

Patient Satisfaction and Compliance in One-Day Care Chemotherapy: A Study at Dr. Moewardi Hospital

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ABSTRACT

The purpose of this study is to ascertain how satisfied and compliant cancer patients are with Dr. Moewardi Hospital's one-day care chemotherapy treatments, as well as how these factors relate to age, gender, education, and cancer type. Methods of research: This study used a descriptive method with a quantitative approach and correlational design. One hundred individuals who satisfied the inclusion and exclusion criteria made up the study's sample. A questionnaire was employed as the data collection method. According to the study's findings, 53% of chemotherapy patients were very satisfied, 37% were satisfied, and 10% were fairly satisfied when the five primary quality characteristics of tangibles, responsiveness, assurance, empathy, and reliability, were used to gauge their degree of satisfaction. 99% of cancer patients have complied with one-day care chemotherapy services. There is a noteworthy and favorable correlation between cancer patients' satisfaction and compliance with one-day care chemotherapy services. The main findings in this study indicate that most one-day care chemotherapy patients at Dr. Moewardi Hospital were very satisfied with the services provided, with a satisfaction level reaching 53%, and 99% of patients showed high compliance with the chemotherapy schedule. In addition, a significant and positive relationship was found between the level of satisfaction and patient compliance. Based on these findings, recommendations for further research are to explore non-demographic factors, such as socioeconomic status and family support, which may affect patient satisfaction and compliance, as well as to expand the study sample to obtain more comprehensive results.

Kata kunci:

Kepuasan pasien;
Kepatuhan;
Kanker;
One day care;
Kemoterapi

Penelitian ini bertujuan untuk mengetahui tingkat kepuasan dan kepatuhan pasien kanker terhadap pelayanan kemoterapi one day care di RSUD Dr. Moewardi dan hubungannya dengan umur, jenis kelamin, pendidikan dan jenis kanker. Metode penelitian: Penelitian ini menggunakan metode deskriptif dengan pendekatan kuantitatif serta desain korelasional. Sampel dalam penelitian ini sebanyak 100 orang yang memenuhi kriteria inklusi dan eksklusi. Teknik pengumpulan data yang digunakan adalah kuesioner. Hasil penelitian ini adalah tingkat kepuasan pasien kemoterapi dinilai dari lima dimensi mutu utama yaitu tangibles, reliabilitas, daya tanggap, assurance dan empathy, sebesar 53% sangat puas, 37% puas dan 10% cukup puas. Kepatuhan pasien kanker terhadap pelayanan kemoterapi one day care telah mencapai 99%. Terdapat hubungan antara tingkat kepuasan dengan kepatuhan pasien kanker terhadap pelayanan kemoterapi one day care yang bersifat signifikan dan positif. Temuan utama dalam penelitian ini menunjukkan bahwa sebagian besar pasien kemoterapi one day care di RSUD Dr. Moewardi merasa sangat puas dengan pelayanan yang diberikan, dengan tingkat kepuasan mencapai 53%, dan 99% pasien menunjukkan kepatuhan tinggi terhadap jadwal kemoterapi. Selain itu, ditemukan hubungan signifikan dan positif antara tingkat kepuasan dan kepatuhan pasien. Berdasarkan temuan ini, rekomendasi untuk penelitian selanjutnya adalah untuk mengeksplorasi faktor-faktor nondemografis, seperti status sosial ekonomi dan dukungan keluarga, yang dapat mempengaruhi kepuasan dan kepatuhan pasien, serta memperluas sampel penelitian untuk memperoleh hasil yang lebih komprehensif.

