



Assessment of Knowledge, Attitude, and Negative Emotions among Gynecologic Oncology Patients during the Coronavirus Disease-19 Pandemic

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Abstract

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BACKGROUND: Coronavirus disease-19 (COVID-19) has been declared a world pandemic by World Health Organization (WHO). The ability of COVID-19 to be transmitted quickly causes fear and excessive worry in certain groups of people, such as the elderly and those with chronic diseases, including oncology and gynecology patients and the caregivers around them (family members).

AIM: This study investigates knowledge, attitude, and negative emotions among gynecologic oncology patients and their families during the COVID-19 pandemic at Hasan Sadikin Public Hospital.

METHODS: In this descriptive study, 100 patients with gynecologic malignancies at Hasan Sadikin Hospital, Bandung, Indonesia, were assessed in May 2020–April 2021, who asked for their current knowledge, attitude, as well as negative emotions through Depression Anxiety Stress Scale (DASS-42).

RESULTS: The average age of the respondents in this study was 45.50. There were 31 respondents with low-level knowledge, 36 with moderate-level knowledge, and 33 with a high level of knowledge about COVID-19. Based on the attitude assessment, only 44 respondents (44%) always wore masks, 54 (54%) kept a distance of 1 meter, and 42 (42%) kept away from the crowd. An evaluation using the DASS-42 showed that 3, 4, and 0 subjects experienced severe depression, severe anxiety, and severe stress, respectively.

CONCLUSIONS: All Indonesian citizens must take necessary measures to prevent COVID-19, including wearing masks, maintaining a minimum distance of 1 m, and washing hands. This study found that not all respondents could comply with the health protocols that were carried out to prevent the transmission of COVID-19. Respondents who experienced severe depression and severe anxiety needed further attention to determine whether they required counseling with a psychiatrist.

Introduction

Coronavirus disease-19 (COVID-19) has been declared a world pandemic by World Health Organization (WHO). Coronavirus is a zoonosis or virus transmitted between animals and humans [1]. The virus and this disease appeared for the 1st time in Wuhan, China, in December 2019. As of July 15, 2020, the number of COVID-19-positive patients has reached 3,428,553 people spread in 188 countries, including Indonesia [2], [3].

COVID-19 is creating fear among the people [3], [4]. In this regard, the government implements large-scale social restrictions to control the spread of this virus [5]. Despite that, Indonesia is still facing a crisis as the number of positive cases keeps rising [6]. Shortage of personal protective equipment and facilities makes the healthcare professionals be at huge risk across the country. It has been turning into a nightmare as the number of medical professionals, including doctors and nurses, are getting infected while treating the patients [7], [8].

The capability of COVID-19 to be transmitted quickly causes fear and excessive worry in certain groups of people, such as the elderly and those with chronic diseases, including oncology and gynecology patients and the caregivers around them (family members) [5], [9]. It poses a huge impact on their physical and mental health [3], [5], [6]. They may feel depressed, anxious, and stressed because of the uncertainty of starting treatments such as chemotherapy, radiotherapy, or surgery. They realized that delayed treatment would exacerbate their cancer status, decreasing their survival rate [9], [10]. Furthermore, cancer heightens the risk of critical illness development and a higher mortality rate due to COVID-19 [11]. Thus, gynecological oncology patients need to stick to the suggested preventive measures. Following these preventions might be hampered because of their negative emotions, attitude, and knowledge concerning COVID-19 [12]. Therefore, people should be aware of the COVID-19 preventive measures as a critical requirement to decrease infection [12]. Accordingly, the present study aims to assess attitude, knowledge, and negative emotions among gynecologic oncology

patients at Hasan Sadikin Public Hospital during the COVID-19 crisis.

Methods

This descriptive study was carried out during the COVID-19 pandemic in May–April 2020. The study population included patients with gynecologic malignancies (100 respondents). Furthermore, the research data were collected at the Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Dr. Hasan Sadikin Hospital, Bandung, Indonesia. The questionnaire was provided for the patients during their stay at the department. After giving proper instructions, participants either completed the questionnaire themselves or were interviewed (those unable to complete the questionnaire themselves). Participation in this research was voluntary, anonymous, and confidential, and all research ethics were followed.

All study participants provided written informed consent before engaging in any study-related procedures. This study was approved by Hasan Sadikin Hospital Bandung Ethics Committee Review Board reference no.: LB.02.01/X.6.5/002/2020. All authors hereby declare that all patients have been examined in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki. All participants filled out the questionnaire in a conscious state.

Apart from not participating in the study, the researchers set no additional exclusion criteria. This study used a convenience sampling method based on the availability and ease of obtaining the required sample. The research material was collected using a fully structured questionnaire consisting of three parts as follows.

