Patient Perceptions Toward the Changes in Outpatient Oncology Service During the COVID-19 Pandemic

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Article Info

Abstract

COVID-19 crisis has posed an enormous challenge for all healthcare services. Therefore, this study aimed to describe the cancer patients' knowledge and perceptions on oncology service quality during the COVID-19 pandemic. Cancer outpatient knowledge and perceptions toward the changes in chemotherapy and radiotherapy service in response to the pandemic was evaluated using a questionnaire. Majority of the 230 participants were knowledgeable about the pandemic and more than 95% of them claimed to sufficiently practice preventive measures. Television and the internet were their main source of information, and despite the fear of being infected by the COVID-19 virus, less than 15% of the respondents thought to stop or delay hospital visits. Generally, the changes in oncology service were well-received by the patients and they trust the health care workers in maintaining their safety. Also, oncology services delivery to outpatients remains consistent despite several alterations in hospital policies. Personal protective equipment utilization by health care workers and patients proved to be an important factor in reducing anxiety during hospital visits. Policy makers need to fully utilize the internet and associated mobile applications as an education tool.

INTRODUCTION

The coronavirus disease 2019 (COVID-19) pandemic has created unprecedented challenge to global healthcare system (Tsamakis et al., 2020). The first two cases of COVID-19 in Indonesia were confirmed on 2nd March 2020. By the 1st May 2021, the National COVID-19 National Task Force reported 1.687.780 confirmed cases with 45,652 (2.7%) deaths (COVID-19 Response Acceleration Task Force, 2020). Early shortage of personal protective equipment (PPE), medical supplies, isolation ward, and increasing number of healthcare workers infected by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) complicates the delivery of optimal medical care. This predicament has significantly affected the management of cancer patients as they are highly susceptible to infection due to their immunocompromised status (Patel et al., 2020). The risk of mortality and morbidity in relation to COVID-19 is also higher in cancer sufferers (Liang et al., 2020).

In response to this emergency, a multitude of guidelines have been published by numerous

governmental and medical professional organizations to mitigate the spread of infection (Djalante et al., 2020). Conforming to these guidelines, our institution implemented several changes in hospital policies that affect day-to-day service such as early COVID-19 screening, patient prioritization system, treatment postponement, physical distancing, attending clinical appointment alone, etc. However, the patients' response and perception to such changes is unknown. The physical isolation and treatment delay might subject them to additional phycological stress on top of their cancer diagnosis that will affect treatment adherence and ultimately their clinical outcome (Al-Quteimat & Amer, 2020). Given the novelty of this topic, there are limited studies that explored the perception of cancer patients to the quality of oncology service during the COVID-19 pandemic. The objective of this study is to evaluate the cancer patients' knowledge of the pandemic and their perceptions on the quality of oncology service during the crisis.

METHODS
Study Design, Participants, and Data Collection

This descriptive cross-sectional study utilized a questionnaire-based approach to gather information from cancer patients between 6th July and 17th July 2020 in an oncology outpatient clinic of a tertiary referral hospital, in Dr. Kariadi General Hospital, Semarang, Indonesia. All cancer patients of any type and disease stage who were waiting in the outpatient oncology clinic or undergoing chemotherapy were approached and given a questionnaire, consecutively. Willing patients were informed that their participation will not affect the service they will receive, and their confidentiality was ensured. After informed consent, all participants were given an unlimited amount of time to finish the questionnaire that was collected before they leave the oncology unit. They were not allowed to bring home the questionnaire. Incomplete response was excluded from analysis. In this case, the questionnaire was returned to the participant on the same day to be completed. Typically, the researchers began by briefing all participants on the study objectives and allowed themself to be available to guide them through the questionnaire. Family member was allowed to aid participants in filling the form. Patients who refused to participate and clinically unfit patients were not given the questionnaire. Data collection was performed by two general practitioners unaffiliated with our institution. Ethical approval was obtained from the Health Research Ethics Committee of Dr. Kariadi General Hospital, Semarang (No. 544/EC/KEPK-RSDK/2020).

