacts on Confirmed COVID-19 Patients Undergoing Isolation

Confirmed COVID-19 patients must undergo a long term isolation during treatment and medication. During the isolation patients experience some physical and psychosocial impacts. Based on the article review analysis psychological impacts can worsen patient condition during isolation enactment. These were divided into emotional, social, and behaviour impact.

Emotional Impact

Based on the analysis, emotional impact consists of Anxiety, depression, PTSD, offended, negative coping, psychologically stress, helpless, delusion, anger, hopeless, guilty, mood changing, sadness and feared. Fear during COVID-19 included on being discomfort thinking about the pandemic, clammy hands, being afraid of losing life, nervousness and anxiety when watching news, insomnia and palpitating²¹. Prior to being hospitalized, early symptoms experienced by the patients are insomnia, aggressive behaviour, delusion, and major Anxiety²². Mental health problems of confirmed COVID-19 patients are depression and Anxiety happened from minor to major^{23,24}. Psychology impacts like Anxiety and depression are affected by negative stigma in the society²⁵. Anxiety happened because of different point of view and uncertainty of pandemic development²⁶. Based on gender aspect, female patients tend to experience

Anxiety because of contacts with colleagues who are positively confirmed COVID-19²⁷. Felling distress appeared when understanding that this disease recovery tends to be difficult, and even it ends on with death. Female patients also tend to experience depression and Anxiety with family members who are positive COVID-19²⁸. Patients who experiences sleeping disturbance is easier to experience Anxiety and when the sleeping quality is worsen it will be risky into depression²⁶. Patients will tend to experience the Anxiety after isolation so mental health readiness of the patients and family when go home to be taken care of²⁹.

Depression happened when having a family member who is COVID-19 diagnosed^{28,30}. A patient with a family member who is infected may be more depressed, maybe because of excessive psychological pressure, guilty about disease infection to another family member, and societal stigma^{18,29}. Depression is much happened to the female patients because of worrying about the health service process and uncertain disease medication³¹. Depression is also triggered by unsatisfying patients with the service and bad communication with the medical personnel. Minimum relation and communication between medical team and patient because of time limitation to interact and workload can trigger stress to the patients¹⁸. Patients in feeling depression tend to have low life quality³⁰. Depression is often followed by insomnia, Anxiety^{30,32}, and negative coping until ends to PTSD³³.

PTSD and depression can cause the increase of inflammation factor of COVID-19 patients^{28,34}. PTSD symptoms mostly happened the isolation enactment in the hospital. However, it can turn to be worse if patient have physical symptoms like sleeping difficulties³⁵. Besides PTSD, a major mental disorder problem experienced by the patients is acute psychotic disorder. Stress burden felt by COVID-19 patients can be risky to experience acute psychotic disorder if it is not given suitable intervention²². Thus, beside giving medication to handle physical symptoms, the

patients are also given sedative to mood stabilizer²². Giving psychotropic must consider the side effect to influencing patients' physic decreasing function^{29,34}. COVID-19 patient should be cared by psychiatric because can influence the neurologist function and, worsen brain nervous that cause mood disorder³⁶. Virus can replicate in cell system, influence immunity and mental, mood disorder, exhausting symptoms, appetite deficiency, social interaction decreasing, and lost interest³⁷.

Social Impact

Based on the analysis, social impact consisted of stigma, social isolation and discrimination. The patients' early response after being diagnosed with COVID-19 was fear, denial and stigma from society¹⁸. Community stigma and Anxiety cause of disease uncertainty that impacts on patients. Depression is a psychological problem sever and decreases patients physical condition³⁸. Patients have stigma from society can increase morbidity and mortality^{38,39}. Social stigma and discrimination decrease the patients' psychological condition³⁵. Patients with mental disorder history are risk because they feel guilty afraid of transmitting to family and other people and have social stigma from society²⁹.