Knowledge assessment including 10 questions about COVID-19: Percentage of total right answers shows the knowledge of respondents. We also asked questions about patients' sociodemographic features (age, educational level, and occupation), the purpose of the hospital visit, and insurance status.

Attitude assessment involving many questions related to the compliance against COVID-19 such as mask usage, physical distancing, avoiding the crowd, washing hands, response preparation in the case of COVID-19 symptoms, effects on activity, family attitude, attitude toward relatives/friends infected by COVID-19, comfort in using a mask, and COVID-19 service.

Depression anxiety stress scale (DASS-42) was used to assess patients' psychological distress. This scale evaluates mental health parameters that characterize a negative emotional state such as depression, anxiety, and stress. The scale consists of 42 statements divided into three sub-scales (each with seven items), namely depression, anxiety, and

stress. The responses are represented on a 4-point Likert scale, that is, zero ("did not apply to me at all"), 1 ("applied to me to some degree, or some of the time"), 2 ("applied to me to a considerable extent, or often"), and 3 ("applied to me very much, or most of the time"). The total scale and subscale scores are calculated by summing responses to the individual items multiplied by 2. Therefore, ultimate scores for each of the subscales range between 0 and 42, while the total DASS-42 scores range between 0 and 126. Higher scores indicate high levels of negative emotional state and high levels of mental stress [13]. Widyana *et al.* [14] revealed the high level of validity and reliability of the Indonesian version of DASS-42.

Descriptive statistical methods, including mean and standard deviations, were implemented for data analysis using SPSS version 22.0.

Results

The subject characteristics of this study are described in Table 1. The mean age of patients was 45.27 ± 12.098 years, about 45 (45%) respondents went to the hospital for routine control, while the others referred for surgery (9 or 9%), chemotherapy (32 or 32%), and radiotherapy (9 or 9%).

Table 1: Subject characteristics

Variable	n=100
Age	
Mean±SD	45.27±12.098
Median	45.50
Range (min-max)	19.00–68.00
Hospital visit purposes	
Routine control	45 (45.0%)
Surgery	14 (14.0%)
Chemotherapy	32 (32.0%)
Radiotherapy	9 (9.0%)
Education	
Elementary school	36 (36.0%)
Junior high school	31 (31.0%)
Senior high school	25 (25.0%)
Associate degree	1 (1.0%)
Bachelor degree	7 (7.0%)
Occupation	
Housewives	90 (90.0%)
Civil Servant	3 (3.0%)
Laborer	2 (2.0%)
Entrepreneur	5 (5.0%)
Insurance Status	
BPJS	100 (100.0%)
Non-BPJS	0 (0.0%)

Categorical data are presented with number/frequency and percentage, while numerical data are listed with mean, median, standard deviation, and range.

The assessment of knowledge based on the filled questionnaire is explained in Table 2. In this respect, 31, 36, and 33 respondents had low-level, moderate-level, and high-level knowledge, respectively.

Table 2: Overview of knowledge scale

Variable	n=100
Knowledge scale	
Low (0–30)	31 (31%)
Moderate (40–70)	36 (36%)
High (80–100)	33 (33%)

Categorical data are presented with number/frequency and percentage, while numerical data are listed with mean, median, standard deviation, and range.

The respondent's behavior is described in Table 3; 44 respondents always used a mask while the other answers included "often," "seldom," and "never." Further, 54 respondents always maintained a distance of 1 m, 42 respondents always stayed away from crowds, 74 respondents will visit the hospital if they have COVID-19 symptoms, 52 respondents obeyed government regulations to stay at home, and 41 respondents said that there was a change in family attitudes in reducing visits to hospitals, 49 respondents will continue to encourage relatives infected with COVID-19, 49 respondents feel comfortable to wear masks, and 44 respondents feel that all hospital services have become more limited due to the COVID-19 pandemic.