Questionnaire

The questionnaire was designed by the hospital COVID-19 task force, a group of clinicians, surgical, and radiation oncologists, approved by the governing committee of ethics. The 30-point questionnaire contained two main parts. The first part is comprised of 15 questions that explore the level of participant's knowledge on regarding the COVID-19 outbreak. It evaluates how does the participants perceive the level of severity of the pandemic, their opinion regarding personal or public preventive measures, what actions have they undertaken to reduce transmission, and the effect of COVID-19 on their illness (Table 2). The second part of the questionnaire evaluate the quality of oncology service during the pandemic (Table 3).

It identifies the patient's difficulty in accessing health care since the pandemic, the level of fear, their opinions regarding the changes in hospital policies, views on how to reduce the level of anxiety during hospital visits. Data were tabulated using Microsoft Excel for Windows 2019 (version 16.0.12, Microsoft Corporation, Washington, United States). Data presented as total number (n) and percentage (%) or mean and standard deviation (SD), as appropriate.

RESULTS AND DISCUSSION
Characteristics of Participants

A total of 230 patients were participated in this study. The mean age of the participant was 49.2 years old, ranging from 20-82 years. Eighty-three percent of participants were female, Javanese ethnicity (97.0%), having educational status equivalent to High School (27.0%), married (90.4%), and have monthly income of below average (66.1%). The highest cancer diagnosis was 135 (58.7%) breast cancer, followed by 35 (15.2%) head and neck, 15 (6.5%) gynecologic, and 14 (6.1%) lymphoma patients. Most participants (223 out of 230 97.0%) have undergone chemotherapy, 86 (37.4%) radiotherapy, and 172 (78.4%) had undergone surgical treatment. The detailed data of the participants' demographics is presented in Table 1.

The mean age of the participant was 49.22 ± 11.035 years, ranging from 20-82 years. This result was because cancer is an age-related disease. The incidence of most cancers increases with age, rising more rapidly at the beginning of midlife (45-64 years old). This population accounts for more than 25% of the total population in developed countries, like the United States. The behaviors of midlife adults (such as smoking, lack of physical activity, and poor diets) are believed to put them at a higher risk for cancer, especially for breast, colon, and lung cancers (Ory et al., 2014; White et al., 2014).

Table 1. Characteristics of Participants

Characteristics	Number (%)
Total	230 (100%)
Age[a]	49.22 ± 11.035 (range 20-82)
Sex	191 (83.0)
Female	39 (17.0)
Male	
Nationality	
Indonesia	230 (100.0)
Foreigner	0 (0.0)
Ethnicity	
Javanese	223 (97.0)
Chinese	4 (1.7)
Betawi	1 (0.4)
Dayak	1 (0.4)
Malay	1 (0.4)
Educational status	
Illiterate	12 (5.2)
Elementary school	53 (23)
Junior high school	49 (21.3)
Senior high school	62 (27.0)
Graduate	49 (21.3)
Post-graduate	5 (2.2)
Marital status	
Married	208 (90.4)
Unmarried	15 (6.5)
Divorced	7 (3.0)
Number of house occupants	
1-5	199 (86.5)
>5	31 (13.5)
Monthly income[b]	
Below average	152 (66.1)
Average	73 (31.7)
Above average	5 (2.2)
Cancer type	
Breast	135 (58.7)
Lung	5 (2.2)
Head and neck	35 (15.2)
Haematology	7 (3.0)
Colorectal	8 (3.5)
Lymphoma	14 (6.1)
Urology	5 (2.2)
Gynaecologic	15 (6.5)
Skin	1 (0.4)
Sarcoma	5 (2.2)
Treatment	
Chemotherapy	223 (97.0)
≤5x	89 (38.7)
5-20x	124 (53.9)
>20x	17 (7.4)
Radiotherapy	86 (37.4)
≤5x	16 (7.0)
5-20x	30 (13.0)
>20x	40 (17.4)
Surgery	172 (74.8)

a Data presented as mean ± standard deviation (SD), and minimum-maximum, respectively
b Below average: <3 million Indonesian Rupiah (IDR); Average: 3-15 million IDR; Above average: >15 million IDR