Self-isolation or isolation in the hospital can COVID-19 patient feel fear, worry and isolation because they have to be separated from family members⁴⁰. Individuals feel isolated, so that Anxiety and anger cause of social networking facilities and activities³⁹. Even though isolation is carried at home and does not adapt to the environment, and patients feel limited to social interaction⁴⁰. While undergoing isolation, the patient worried about discrimination from society²³. Discrimination and stigma from society because of the rapid transmission of the virus and people's fear³⁴. Social stigma, isolation and discrimination can cause Psychological condition decrease⁴¹.

Behaviour Impact

Based on the analysis, behaviour impact consisted

of compulsive obsession, panic, insomnia or sleeping disorder, exhausted, behaviour changing, aggressive, dietary habit changing, to suicide trial. Suicide urge of patient triggered by stress, negative emotion, social isolation, helplessness, hopelessness, guilt, mood change, economical burden, joblessness, and family harassment³⁷. Those aspects become burdens they create financial loss of the patient³⁹. Male tends to experience it because man is the responsible person in the family cannot give financial guarantee during quarantine or isolation⁴². Economic difficulty also becomes a burden for the patient⁴¹. Pandemic information can increase Anxiety too in society, so it needs the ability to filter the information, the government also try to keep an eye on pandemic hoax spreading³⁷.

Many changing of emotional conditions emotional that felt can make the patient experiences some changing as; sleeping habit, dietary, and behaviour disorder^{18,24}. On panic condition, the patient becomes uncooperative so troublesome medical team to do an intervention⁴¹. Medical team must be able to consider the impact of social media usage to the patient relates to mental emotional condition⁴³. Beside that, medical staff hoped to give psychological intervention because wherever isolation places still experience a psychological problem⁴⁰.

Protective Factor of Confirmed COVID-19 Patients Who Undergo Isolation

A protective factor is a condition in an individual; family, community, and society can possibly catch stressor through effective way to decrease mental problem risk⁴⁴. Based on the article analysis result, a protective factor by confirmed COVID-19 patient during isolation time consisted of social support, personal ability, positive belief and material asset.

Social Support

Based on the analysis, social support consists of family support, medical team, and government. Social support may decrease of psychological stress

responses to negative life events or trauma historical⁴⁵. Good social support relates to the risk of decreasing psychology disorder to the patient³³. Social support that is needed by the patient in light COVID-19 can increase self-confidence, increase defence so it can help to lighten the psychology problem²⁷. Family support, friends, and medical team help recover the spirit and do not feel alone¹⁸. Appropriate support, self-ability, and intervention can increase the physical and psychological recovery of the patient^{18,38}. Patients get support from friends, family, and medical team who tend to have not depression. If it is impossible to meet family members, so they can sending positive messages and motivating¹¹. Support can be expressed online via the phone or social media³¹.

Medical team have an obligation to do intervention such as education about information and medication procedure, screening, follow up, prevention, disease prognosis, and the mortality development to minimize Anxiety⁴³. Intervention can be given to the patient via online media as an effort to minimize infection risk⁴⁶. Intervention conveying about the transparent and open information between medical team and the patient can decrease fear, Anxiety, discrimination that felt by the patient²⁶. Intervention of mental health and psychosocial support can decrease depression and stigma that the patient feels.

Medical personnel, team, and society also need support from, the government in the management effort of the psychosocial problem of COVID-19 patients. The government is hoped establishes rules to minimize negative stigma in society to the COVID-19 patient and develop a research program³⁴. Health promotion such as; healthy life-style, regular exercise and COVID-19 information minimum 1 hour every day can minimize psychological health effect⁴⁷.

