

# Study of Patients' Characteristics Getting Treated at Muhammadiyah Hospitals in East Java

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## ABSTRACT

**Background:** Patients' characteristics can predict the type of services provided by hospitals. Furthermore, the quality of hospital services can be developed and be satisfactorily made available based on the needs of patients.

**Aim:** This research described the characteristics of patients entering Muhammadiyah hospitals in East Java province, Indonesia.

**Method:** This research used a simple random sampling survey design. The sample consisted of patients who were hospitalized for the first time. The survey was conducted using a structured questionnaire administered to 531 patients. Data were collected from August-September 2019. The data was collected using interviews, questionnaires and observations. Analysis on the descriptive statistics in this paper was performed by using the Statistical Package for Social Sciences (SPSS) software.

**Results:** The results showed that the highest number of respondents were female (52.5%), most pediatric patients were less than 10 years old (28.2%), most respondents had junior high and high school education (40.1%), most patient were treated between 5-10 days (59.9%), most patient possessed the Indonesian National Health Insurance (62.1%), and most were diagnosed with acute gastroenteritis (14.1%), followed by diabetes mellitus (9.04%) and typhoid fever (8.47%).

**Conclusion:** Socio-demographic characteristics, length of treatment, and medical diagnosis of patients can help to estimate the need for health services to be made available by hospitals.

**Keywords:** Nursing, Medical Diagnosis, Treatment, Socio-Demographic

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## INTRODUCTION

Patient services are activities carried out to meet the needs, desires and expectations of patients. If the services received are in accordance with patient expectations, it means that the services are satisfactory. It is important to identify the needs and wants of patients in order to satisfy them. Their needs and expectations can be identified by looking at the characteristics of each patient, ranging from gender, age, length of stay, level of education, and medical diagnosis.

Hospitals as health service institutions need to understand the characteristics of patients to facilitate decision making related to hospital services so that the services provided are in accordance with the needs and desires of the community in general and patients in particular. An increase in the number of patient visits from time to time can also be influenced by various factors, one of which is satisfaction obtained by the patients which is very much related to the assessment of the perceived results (services received) against the expected. Some studies show patient characteristics can influence nursing services, but not all patient characteristics affect service satisfaction. Hidayati et al. showed that characteristics such as age groups, sex, education, and income have no relationship with service satisfaction in outpatient care<sup>1</sup>. This is different from Meryani et al. who stated that there is a relationship between patient characteristics and satisfaction with nursing services, but not for all related characteristics such as age<sup>2</sup>. Based on this, this research analyzed the characteristics of patients who were first

treated at Muhammadiyah hospitals, East Java province, Indonesia.

## METHOD

This research used a survey design. The research was conducted from August to September 2019 in Muhammadiyah hospitals in East Java, Indonesia. The number of respondents surveyed was 531 patients treated at Muhammadiyah hospitals in 4 randomly selected districts out of 17 districts that have Muhammadiyah hospitals. The first stage involved random sampling from 4 districts out of 17 districts with Muhammadiyah hospitals. The second phase involved selecting 531 patients from selected districts. The number of patients selected was proportional to the number of patients in the hospitals in the selected district<sup>3,4</sup>. Face-to-face interviews using paper questionnaires were conducted to collect data<sup>5-7</sup>. The main target of respondents were patients being treated in the hospitals. Fieldwork was carried out by a team of local surveyors who were trained to ensure that respondents understand the questions asked. Data collected were entered into Excel. Raw data was refined by correcting various incorrect inputs. Analysis on the descriptive statistics was performed by using the Statistical Package for Social Sciences (SPSS) software.

## RESULTS

Table 1 shows that the highest number of respondents were female (52.5%), most pediatric patients were less than 10 years old (28.2%), most respondents had junior

high and high school education (40.1%), most patient were treated between 5-10 days (59.9%), most patient possessed the Indonesian National Health Insurance

(62.1%), and most were diagnosed with acute gastroenteritis (14.1%), followed by diabetes mellitus (9.04%) and typhoid fever (8.47%).

**Table 1.** Patient socio demographic characteristics (N = 531)

Variable	Category	Count	Percentage
Gender	Male	252	47.5
	Female	279	52.5
Age (year)	<10	50	28.2
	11-20	9	5.08
	21-30	23	13
	31-40	18	10.2
	41-50	13	7,34
	51-60	28	15.8
	> 60	36	20.3
Level of education	Never	150	28.2
	Primary school	99	18.6
	Junior / senior high school	213	40.1
	University	69	13
Length of stay	<5 day	195	36.7
	5-10 day	318	59.9
	> 10 day	18	3.39
Indonesian National Health Insurance status	Yes	330	62.1
	No	201	37.9
Ward	Medical	240	45.2
	Surgical	39	7,34
	Maternity	42	7.91
	Pediatrician	150	28.2
	Intensive Care Unit	30	5.65
Medical diagnosis	Acute appendicitis	3	0.56
	Acute gastroenteritis	75	14.1
	Anemia	15	2.82
	Angina pectoris	3	0.56
	Atrial fibrillation	6	1.13
	Bacterial infections	9	1.69
	Benign prostatic hyperplasia	3	0.56
	Breast cancer	6	1.13
	Bronchial asthma	3	0.56
	Bronchitis	6	1.13
	Bronchopneumonia	12	2.26
	Cardiogenic shock	6	1,13
	Cerebrovascular accident	18	3.39
	Chronic kidney disease	12	2.26
	Chronic Obstructive Pulmonary Disease	3	0.56
	Clavicle Fracture	3	0.56
	Contusio cerebri	9	1.69
	Coronary Artery Disease	3	0.56
	Cushing's syndrome	3	0.56
	Cystitis	3	0.56
	Decompensatio cordis	18	3.39
	Dengue Hemorrhagic Fever	12	2.26
	Diabetes Mellitus	48	9.04
	Dyspepsia	33	6.21
	Eclampsia	3	0.56
	Epilepsia.	3	0.56
	Erythroderma	3	0.56
	Febrile convulsion	3	0.56
	Febris	24	4,52