Table 2. Participant's Perception of COVID-19

Questions	Answer	Number (%)
Worried about getting infected with COVID-19	Very worried	68 (29.6)
	Slightly worried	111 (48.3)
	Not worried	51 (22.2)
Knowledge about being infected or not	Yes	0 (0.0)
	No	186 (80.9)
	Do not know	44 (19.1)
Have undergone laboratory tests to confirm COVID-19 (rapid-test or PCR test)	Yes	17 (7.4)
	No	213 (92.6)
Disruption in daily activities due to COVID-19	Very disturbed	61 (26.5)
	Disturbed	89 (38.7)
	Not disturbed	78 (33.9)
	Not at all	2 (0.9)
Staying at home and avoiding social events due to COVID-19	Yes	219 (95.2)
	No	11 (4.8)
Social distancing of at least 2 meters	Yes	224 (97.4)
	No	6 (2.6)
Increased frequency of hand-washing habits	Yes	228 (99.1)
	No	2 (0.9)
Wearing facemask when going outside	Yes	228 (99.1)
	No	2 (0.9)
Opinion on whether people should stay at home and cancel a social meeting	Yes	206 (89.6)
	No	24 (10.4)
Opinion on whether people should avoid shaking hand with others	Yes	215 (93.5)
	No	15 (6.5)
Opinion on whether all shops which do not sell primary needs (e.g., supermarket, pharmacies, post office, and gas station) should be closed temporarily due to the COVID-19	Yes	74 (32.2)
	No	156 (67.8)
Opinion on whether there should be a night curfew (except for grocery shopping, working, or seeking medical treatment) due to the COVID-19	Yes	175 (76.1)
	No	55 (23.9)
Knowledge about whether the coronavirus can worsen cancer suffered by the participants	Yes	101 (43.9)
	No	129 (56.1)
Source of information about the COVID-19	Radio	1 (0.4)
	Television	166 (72.2)
	Internet	55 (23.9)
	Other	8 (3.5)
Knowledge about the recent number of confirmed COVID-19 cases in Indonesia	<100	5 (2.2)
	100-1,000	39 (17.0)
	1,000-5,000	31 (13.5)
	4,000-10,000	48 (20.9)
	>10,000	107 (46.5)

Table 3. Participant's Perception of Quality of Outpatient Care during COVID-19 Pandemic

Questions	Answer	Number (%)
Worried about getting infected with COVID-19 during visiting the Oncology Outpatient Clinic for follow-up care	Very worried	93 (40.4)
	Slightly worried	94 (40.9)
	Not worried	43 (18.7)
Thoughts to stop or delay follow-up care in the Oncology Outpatient Clinic	Yes	30 (13.0)
	No	200 (87.0)
Difficulty in getting follow-up care due to COVID-19	No difficulty	162 (70.4)
	Difficulty in accessing the hospital (transportation)	43 (18.7)
	Delay in follow-up care by the hospital	5 (2.2)
	Longer queue	11 (4.8)
	Limited healthcare providers (doctors, nurses, administrative officers)	2 (0.9)
	Other	7 (3.0)
Change in the quality of follow-up care due to COVID-19	Yes	84 (36.5)
	No	146 (63.5)
Opinion as to whether the COVID-19 protocol implemented in Dr. Kariadi General Hospital was sufficient or not	Very insufficient	1 (0.4)
	Slightly insufficient	9 (3.9)
	Sufficient	113 (49.1)
	More than sufficient	107 (46.5)
Opinion as to whether the measures and personal protective equipment used by health workers (doctors, nurses, administrative officers, security officers) in Dr. Kariadi General Hospital were sufficient or not to prevent the transmission of the coronavirus	Very insufficient	2 (0.9)
	Slightly insufficient	5 (2.2)
	Sufficient	114 (49.6)
	More than sufficient	109 (47.4)
Trust in health workers (doctors, nurses, administrative officers, security officers) in maintaining patient's safety	Strongly unbelieving	1 (0.4)
	Slightly unbelieving	3 (1.3)
	Neutral	34 (14.8)
	Slightly believing	11 (4.8)
	Strongly believing	181 (78.7)
Opinion on changes in the health worker's quality of care (communication, drugs administration, contact) due to COVID-19	Getting very poor	8 (3.5)
	Constant	117 (50.9)
	Getting better	84 (36.5)
	Getting much better	21 (9.1)