INTRODUCTION

One of the public service providers in the health sector is the hospital. "A hospital is a health service institution that provides comprehensive individual health services that provide inpatient, outpatient, and emergency services," according to Republic of Indonesia Health Minister Decree No. 340/MENKES/PER/III/2010. As public service providers, hospitals need to focus on patient happiness. According to (Dahliah et al., 2021), patient satisfaction is a gauge of service quality and one of the indications of a hospital's standards. Because people feel that only hospitals can treat and repair their pain and complaints, hospitals are expected to deliver high-quality medical services that are accessible to the entire community (Lestari & Nurcahyanto, 2017). High-quality hospital care must satisfy the five primary criteria of quality, which are tangibles (physical proof), responsiveness, assurance, empathy, and reliability (Nurani et al., 2021). With an estimated 9.6 million deaths per year, cancer ranks as the second most common cause of death globally (World Health Organization, 2023). Data from the Indonesian Ministry of Health report from 2020 showed that there were 234,511 cancer-related deaths and 396,914 new cancer cases. With around 136.2 cases per 100,000 people, Indonesia has the eighth-highest cancer incidence rate in Southeast Asia (Kementrian Kesehatan RI, 2018). Comprehensive cancer services that cover everything from early diagnosis and therapy to post-operative care are known as integrated cancer services. Dr. Moewardi Hospital's integrated cancer services are tailored for the nine-story Tulip Nuclear Radiology and Oncology building. At Dr. Moewardi Hospital, one-day care (ODC) chemotherapy services are a type of renewal of integrated cancer medical services. Cancer patients visit the chemotherapy unit to receive chemotherapy for a few hours before being released to their homes if their condition is good. By allowing chemotherapy patients to get treatment in the recovery room rather than an inpatient room, this ODC service saves money and time while lowering the hospital's risk of nosocomial infections. Oral chemotherapy does not require hospitalization for inpatient care. Cancer patients are known to prefer it over intravenous chemotherapy; nonetheless, a number of studies show that cancer patients do not always comply with oral chemotherapy.

This ODC chemotherapy service is a renewal option that can be utilized as a substitute and improve cancer patients' adherence to intravenous chemotherapy. To increase patients' quality of life and chances of survival, adherence to cancer therapy is crucial (Winterhalder et al., 2011). Patients and the medical staff who provide care must work together to ensure that cancer patients adhere to chemotherapy. Only 50% to 70% of cancer patients comply, and this is determined by five elements: (1) social and economic considerations; (2) the health care team; (3) therapy; (4) illness conditions; and (5) the patients (Timmers et al., 2017). Increased risk of disease recurrence, lower survival rates, and higher medical expenses that patients must pay are all consequences of non-compliance during cancer therapy (Birand et al., 2019).

Assessing the degree of satisfaction of chemotherapy patients and motivating them to finish the previously created chemotherapy schedule are two criteria for successfully delivering high-quality patient care. Assessing the degree of satisfaction can result in the best possible plan for patient care. Patients undergoing chemotherapy typically require ongoing, long-term treatment. Thus, hospitals must pay attention to all patient concerns and suggestions in order to reduce chemotherapy patient non-compliance (EL Marnissi et al., 2019).

There is currently relatively little research on the satisfaction and compliance of cancer patients receiving chemotherapy for one-day care, and the findings are inconsistent across all factors that are expected to affect patient compliance and satisfaction. Based on the background that has been explained, this study aims to analyze the level of satisfaction and compliance of cancer patients with one-day chemotherapy care services at Dr. Moewardi Hospital, as well as to identify the relationship between the level of patient satisfaction and compliance with demographic variables, such as age, gender, education level, and type of cancer.

The contribution of this study lies in a deeper understanding of the relationship between patient satisfaction levels and compliance with one-day care chemotherapy services at Dr. Moewardi Hospital. This study provides insight into the importance of service quality in improving patient compliance with chemotherapy schedules. It shows that demographic factors such as age, gender, education, and type of cancer do not significantly affect patient satisfaction and compliance. These findings can be the basis for policy development and improvement of chemotherapy services in hospitals.

RESEARCH METHOD

This study used a descriptive method with a quantitative approach and correlational design. Cancer patients who got ODC chemotherapy services, had previously received ODC chemotherapy sessions, were willing research volunteers, and could read and write correctly in Indonesian were all considered for participation in this study. Patients with communication impairments, ODC cancer patients who were hospitalized following chemotherapy operations, and cancer patients who received ODC chemotherapy services on their initial visit were all excluded from this study. A questionnaire was used as the instrument to collect data for this investigation. The initial part of the questionnaire consisted of a preliminary survey with 14 questions about the characteristics of the respondents, such as gender, age, occupation, last educational attainment, type of cancer, length of time since cancer diagnosis, hospitalization history, information about ODC chemotherapy sessions, patient compliance with chemotherapy schedule, side effects experienced during ODC chemotherapy procedures, patient familiarity with ODC chemotherapy, and family knowledge and support for patients undergoing chemotherapy.