Variable	Category	Count	Percentage
	Femoral fracture	3	0.56
	Hematemesis	3	0.56
	Hepatic cirrhosis	3	0.56
	Hepatitis	6	1.13
	Hydronephrosis	3	0.56
	Hyperemesis gravidarum	9	1.69
	Hypertension	3	0.56
	Humerus fracture	3	0.56
	Hypoglycemia	3	0.56
	Intertrochanteric fractures	3	0.56
	Laparotomy	3	0.56
	Meningoencephalitis	3	0.56
	Oligohydramnios	3	0.56
	Phalanx fractures	6	1.13
	Postpartum	15	2,82
	Preeclampsia	3	0.56
	Pulmonary contusion	3	0.56
	Renal colic	6	1.13
	Sectio caesura	3	0.56
	Septic shock	6	1.13
	Struma multi nodosa	3	0.56
	Typhoid fever	45	8.47
	Tuberculosis	3	0.56
	Unstable angina	6	1.13
	Urinary tract infection	3	0.56
	Varicella	3	0.56
	Vertigo	21	3.95
	Viral infection	3	0.56
	Vomiting	3	0.56

## DISCUSSION

Nursing services can be seen from three dimensions, such as accessibility which refers to ease of interaction and contact between patients and nurses. Another dimension is communication skills involving how information can be easily understood by patients, nurses' listening, questioning skills and responding to customers, and lastly understanding the customer namely nurses' ability to assess and understand patient needs. Several characteristics help to understand patients' background, such as age, sex, education, care, education and medical diagnosis<sup>8-10</sup>.

Age may affect the level of satisfaction, where adult patients tended to feel more satisfied because they usually received more responsive care. Age also affect the availability of services since most services are utilized by patients who are of productive age. The high number of respondents in this productive age group may be due to the fact that they are more prone to illness and disease, and they require more medical attention<sup>11,12</sup>

Patient education can determine their general assessment and outlook on health services and including information about diseases. People who are more educated tend to have higher demand for health services, because they pay more attention to their health. Awareness of the importance of health is more pronounced among respondents with high school education thus they demand more health services. The need to remain productive can affect the demand and the level of satisfaction of health services especially by workers.

The level of satisfaction with health services can be affected by gender. Women tend to demand for more health services due to their nature, being more sensitive and

requiring more attention. Furthermore, women as part of the workforce tend to require more medical services since they are more susceptible to disease, especially diseases that only affected women.

Several studies supported the results, Hayuningsih and Mutika stated that there is a meaningful relationship between education, work, and patient satisfaction (tangibles aspects) and antenatal care services<sup>13</sup>. Likewise, Utami stated that education and employment status can affect service quality, as opposed to gender, age and income which do not affect service<sup>14</sup>. Meanwhile, Mulyani stated that there is no relationship between sexes, education, occupation, but there existed a relationship in term of age<sup>15</sup>. Various theories also relate proneness to disease and illnesses to internal factors originating in the patient's body, such as age, sex, and history of disease<sup>16-18</sup>.

## CONCLUSION

Socio-demographic characteristics, length of treatment, and medical diagnosis of patients can help to estimate the need for health services to be made available as well as shaping the model or form of health services provided by hospitals

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## CONFLICT OF INTEREST

The authors have no conflicts of interests to declare.