Questions	Answer	Number (%)
Getting information on COVID-19 from the doctors, nurses, or other health workers	Not at all	78 (33.9)
	Few	59 (25.7)
	Moderate	70 (30.4)
	Plenty	23 (10.0)
The most abundant source of information about the correlation between coronavirus and the disease suffered by the participants	Doctor	27 (11.7)
	Nurse	15 (6.5)
	Administrative officers	4 (1.7)
	Brochure, television, hospital announcement	119 (51.7)
	Other	65 (28.3)
Opinion on the quality of follow-up care during COVID-19	Getting very poor	1 (0.4)
	Slightly worse	1 (0.4)
	Constant	127 (55.2)
	Getting better	92 (40.0)
	Getting much better	9 (3.9)
Opinion on the most important matter to improve the quality of follow-up care	Health workers use more personal protective equipment	120 (52.2)
	Participant gets more personal protective from the hospital	32 (13.9)
	Health workers provide more education about COVID-19	43 (18.7)
	Expediting the follow-up care	30 (13.0)
	Slowing or delaying the follow-up care	1 (0.4)
	Other	4 (1.7)
Being scared or anxious to go to the hospital due to COVID-19	Very scared/anxious	59 (25.7)
	Slightly scared/anxious	81 (35.2)
	Not scared/anxious (neutral)	90 (39.1)
Opinion on the most important matter to overcome the fear or anxiety while undergoing follow-up care during COVID-19 pandemic	Wearing self-protection tools (masks)	132 (57.4)
	Use of personal protective equipment by health workers	47 (20.4)
	Health worker's education and communication	28 (12.2)
	Expediting the follow-up care	21 (9.1)
	Slowing or delaying the follow-up care	1 (0.4)
	Other	1 (0.4)

The participants of the study were dominated by 135 (58.7%) breast cancer patients. The highest percentage of breast cancer patients in this study was supported by the fact that breast cancer was the most commonly diagnosed cancer among women and the leading cause of deaths cancer-related mortalities among them (DeSantis et al., 2019) Chen et al. (2016) showed that patients aged 40 years or older accounted for the majority of breast cancer patients (93.6%) in their study (Chen et al., 2016). Women aged 50 years or older accounted for 78% of new breast cancer cases and 87% of breast cancer-related mortalities in the United States (Momenimovahed & Salehiniya, 2019).

Perception of COVID-19

The majority of participants (48.3%) felt 'slightly worried' about getting infected with COVID-19. Most of the participants (80.9%) stated that they were not infected with COVID-19, but only 7.4% of the participants underwent laboratory examinations to confirm the COVID-19 infection. Moreover, the majority of participants (38.7%) also felt 'disturbed' in doing their daily activities due to the outbreak of the COVID-19. This disruption was proven by the fact that the majority of participants (95.2%) chose to stay at home and avoid social events during the COVID-19 pandemic. The majority of participants also experienced behavioral changes such as maintaining a minimum distance of 2 meters, increased handwashing frequency, and wearing masks when traveling outdoors, with a percentage of 97.4%, 99.1%, and 99.1%, respectively.