Patients undergoing ODC chemotherapy for the first time were not included in this study, as they did not have enough experience to evaluate compliance and satisfaction with ODC chemotherapy services. Therefore, the inclusion criteria excluded first-time patients to ensure more representative and relevant data on patient experiences in follow-up chemotherapy care. The questionnaire's second section served as a metric for evaluating patient satisfaction. It included information about the physical facilities, the knowledge and skills of ODC chemotherapy healthcare professionals in delivering prompt and efficient services, their capacity to build trust with ODC chemotherapy patients, and their demeanor and manners when attending to ODC chemotherapy patients. Respondents were asked to indicate whether they agreed or disagreed with particular assertions using a Likert scale in this second questionnaire. (1) Dissatisfied, (2) Less Satisfied, (3) Quite Satisfied, (4) Satisfied, and (5) Very Satisfied were the five Likert scales used in Importance Performance Analysis. This study used a questionnaire adapted from the Morisky Medication Adherence Scale (MMAS-8), with the

third part of the questionnaire serving to evaluate the level of patient compliance during chemotherapy sessions. Experts used face validity to evaluate the questionnaire to ensure that each item in the questionnaire was relevant and in accordance with the objectives of the study. Meanwhile, the reliability of this questionnaire was tested using Cronbach's alpha, which indicates the internal consistency of the instrument used. The Servqual questionnaire adaptation process was also carried out by considering the context of one-day chemotherapy care services at Dr. Moewardi Hospital, and an evaluation was carried out on the suitability of each dimension to the research needs. The Charles Spearman correlation test and univariate and bivariate analysis were employed in this investigation.

This study had obtained ethical approval from the Health Research Ethics Committee of Dr. Moewardi Hospital. Prior to data collection, all respondents had explained the purpose and procedures of the study and their rights as participants, including the right to withdraw from the study at any time without consequence. In addition, participants were asked to provide written consent after understanding the information provided. All data collected were kept confidential and used only for this study.

RESULTS AND DISCUSSION

This study aims to explore more deeply the level of satisfaction and compliance of cancer patients with one-day care chemotherapy services at Dr. Moewardi Hospital, as well as to understand the factors that influence both variables, such as age, gender, education, and type of cancer. Given the importance of compliance in the cancer treatment process, this study is expected to provide useful insights for the management of health services, especially in improving the quality of chemotherapy services and ensuring that patients undergo treatment properly. In this section, the results obtained from data analysis and discussions related to findings relevant to the research objectives will be presented.

Table 1. Characteristics of Respondents of Cancer Patients with One-Day Care Chemotherapy at Dr. Moewardi Hospital, Surakarta

Characteristics	Frequency
1) Age	
21 - 30 Years Old	5
31 - 40 Years Old	6
41 - 50 Years Old	18
51 - 60 Years Old	27
> 60 Years Old	44
2) Gender	
Men	27
Women	73
3) Education	
Non-education	7
Elementary School (SD)	31
Junior High School (SMP)	12
Senior High School (SMA)	39
Diploma	2
Bachelor's Degree	9

Table 1. Characteristics of Respondents of Cancer Patients with One-Day Care Chemotherapy at Dr. Moewardi Hospital, Surakarta (cont')

Characteristics	Frequency
4) Job	
Civil Servants (PNS)	6
Private Employees	5
Laborers	16
Self-Employed	21
Farmers	7
Not working	43
Others	2
5) Types of Cancer	
Breast	49
Ovarian	2
Cervical	0
Bladder	4
Colon	10
Rectum	6
Tongue	1
Prostate	2
Lung	1
Lymph nodes (NHL / HL)	7
Others	18
(Pancreatic cancer,	
Liver cancer,	
Kidney cancer,	
Esophageal cancer,	
Skin cancer,	
Gastric cancer,	
Brain cancer,	
Leukemia cancer,	
Bone cancer)	