## REFERENCES

- Hidayati, A. N., Suryawati, C., & Sriatmi, A. (2014). Analisis Hubungan Karakteristik Pasien dengan Kepuasan Pelayanan Rawat Jalan Semarang Eye Center (SEC) Rumah Sakit Islam Sultan Agung Semarang. *Jurnal Kesehatan Masyarakat (e-Journal)*, 2(1), 9-14.
- Oroh, M. E., Rompas, S., & Pondaag, L. (2014). Faktor-faktor yang berhubungan dengan tingkat kepuasan pasien rawat inap terhadap pelayanan keperawatan di ruang interna RSUD Noongan. *Jurnal Keperawatan*, 2(2).
- MPKU. Data Rumah Sakit Muhammadiyah-Aisyiyah: Majelis Pembina Kesehatan Umum. (2016). [Available from: <https://www.mpkku.or.id>].
- Gani, A. (1996). Improving quality in public sector hospitals in Indonesia. *The International journal of health planning and management*, 11(3), 275-296. [https://doi.org/10.1002/\(SICI\)1099-1751\(199607\)11:3%3C275::AID-HPM436%3E3.0.CO;2-C](https://doi.org/10.1002/(SICI)1099-1751(199607)11:3%3C275::AID-HPM436%3E3.0.CO;2-C)
- Castle, N. G., Brown, J., Hepner, K. A., & Hays, R. D. (2005). Review of the literature on survey instruments used to collect data on hospital patients' perceptions of care. *Health services research*, 40(6p2), 1996-2017. <https://doi.org/10.1111/j.1475-6773.2005.00475.x>
- Vera-Catalán, T., Gallego-Gómez, J. I., Rivera-Caravaca, J. M., Segura-Melgarejo, F., Rodríguez-González-Moro, M. T., & Simonelli-Muñoz, A. J. (2019). A new tool to assess patients' comfort during hospitalization: The Hospital Discomfort Risk questionnaire. *Journal of nursing management*, 27(7), 1485-1491. <https://doi.org/10.1111/jonm.12834>
- Webster, T. R., Mantopoulos, J., Jackson, E., Cole-Lewis, H., Kidane, L., Kebede, S., ... & Bradley, E. H. (2011). A brief questionnaire for assessing patient healthcare experiences in low-income settings. *International Journal for Quality in Health Care*, 23(3), 258-268. <https://doi.org/10.1093/intqhc/mzr019>
- Faried, A., Putra, S. P., Suradji, E. W., Akbar, R. R., Nugraheni, N. K., & Arifin, M. Z. (2020). Characteristics and outcomes of pediatric tuberculous meningitis patients with complicated by hydrocephalus with or without tuberculoma at Regional Public Hospital Teluk Bintuni, West Papua, Indonesia. *Interdisciplinary Neurosurgery*, 19, 100609. <https://doi.org/10.1016/j.inat.2019.100609>
- Rahman, S. G. A., Fajri, N. N., Imran, I., Lestari, N. N. D., Hastuti, S. S., Fajri, L. L., ... & Khatab, K. (2019). Baseline characteristics of embolic strokes patients in the Dr. Zainoel Abidin Hospital Banda Aceh, Indonesia. *Journal of the Neurological Sciences*, 405, 71-72. <https://doi.org/10.1016/j.jns.2019.10.561>
- Putri, N. D., Wiyatno, A., Dhenni, R., Sriyani, I. Y., Dewantari, A. K., Handryastuti, S., ... & Prayitno, A. (2019). Birth prevalence and characteristics of congenital cytomegalovirus infection in an urban birth cohort, Jakarta, Indonesia. *International Journal of Infectious Diseases*, 86, 31-39. <https://doi.org/10.1016/j.ijid.2019.06.009>
- Saputra, F., Yunibhand, J., & Sukratul, S. (2017). Relationship between personal, maternal, and familial factors with mental health problems in school-aged children in Aceh province, Indonesia. *Asian journal of psychiatry*, 25, 207-212. <https://doi.org/10.1016/j.ajp.2016.10.025>
- Vargese, S. S., Mathew, E., Johny, V., Kurian, N., & Raju, A. S. (2020). Prevalence and pattern of multimorbidity among adults in a primary care rural setting. *Clinical Epidemiology and Global Health*, 8(2), 482-485. <https://doi.org/10.1016/j.cegh.2019.10.014>
- Hayuningsih, S., & Mutika, W. T. (2018). Hubungan antara karakteristik pasien terhadap kepuasan pasien (aspek tangibles) pada pelayanan antenatal care di rumah bersalin citra lestari Pabuaran Bojonggede Bogor Jawa Barat. *Berita Kedokteran Masyarakat*, 34(5), 7-2. <https://doi.org/10.22146/bkm.35656>
- Utami, Y. T. (2018). Pengaruh Karakteristik Pasien Terhadap Kualitas Pelayanan Rawat Jalan Di Uptd Puskesmas Penumpang Surakarta. *INFOKES Journal*, 8(1).
- Mulyani, R. (2017). Hubungan Karakteristik Pasien Dengan Kepuasan Pelayanan Gizi Di Ruang Rawat Inap Rumah Sakit. *Jurnal Ilmiah Keperawatan Sai Betik*, 10(2), 231-239. <http://dx.doi.org/10.26630/jkep.v10i2.280>
- Chen, S., Lenhart, S., Day, J. D., Lee, C., Dulin, M., & Lanzas, C. (2018). Pathogen transfer through environment-host contact: an agent-based queueing theoretic framework. *Mathematical medicine and biology: a journal of the IMA*, 35(3), 409-425. <https://doi.org/10.1093/imammb/dqx014>
- Galea, S., & Link, B. G. (2013). Six paths for the future of social epidemiology. *American Journal of Epidemiology*, 178(6), 843-849. <https://doi.org/10.1093/aje/kwt148>
- Foxman, B., & Rosenthal, M. (2013). Implications of the human microbiome project for epidemiology. *American journal of epidemiology*, 177(3), 197-201. <https://doi.org/10.1093/aje/kws449>