Regarding the opinion of the participants in terms of government regulations relating to large-scale social restrictions in the face of the COVID-19 outbreak, the majority of participants (89.6%) agreed that people better stayed at home and delayed holding social meetings. The majority of participants (93.5%) also agreed to avoid shaking hands during the COVID-19 outbreak. Most of the participants (72.2%) received information on COVID-19 from television. The detailed data of the participants' perception of COVID-19 can be seen in Table 2.

This study also aimed to describe the perception of cancer patients towards the COVID-19 pandemic. It is believed that the knowledge, attitudes, and practices people hold toward a certain disease play an essential role in determining their readiness to accept behavioral change measures from health authorities (Azlan et al., 2020). The results showed that the majority of participants (48.3%) felt 'slightly worried' about getting infected with COVID-19. This was similar to the results of the study of Seale et al. stating that the anxiety level towards the COVID-19 pandemic among Australian residents was moderate (Seale et al., 2020). A separate survey by Faasse & Newby on public perceptions of COVID-19 in Australia showed that two-thirds of the participants were at least moderately worried about the COVID-19 outbreak in Australia (Faasse & Newby, 2020).

In this study, most of the participants (80.9%) stated that they were not infected with COVID-19, but only 7.4% of the participants underwent laboratory examinations to confirm the COVID-19 infection. Given the limited study regarding the perceived risk of getting infected by COVID-19, we compared our result to an online poll of US residents and a survey of Australian residents. The two studies reported similar results, which were found

to be moderate, on risk perceptions of catching the virus. One of the factors contributing to the low perceived level of risk was unawareness of the true risk of the COVID-19 pandemic (Faasse & Newby, 2020; McFadden et al., 2020). It was likely that some people assessed their risk as being low due to their accomplishment of engaging in protective behaviors (Faasse & Newby, 2020; Wang et al., 2020). Wang et al. (2020) indicated that engaging in health-protective behaviors was associated with the reduced psychological impact of the pandemic (Wang et al., 2020). People usually rely on symptoms to indicate disease and assume that having no symptoms means they are well and not infected by a certain disease (Faasse & Newby, 2020). However, several previous studies from groups with widespread testing for the SARS-CoV-2 virus indicated that most infections have been asymptomatic (Bai et al., 2020; Day, 2020; Mizumoto et al., 2020). Such assumptions urged the need for public health campaigns about COVID-19 to address these misassumptions (Faasse & Newby, 2020).

Moreover, the majority of participants (38.7%) also felt 'disturbed' in doing their daily activities with the outbreak of the COVID-19. Park et al. (2021) stated that the COVID-19 pandemic has brought a significant impact on daily life and the global economy. This pandemic has affected thousands of peoples, including disruption of the celebration of cultural, religious, and festive events, social distancing with peers and family members, as well as the temporary closure of public places (Park et al., 2021).

Lifestyle modification for infection preventions were practiced by the study respondents. Atchison et al. who found high levels of self-reported behavioral changes since the COVID-19 pandemic. These changes included washing hands more frequently as well as adopting social distancing measures (avoiding crowded places and social meetings) (Atchison et al., 2020). Perveen et al. also found behavior changes towards the COVID-19, such as washing hands regularly, using sanitizer regularly, wearing a face mask as a precaution, and following social distancing (Perveen et al., 2020). These adopted measures and behavioral changes by the patients were believed to reflect their high level of trust in the government and health authorities to lead the COVID-19 response (Seale et al., 2020).

Regarding the knowledge of the COVID-19 relationship in worsening cancer, the majority of participants (56.1%) agreed with the opinion. Previous studies suggested that patients with cancer might be more susceptible to COVID-19 than those without cancer because of the myelosuppressive effects of both treatment and their disease, which

suppresses their immune system. Cancer patients infected with SARS-CoV-2 had a higher risk of developing severe COVID-19 and worse outcomes (Fontana & Strasfeld, 2019; Liang et al., 2020; Patel et al., 2020; Tagliamento et al., 2020).