Source: (Primary data processed, 2024)

The majority of respondents (44%) were above 60, according to the characteristics of the sample. At Dr. Moewardi Surakarta Hospital, women made up 73% of the ODC chemotherapy cancer patients. High school was the last educational level for the majority of ODC chemotherapy cancer patients at Dr. Moewardi Surakarta Hospital (39%), followed by elementary school (31%). According to the largest age group, those over 60, the majority of ODC chemotherapeutic cancer patients (43%) were either retired or no longer employed. According to the gender of the majority of cancer patients in this study, which is female, breast cancer was the most prevalent type of cancer experienced by ODC chemotherapy cancer patients (49%). Using a 25-question questionnaire, the degree of patient satisfaction was assessed based on five primary quality dimensions: physical evidence, dependability, responsiveness, insurance, and empathy. Table 2 displays the findings from a survey of 100 respondents about their degree of satisfaction with ODC chemotherapy services. According to the findings, the majority of cancer patients receiving ODC chemotherapy at Dr. Moewardi Surakarta Hospital expressed great satisfaction (54%) and satisfaction (39%) with the treatment.

Table 2. Satisfaction of Cancer Patients with One-Day Care Chemotherapy at Dr. Moewardi Surakarta Hospital

Dimension	Satisfaction Level (%)				
	SP	P	CP	KP	TP
Physical Evidence	41	51	8	0	0
Reliability	57	34	9	0	0
Responsiveness	60	35	5	0	0
Insurance	54	39	7	0	0
Empathy	54	35	11	0	0

Description: SP (very satisfied), P (satisfied), CP (quite satisfied), KP (less satisfied), TP (not satisfied)

Source: (Processed primary data, 2024)

Table 3. Compliance of Cancer Patients with One-Day Care Chemotherapy at Dr. Moewardi Surakarta Hospital

Compliance	Frequency	Percentage
Compliant	99	99%
Not Compliant	1	1%

Source: (Primary data processed, 2024)

The level of patient compliance measured based on the MMAS-8 questionnaire can be seen in Table 3. The results of the study showed that 99% of cancer patient respondents were compliant with ODC chemotherapy treatment at Dr. Moewardi Surakarta Hospital, while the remaining 1 respondent was not compliant.

Table 4. Correlation Between The Level of Compliance and The Level of Satisfaction of Cancer Patients

		Satisfaction	Compliance
Spearman's rho	Satisfaction	Correlation	1.000
		Coefficient	
		Sig. (2-tailed)	0.028
	Compliance	Correlation	0.220
		Coefficient	
		Sig. (2-tailed)	0.028
N		100	100

Spearman, Charles. The correlation between patient satisfaction and compliance level is ascertained using the correlation test. The correlation coefficient of 0.220 obtained through data analysis using SPSS software (Table 4) indicates a weak relationship between patient satisfaction levels and adherence to chemotherapy services. Although this relationship is statistically significant, with a low correlation coefficient, its practical relevance needs to be considered further, considering that a weak relationship may not be strong enough to influence significant changes in service policies or practices. Since the correlation coefficient is positive, the relationship between the two variables is moving in the same direction. There is a substantial correlation between the patient satisfaction variable and patient compliance, as indicated by the significance value, or Sig. (2-tailed), of 0.28, where $0.028 < 0.05$.

Table 5. Correlation of Parameters with Patient Compliance and Satisfaction

		Compliance	Satisfaction
Age	Correlation	1.000	-0.101
	Coefficient		
	Sig. (2-tailed)		0.318
Gender	N	100	100
	Correlation	1.000	-0.095
	Coefficient		
Education	Sig. (2-tailed)		0.346
	N	100	100
	Correlation	1.000	0.195
Cancer Types	Coefficient		0.014
	Sig. (2-tailed)		0.052
	N	100	100
Cancer Types	Correlation	1.000	0.166
	Coefficient		
	Sig. (2-tailed)		0.099
Cancer Types	N	100	100
	Correlation	1.000	-0.087
	Coefficient		
Cancer Types	Sig. (2-tailed)		0.392
	N	100	100
	Correlation	1.000	-0.087
Cancer Types	Coefficient		
	Sig. (2-tailed)		0.392
	N	100	100