Personal ability

Based on the analysis, personal ability consists of religious, psychomotor, affective, and cognitive aspects. The ability of social media usage wisely and effectively depends on knowledge level or patient

cognitive ability⁴⁶. Social media usage, mostly Facebook and YouTube, is the second coping method that used generally³¹. The patients also needs beside the knowledge of social media, the adaptive of second coping strategy³⁸. Adaptive coping and support system that individual had during isolation helped the patients not be burdened¹⁹. Using an adaptive coping strategy during isolation is very important for the patient to adapted to the new environment⁴⁰. The other that, the patients' ability to adapt to the problem also minimizes Anxiety and burden that felt during isolation²⁷. Patient uses religious aspect as well that trusted to face and to response problems⁴⁰. Thus, religious aspect is often used by the nurses to give psychological intervention for the confirmed patient⁴⁰. An individual resilient can protect from depression and Anxiety symptoms, against negative emotion to prevent stress and increase mental health²⁷. Nurses often encourage the patient to do light exercise, take regular rest during isolation, so self-awareness doing those is necessary for patients' health⁴⁷.

Positive belief

Based the analysis, positive belief consists of internal and external factors. Internal factors sourced from the inside of the patient, and external factor sourced from patient belief in God and others. Internal factor is such as thankful, positive thinking, and optimism in life. Patients create thankful for life and problems that must be accepted and faced are lessons to be braver and stronger¹⁸. Self-ability of the patient as like God's belief and good spiritual level can minimize the risk of mental health problems during isolation⁴⁰. Positive thinking can decrease the burden or psychological stress that faced the patient²⁷. Positive thinking is needed not only for self but also for family, others (society or medical personnel). Positive thinking is a positive belief as well to medical personnel as persons who can help recovery and minimize depression symptoms³¹. The important thing for the patients to increase their psychological welfare is optimistic during treatment time¹⁹. Besides that, patients also keep increasing self-belief that they

can be recovered²⁷.

Material asset

Based on the analysis, material asset consists of the financial and facility available. COVID-19 patient feels more burdened because of the family economic and the unavailable of facilities during isolation. Monetize burden, joblessness, and family harassment can become related reasons for increasing suicide intention in COVID-19 patients³⁷. As if the man bears Indian customs, economics, and when he is confirmed COVID-19 then undergo on isolation, the Anxiety of family needs will appear⁴². Based on that matter, financial sufficiency can decrease stress level on the patient³⁷. Relating to the facilities, the patient needs good facilities to do social relations and support the environment during isolation. Treatment from the staff and comfort living environment minimize the burden or psychosocial problems of the patient during isolation¹⁹. Effort that can be done to increase mental health is creating a supporting environment, easy access to health treatment services and clear policy relates to health service³⁸.

This is systematic review limitation relates to original article source research that discusses about special psychosocial impacts impacts-on confirmed COVID-19 patients during isolation enactment. We analyzed 4 Letter of Editor 4 articles (14.2%). Besides that, there are 3 articles (10.7%) focus on both confirmed COVID-19 patients and all pandemic impacted groups.

Conclusion

COVID-19 patients have experienced many psychosocial impacts during isolation enactment. Psychosocial impacts during isolation were divided into emotional impact, social impact, and behaviour impact. Aside from the many psychosocial affects, during isolation enactment, patients can survive because they have protective factors. Protective factors of COVID-19 patients were divided into social support, personal ability, positive belief, and

material asset. Each protective factor in the patients can dig and push to be more increasing can be use to minimize psychological problems during isolation enactment. Based on the identification results, many psychological affects that are experienced by the patients should be given appropriate intervention using recommended methods.

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Ethical Clearance

Due to the characteristic of this research design is a systematic review (use of secondary data) the ethical evaluation was not required. However, statement of research ethics in the journal articles would serve as a consideration of the use of the publication for this review.

Declaration of competing interest

The authors declare, There is no conflict of interest.

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Authorship

3- All authors conceived the idea, concept and design of the study. Mira Wahyu Kusumawati writing, drafting and revising the article. Setyawati Soeharto and Heni Dwi Windarwati revising the article. All authors discussed the results and contributed to the final manuscript final approval of the version to be submitted.

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