The results of the study also showed where most of the participants sought their information about COVID-19. Most of the participants (72.2%) received information on COVID-19 from television. These results were similar to the study of Faasse & Newby stating that mainstream news media was the most popular source of information about COVID-19 (Faasse & Newby, 2020). Furthermore, Seale et al. suggested that the intense media coverage and government information has brought a greater impact in increasing public awareness and willingness for the adoption of hygiene strategies to prevent the transmission of COVID-19 (Seale et al., 2020).

Quality of Outpatient Care during COVID-19 Pandemic

The results showed that the majority of participants (40.4%) felt 'very worried' about getting infected with COVID-19 during the follow-up care in the Oncology Outpatient Clinic. However, the majority of participants (87.0%) did not think to stop or delay their follow-up care and have no difficulty in obtaining their follow-up care during the COVID-19 pandemic (70.4%). Regarding the follow-up care service during the COVID-19 pandemic, the majority of participants (63.5%) did not feel any change in the follow-up service. Meanwhile, 52.2% of the participants felt no difference in the quality of follow-up care since the COVID-19 pandemic, and 50.9% of them felt no change in the service quality of doctors and nurses in terms of communication, drug administration, and contact since the COVID-19 pandemic. Moreover, the majority of participants (49.6%) ranked the health protocol implemented in the Oncology Outpatient Clinic of Dr. Kariadi General Hospital Semarang during the COVID-19 pandemic as 'sufficient'. Most participants (49.6%) also assessed the usage of personal protective equipment by healthcare personnel in the Oncology Outpatient Clinic of Dr. Kariadi General Hospital Semarang as 'sufficient'. The majority of participants (78.7%) 'strongly believed' in healthcare personnel in maintaining their safety.

Significant number of respondents (33.9%) was not educated about COVID-19 from doctors, nurses, or healthcare personnel. Meanwhile, the others (30.4%) stated that they obtained 'moderate' information about COVID-19 during their follow-up care. The majority of participants (51.7%) obtained the most information on the correlation between COVID-19 and their cancer diseases from brochures, television, or hospital announcements.

The study aimed to determine the perception of cancer patients towards the continuity of their follow-up care during the COVID-19 pandemic. The study showed that the majority of participants (40.4%) felt 'very worried' about getting infected with COVID-19 during the follow-up care in the Oncology Outpatient Clinic. This result was similar to the study of Chen et al. on the impact of the severe acute respiratory syndrome (SARS) on the status of lung cancer chemotherapy patients. The study showed that nearly two-thirds of patients were afraid of entering a hospital for fear of acquiring SARS (Chen et al., 2004). Although the benefit of outpatient visits for cancer patients remains the same in the current situation, the risks have increased significantly. Therefore, several strategies are established in reducing transmissions in outpatient settings (Tsamakis et al., 2020). American Society of Clinical Oncology (ASCO) has issued guidelines regarding cancer care delivery during the COVID-19 pandemic that includes patient and hospital factors. Patient factors include informing patients about postponing appointments if they develop symptoms of respiratory infection and advising them to put on a face mask or face covering during the follow-up care. Meanwhile, hospital factors include limiting access to the facility through one point of entry, limiting clinical attendance to the patient, and one visitor (or no visitors), as well as establishing triage stations which include a strict COVID-19 screening system. It was agreed between oncologists that cancer patients who were not a priority for their clinical condition were not advised to go to the hospital. Patients requiring outpatient visits should be carefully scheduled or switched to telemedicine. A recent review article also stated that cancer patients with ongoing radiation therapy are advised to continue their therapy scheduled by the hospital. New patients need to be evaluated carefully and stable cancer patients can be postponed for any hospital visit. In this study, the majority of participants (87.0%) did not think to stop or delay their follow-up care during the COVID-19 pandemic. This result might be due to their high motivation and beliefs in completing their treatments. Saratsiotou et al. reported that patients' beliefs were the most important factor associated with medication adherence. Furthermore, patients with more positive perceptions of medication are more likely to continue their cancer treatment (Saratsiotou et al., 2011).