The correlation between each parameter, including age, gender, education status, and type of cancer, with the level of patient compliance and satisfaction was analyzed using the Spearman Correlation test, which can be seen in Table 5. Based on the results of the analysis, the relationship between demographic factors such as age and gender with the level of patient compliance and satisfaction did not show a significant impact because the significance value for each parameter was greater than 0.05. This indicates that these demographic factors do not directly affect patient satisfaction and compliance with ODC chemotherapy services at Dr. Moewardi Hospital. However, other factors, such as type of cancer or previous experience with chemotherapy, may have a more significant role in influencing patient satisfaction and compliance. The correlation coefficient for each parameter is in the range of 0.00 - 0.25, which indicates that the relationship between the two is very weak.

Discussion

According to the study's findings, the majority of cancer patients who received one-day care (ODC) chemotherapy services were older than 65. Since young adulthood, the incidence of cancer has been rising with age, making it an age-related disease (White et al., 2014). Adults over 50 have a much higher chance of receiving a cancer diagnosis (Dong et al., 2020). The increased prevalence of cancer in people over 55 is believed to be caused by a number of variables, including lifestyle choices, a high-calorie diet, stress, a lack of physical activity, and pollution exposure. Genome instability, telomere shortening and damage, epigenetic modifications, protein spectrum changes, mitochondrial dysfunction, cell aging, and changes in intercellular communication are all linked to the aging process at the cellular level (SMETANA JR. et al., 2016). According to the study's questionnaire completion statistics, 73% of respondents were female, indicating a higher proportion of females than males. This is comparable to GLOBOCAN data from 2020, which showed that there were 183,368 new cancer cases in Indonesia, with 213,546 of those cases being women. Additionally, according to (Prihantono et al., 2023), women had a higher incidence of cancer (57.3%) than men (42.7%). Women are believed to be more vulnerable to cancer due to a number of variables, including lifestyle choices, fatty food consumption, and an overabundance of the hormones

progesterone and estrogen in the body (Wahyuni et al., 2021). According to research by (Dong et al., 2020), women had the highest incidence of cancer at 7,858,728 cases (55%) out of 14,281,801 cases from 2001 to 2016, particularly in the over-65 age group. This is consistent with a study that found that women over 60 made up the majority of patient replies. Three-quarters (39%) of the study's respondents had only completed high school. Through the social context, money, and healthcare access, educational status can influence cancer mortality (Gupta et al., 2023). High-educated patients can diagnose cancer early and receive treatment more quickly because they have access to resources for better preventive and curative measures (Leuven et al., 2014).

The most common type of cancer suffered by patient respondents in this study was breast cancer (49%). This is in line with GLOBOCAN data in 2020 which reported that the number of new cases of breast cancer reached 68,858 cases (16.6%) of the total 396,914 new cases of cancer in Indonesia. The results of this study are similar to the study by (Prihantono et al., 2023), which reported that the most common type of cancer was breast cancer, which was 1008 cases (12.9%). (Rahmatya et al., 2015) reported that around 48% of breast cancer incidents occurred in women over 65 years of age, in line with the results of this study. Based on the results of the study, it was found that most cancer patients felt very satisfied (54%) and satisfied (39%) with the ODC chemotherapy services they received at Dr. Moewardi Surakarta Hospital. In interviews conducted regarding the physical evidence questions, several patients suggested the addition of waiting chairs and treatment rooms because, on certain days, there were more chemotherapy patients at the ODC service than usual, making it uncomfortable to wait to get services. Several patients undergoing initial chemotherapy sessions also provided suggestions for the provision of clearer directional signs. However, neither of these factors had a significant effect on the level of satisfaction of cancer patients receiving ODC chemotherapy services at Dr. Moewardi Hospital. Service is a priority in carrying out tasks in the field of health services which are carried out through an integrated management approach. Patient satisfaction is one indicator for assessing the quality of health services (Badrin et al., 2019). Measuring patient satisfaction with services is needed as an evaluation material for management to ensure and improve the quality of services. Patient satisfaction is a subjective and individual assessment of each patient, which depends on various factors, and the interaction between the patient and medical personnel greatly influences it. Patient satisfaction itself can be influenced by several factors, such as the obligation to follow hospital regulations and routines, adaptation to the hospital environment, anxiety that occurs in the patient, hopes and despair regarding treatment, and disease prognosis (Ferreira et al., 2023). The implementation of chemotherapy requires compliance from patients both in the short and long term. Long-term treatment such as chemotherapy is very susceptible to the problem of patient non-compliance where patients often feel bored to undergo continuous treatment. This problem can have many impacts on patients, such as slowing down the healing process, worsening the patient's condition, and causing death (Ayurini & Parmitasari, 2015). The results of the study reported that 99% of patients were compliant with one-day care chemotherapy treatment at Dr. Moewardi Surakarta Hospital, while the remaining 1 respondent was not compliant. This indicates that almost all cancer patients undergoing ODC chemotherapy at Dr. Moewardi Surakarta Hospital are compliant with chemotherapy treatment. Research by (Jacobs et al., 2017) showed that the level of compliance of oral chemotherapy patients was 89.3% within 12 weeks, while (Bekalu