Table 3: Description on knowledge scale

Variable	n=100
Mask usage	
Always	44 (44.0%)
Often	18 (18.0%)
Seldom	11 (11.0%)
Never	27 (27.0%)
Keeping 1 m distance	
Always	54 (54.0%)
Often	26 (26.0%)
Seldom	12 (12.0%)
Never	8 (8.0%)
Avoiding crowds	
Always	42 (42.0%)
Often	36 (36.0%)
Seldom	15 (15.0%)
Never	7 (7.0%)
Washing hands	
Always	56 (56.0%)
Often	31 (31.0%)
Seldom	3 (3.0%)
Never	10 (10.0%)
Response preparation if COVID-19 symptoms present	
Go to hospital	74 (74.0%)
Treat in primary clinic	21 (21.0%)
Buy medicine in pharmacy	3 (3.0%)
Ignore	2 (2.0%)
Effect on activity	
Limited activity	28 (28.0%)
Usual Activity	8 (8.0%)
Difficult to leave house	12 (12.0%)
Stay home as recommended by government	52 (52.0%)
Family attitude	
Ignorant	21 (21.0%)
Being lazy to take control to the hospital	15 (15.0%)
Acting usual	23 (23.0%)
Keep caring but reduce visits to hospital	41 (41.0%)
Attitude toward relatives/friends infected by COVID-19	
Stay away	19 (19.0%)
Maintain relationship as usual	25 (25.0%)
Encouraging	49 (49.0%)
Do not know	7 (7.0%)
Comfort using a mask	
Sometimes uncomfortable	35 (35.0%)
Comfortable	49 (49.0%)
Expensive	9 (9.0%)
Feels itchy and becomes difficult to breathe	7 (7.0%)
COVID-19 service	
Scary	30 (30.0%)
Everything becomes very restricted	44 (44.0%)
Hard to ask for referral	8 (8.0%)
Nothing special	18 (18.0%)

Categorical data are presented with number/frequency and percentage, whereas numerical data are listed with mean, median, standard deviation, and range.

The assessment of DASS-42 is presented in Table 4. Respondents with a normal, mild, medium, severe, and very severe depression subscale were as many as 77 (77.0%), 9 (9.0%), 10 (10.0%), 3 (3.0%), and 1 (1.0%), respectively. Respondents with normal, mild, medium, severe, and very severe anxiety subscale included 70 (70.0%), 10 (10.0%), 14 (14.0%), 4 (4.0%), and 2 (2.0%), respectively. There were 91 (91.0%), 5 (5.0%), 4 (4.0%), 0 (0%),

Table 4: Description based on depression anxiety stress scale category

Variable	n=100
Depression subscale	
Normal	77 (77.0%)
Mild	9 (9.0%)
Moderate	10 (10.0%)
Severe	3 (3.0%)
Very severe	1 (1.0%)
Anxiety subscale	
Normal	70 (70.0%)
Mild	10 (10.0%)
Moderate	14 (14.0%)
Severe	4 (4.0%)
Very severe	2 (2.0%)
Stress subscale	
Normal	91 (91.0%)
Mild	5 (5.0%)
Moderate	4 (4.0%)
Severe	0 (0.0%)
Very severe	0 (0.0%)

Categorical data are presented with number/frequency and percentage, whereas numerical data are presented with mean, median, standard deviation, and range.

and 0 (0%) respondents with a normal, mild, medium, severe, and very severe stress subscale, respectively.

Discussion

The COVID-19 is an infectious disease that has symptoms similar to the common cold accompanied by fever and dry cough. Almost 90% of patients have a fever, and more than two-thirds have a dry cough [15]. At present, the government advises anyone with symptoms, such as high temperature and persistent cough, to self-isolate at home or in a health facility for 14 days from the onset of symptoms [5]. Based on data received until September 28, 2020, there were 3,509 new cases of COVID-19 in the last 24 h in Indonesia. This number makes the 278,722 cases of COVID-19 total in Indonesia, as the first patient infected with the coronavirus was confirmed on March 2, 2020. About 206,870 COVID-19 patients were cured and a total number of 10,473 died [16].

In the COVID-19 crisis, health and mental health professionals have been facing challenges due to very little information on the psychological impact and underlying mental health conditions of patients and their families, including gynecologic oncology patients. There are also psychological impacts on society, for example, increasing stress and anxiety [3], [17]. The existence of various kinds of health protocols, including quarantine, makes many differences in the provision of services to patients who fear, which can make patients feel alone, depressed, or even increasing use alcohol and drugs to hurt themselves and other people [18]. In Indonesia, researchers are busy exploring the genomic character of the virus, identifying the epidemiology, clinical characteristics of infected patients, and the challenges faced by healthcare workers. However, less focus has been being paid to the impact of COVID-19 on the mental health of Indonesian people [18].

Our research presented subject characteristics, for example, they were mostly around 45 years old or more. Most patients came for routine control (45%), and some patients came for surgery, chemotherapy, and radiotherapy. Most of the subjects (36%) were elementary school graduates, and about 90% of respondents were housewives. All of the respondents used government insurance (BPJS).

Assessment of respondents' knowledge about COVID-19 showed that they are not well aware. Thus, they need to be reformed about prevention measures against COVID-19. We can provide the patients and family with regular education, while they are waiting for the doctor's consultation using television media.