Regarding the follow-up care service during the COVID-19 pandemic, the majority of participants (63.5%) did not feel any change in the follow-up service. Moreover, the majority of participants (49.6%) ranked the health protocol implemented in the Oncology Outpatient Clinic of Dr. Kariadi

General Hospital Semarang during the COVID-19 pandemic as 'sufficient'. These results were similar to the survey conducted by The Beryl Institute and Ipsos which looked at the patient experience of care during the COVID-19 pandemic. The survey showed that despite the limited access to primary care due to the COVID-19 pandemic, patient satisfaction with the quality of their care has risen dramatically (IPSOS, 2020).

COVID-19 poses a higher risk for healthcare personnel. Therefore, several measures, such as using personal protective equipment (PPE) and proper hand hygiene, are critical in preventing the risk of infection of COVID-19 in hospitals. Therefore, adequate training, knowledge, and resources are necessary to prevent hospital-acquired infections due to cross-contamination to other patients who receive care in hospitals (Elhadi et al., 2020). Based on the ASCO guideline, the recommendations for the healthcare personnel are wearing medical-grade facemasks while they are in the healthcare facility, minimizing physical contact, and maintaining 6-foot distancing whenever possible. Meanwhile, the recommendations for the healthcare facilities include establishing a clear policy on optimizing the supply of PPE and conducting routine decontamination (ASCO, 2020).

The results of the study also showed that the majority of participants (51.7%) obtained the most information on the correlation between COVID-19 and their cancer diseases from brochures, television, or hospital announcements. Some previous studies showed that television was one of the primary sources of information about the COVID-19 outbreak (Faasse & Newby, 2020; Seale et al., 2020). However, the high usage of news media as sources of information was concerning given the potential for an alarming or incorrect situation of the pandemic (Klemm et al., 2014). On the other hand, Olum et al. suggested that such media, if used properly, could be beneficial in disseminating information on COVID-19 by the stakeholders (Olum et al., 2020). However, the reliance of the general public on such media indicated that healthcare professionals, need to invest a significant proportion of their time and resources to be active on social media to disseminate correct news (Abdulwahab et al., 2021).

Adequate self-protection tool (facemask) was identified to be essential for overcoming fear and anxiety during clinical visits. Previous studies also found high levels of self-reported behavioral changes towards the COVID-19 pandemic, including washing hands more frequently, wearing a face mask, as well as adopting social distancing measures (Atchison et al., 2020; Perveen et al., 2020; Seale et al., 2020).

There are noteworthy strengths to our study. Firstly, our study included patients with a broad range of cancer types, since we did not focus on a certain type of cancer patients. Secondly, our study was believed to be the first study conducted to describe the perception of the COVID-19 pandemic among cancer patients. Finally, this study also showed their perception of the continuity of their follow-up care during the pandemic situation. The results of the study were expected to provide significant information to the stakeholders and policymakers to establish strategies in ensuring the safety of cancer management during the pandemic. This is a qualitative descriptive study that did not explore cause-effect relationship and used convenience sampling method that may create discrepancies in patient demographics. Questionnaire-based study also subject the results of this study to self-reported bias.

CONCLUSION

Most study participants were worried and anxious of being infected with COVID-19 during their outpatient visits. However, this did not deter them for delaying or stopping oncologic outpatient visits. The delivery of oncology services in out institution remains consistent despite several alterations. The use personal protective equipment both by the health care workers and patients proved to be an important factor in reducing anxiety during hospital visits. Policy makers should fully utilize the internet and associated mobile applications as an education tool.

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