et al., 2023) reported that only 42.3% of chemotherapy patients were compliant with oral chemotherapy treatment in Ethiopia, this study found a much higher compliance rate, at 99%, with one-day care (ODC) chemotherapy services at Dr. Moewardi Hospital. This may be due to the difference in direct supervision and more intensive medical support during the ODC chemotherapy process, which allows patients to receive more attention from medical personnel compared to oral chemotherapy treatment which is usually done at home. Other factors, such as direct monitoring during chemotherapy procedures and control of side effects, may also contribute to the higher compliance rate in ODC treatment. The level of compliance of ODC chemotherapy patients is higher than the level of compliance of cancer patients receiving oral chemotherapy. These results indicate that ODC chemotherapy services are a service update that can improve the compliance of cancer patients in undergoing chemotherapy treatment.

The results of this study's analysis indicate a strong, albeit weak, positive correlation between patient satisfaction and compliance. Similar to this study, (Dias-Barbosa et al., 2012) found that 10 out of 20 studies demonstrated a favorable and substantial association between patient satisfaction and patient compliance. The degree of satisfaction and side effects were also found to be predictors of the degree of compliance of patients with breast cancer with oral hormonal treatment, according to research by (Koni et al., 2023). Hospitals as service providers benefit from patient satisfaction just as much as patients do as service users. Patient compliance with care and treatment will rise when patients are satisfied (Badrin et al., 2019).

In this study, it was discovered that the factors of age, gender, educational attainment, and cancer type did not significantly affect the degree of satisfaction and compliance of cancer patients receiving ODC chemotherapy. This finding is consistent with the study by (Al Shahrani & Baraja, 2014), which also found no significant correlation between patient satisfaction and demographic factors such as age, gender, duration of illness, and educational attainment. The insignificance of these demographic factors may be due to several reasons, one of which is that these factors may not sufficiently influence patients' perceptions of the quality of care provided. In addition, other factors that are more directly related to the care experience, such as the quality of communication with medical personnel or the side effects of chemotherapy, may have a greater influence on patient satisfaction and compliance. Therefore, although demographic factors are often considered important variables, in the context of this study, they did not show a significant impact on patient satisfaction and compliance outcomes.

CONCLUSION

Cancer patients at Dr. Moewardi Surakarta Hospital showed high levels of satisfaction and compliance with one-day chemotherapy services. These findings indicate a positive correlation between patient satisfaction and compliance, indicating that increased patient satisfaction may have an impact on increased compliance with ODC treatment. However, demographic factors such as age, gender, education level, and type of cancer did not show significant associations with patient satisfaction or compliance. Based on these findings, it is recommended to explore non-demographic factors, such as socioeconomic status or level of family support, in further studies using mixed methods. This may provide deeper insight into the factors that influence patient satisfaction and compliance.

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