The attitude toward COVID-19 among most of the patients and families still needs to be improved. Although they knew that hand washing, mask usage, and physical distancing should be obeyed, they did not act sufficiently. This could be due to the lack of information they had received about the COVID-19 pandemic and prevention measures, which could be resolved by proper education about the situation. They also knew that under such circumstances, the spirit of encouragement is a key to positive thinking. Yet, they had trouble taking medical treatment regularly because activities were restricted. Since the treatment was delayed, their confidence and optimistic attitudes toward the success of their treatment were adversely affected, especially among late-stage cancer patients.

Gynecologic malignancies are common malignant disorders. Their prevalence has increased significantly in recent decades; therefore, they are a major health problem with serious consequences to society and the economy [10]. COVID-19 pandemic has made some patients and families feel stressed or depressed regarding their future therapy or chemotherapy schedule [10].

During May 2020–April 2020, the Hasan Sadikin Hospital placed many restrictions on scheduling operations for patients, including gynecologic oncology patients. Besides, the doctor's practice schedule was also limited; many chemotherapies and radiotherapy schedules were delayed. The delay in action in malignancy patients is frightening because tumor enlargement will occur quickly [9].

The use of the DASS-42 serves to assess depression, anxiety, and stress in gynecologic oncology patients who were experiencing many delays in therapy at the time of this study. In addition to the DASS-42, there is a short version of DASS with 21 questions where in depression, anxiety, and stress subscales have 7 question items each. The clinical use of DASS is to determine the emotional disturbance of a subject. The DASS's primary function is to assess the severity of the core symptoms of depression, anxiety, and stress. At the time of the COVID-19, people who have had depression, anxiety, or stress usually have shown additional symptoms that interfere with a person's

life activities, such as sleep disorders, eating disorders, or even sexual disorders [18], [19]. Therefore, the clinicians need to investigate these disorders according to treatment requirements.

In the present study, 3 patients were severely depressed (DASS-42 score >20) and 1 patient felt depressed very severely (DASS-42 score >28). This may result from their specific conditions, that is, suffering advance stage cancer. It made them feel hopeless since they knew that delayed treatment (due to social restriction) would decrease their quality of life and worsen their treatment outcome. Furthermore, 4 people felt very anxious (DASS-42 score >15), and 2 people experienced very severe anxiety (DASS-42 score >20). Their anxiety was likely due to the anticipation of their treatment outcome and their quality of life, which might deteriorate as the treatment was delayed, especially for those with worse prognosis [9], [10].

Cancer causes a lot of changes in patients. These, in turn, can lead to various physical and psychological complications such as anxiety, disappointment, fatigue, depression, and a feeling of proximity to death. The results of previous studies have indicated that reducing the psychological problems of a patient with cancer could increase his or her life expectancy, well-being, and quality of life. Psychological stress impairs a patient's physical and mental functions [20]. In addition, negative emotions in cancer patients lead to an increased risk of psychological comorbidities, contributing to suboptimal treatment adherence and potentially worse health outcomes.

We have discussed the potential psychological impact of the COVID-19 pandemic based on expert opinion and previous experience with this type of pandemic. Falcone *et al.* [21] surveyed cancer patients to explore the impact of the outbreak on their emotional well-being and quality of life more objectively. There was objective evidence that the COVID-19 outbreak caused substantial emotional distress among cancer patients, regardless of the severity of their illness or treatment needs.

The good news is that we found no one with a stress condition, which could be the result of reassurance given to the patients over time about the treatment and other health services. We had also provided some alternatives to communicate with our patients through a telemedicine communication system, namely, WhatsApp or phone call service so that patients or families could ask about their health service. However, we did not involve a psychiatric specialist, so we need to collaborate with psychiatrists in the future on how to manage stress, depression, or anxiety in gynecologic oncology patients during the COVID-19 pandemic. We assume this research as a tool to help us to better communicate with our patients and understand their confusion in this pandemic situation.

Conclusions

This study investigates knowledge, attitude, and negative emotions among gynecologic oncology patients and their families during the COVID-19 pandemic at Hasan Sadikin Public Hospital, Bandung, Indonesia. In detail, 33 respondents had enough knowledge of how to face COVID-19, but the others needed to be further informed and aware. All Indonesian citizens should take necessary measures to prevent COVID-19 infection, including wearing masks, maintaining a minimum distance of 1 m, and washing hands. This study found that not all respondents could comply with the health protocols that were carried out to prevent the transmission of COVID-19. Respondents who experienced severe depression and severe anxiety needed further attention to realize whether they require counseling with a psychiatrist.

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