The Perception of Adults in Manila About the Accessibility, Availability and Affordability of Private and Public Healthcare Services for Neurological Emergencies

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ABSTRACT

Introduction: Neurological emergencies can be life-threatening, requiring immediate care to prevent adverse outcomes. In the Philippines, where conditions like stroke are prevalent, timely access to healthcare is critical. This study assessed how adults in Manila perceive the accessibility, availability and affordability (AAA) of private and public healthcare services for neurological emergencies.

Methodology: A survey was conducted among 463 adults in Manila, achieving a valid response rate of 92.3% (427 responses analyzed). Participants represented diverse socioeconomic backgrounds. The survey explored perceptions regarding AAA of healthcare services for neurological emergencies.

Results: Across income levels (poor, middle, rich), participants favored private hospitals for accessibility and convenience, such as emergency room access and prompt care. Private hospitals were also preferred for availability of diagnostic equipment, medications, specialist expertise and 24/7 care. Public hospitals, however, were preferred for affordability, particularly for emergency visits, medications, tests, neurologist consultations and ambulance services.

Discussion: Findings reveal a clear preference split: private hospitals are valued for accessibility and resources, while public hospitals remain the affordable choice. This reflects ongoing systemic and socioeconomic challenges in Manila's healthcare landscape.

Conclusion: The study provides actionable insights for policymakers and healthcare providers seeking to improve emergency neurological care. Addressing gaps in access and affordability can enhance patient outcomes and satisfaction while promoting more equitable healthcare delivery.

Keywords: Accessibility, Availability, Affordability, Healthcare services, Neurological Emergencies

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INTRODUCTION

Globally, neurological disorders are the leading cause of disability-adjusted life years (DALYs) and the second leading cause of death. As populations grow and age, the prevalence of major disabling

neurological disorders steeply rises. The four most significant contributors to neurological DALYs were stroke, migraine, Alzheimer's and other dementias, and meningitis.[1]

In the Philippines, thousands of Filipino families are affected by these disorders, causing emotional and physical distress. According to the World Health Organization's report on the global burden of disease, the total number of DALYs lost due to stroke was 348 per 100,000 of the Philippines' population. Moreover, there has been an increase in mortality rates in both sexes, with hypertension as a predisposing factor.[2] A 2014 study on the burdens of stroke in the Philippines revealed that stroke is the second leading cause of death in the country, with a prevalence of 0.9%; ischemic stroke comprises 70%, while hemorrhagic stroke comprises 30%.[3]

In 2007, the Department of Neurosciences at the University of the Philippines found that epilepsy remains one of the leading causes of neurological consultations and admissions in the Philippines, with an estimated prevalence of 0.9%.[4] Additionally, a 2013 study on motorcycle-related trauma patients admitted to the Philippine General Hospital showed that 40.7% sustained traumatic brain injuries (eg, intracranial hemorrhage or brain herniation), with 43% of them resulting in death.[5]

It is evident that neurological disorders are a significant health concern in the country and continues to increase. One of the contributing factors to the welfare of Filipino citizens is health, and anything that negatively affects this must be addressed and prioritized.

Similar to other medical conditions, several neurological disorders exhibit symptoms or episodes requiring emergency care. Emergencies such as acute stroke, severe traumatic brain injury, subarachnoid hemorrhage, spinal cord injury and Guillain-Barre Syndrome are common reasons for emergency room admissions. These conditions have severe consequences when not immediately treated. Medical professionals and first responders emphasize rapid and focused action during neurological emergencies, as they are deemed life-threatening and can result in poor functional recovery if not promptly addressed.[6]

Apart from the health-related implications of delayed emergency response, it can lead to significant emotional distress for both the patient and their caregiver. During neurological emergencies, patients are often unable to seek help themselves, leaving the responsibility to their family, friends or caretakers. The waiting period can be stress-inducing, and prolonged delays exacerbate emotional distress including frustration and anxiety. Such distress may lead to a decrease in trust towards healthcare personnel and affect the patient's willingness to cooperate. Furthermore, it may result in outbursts of rage, posing challenges in patient care. Holistic medical care encompasses not only physical aid but also considers comfort of the patient and their significant others.

A qualitative study of patient trust in South Australia revealed that public hospital patients often experience prolonged waiting times for emergency attention compared to private hospital patients, leading to frustration and anxiety. However, these patients rarely blame or distrust doctors or nurses, attributing delays to an underfunded system and overworked staff.[7]

According to a 2010 report by the Department of Health (DOH), Filipinos from low-income households prefer seeking treatment in government hospitals for their affordability, but perceive private medical facilities as providing superior service.[8]

Despite considerable research on public perception of healthcare services worldwide and in the Philippines, limited information exists on the public's perception of accessibility, availability and affordability (AAA) of healthcare services for neurological emergencies in Manila, Philippines. Given the relevance of neurological disorders to Filipino issues, acquiring more information on this topic is essential. This information can provide progressive opportunities for improving the national healthcare system. Understanding Filipino perceptions is crucial for both public and private medical institutions to comprehensively evaluate and enhance the quality of their services to meet the needs of people.

Therefore, researchers aim to conduct a descriptive study using a validated survey to determine the perception of adults in Manila regarding the AAA of healthcare services for neurological emergencies in both private and public institutions. While perception and actual capabilities may not be directly comparable, research seeks to gauge the overall perception of adults in Manila, offering insights into emergency services provided by tertiary

hospitals based on general perception. Furthermore, research may serve as a foundation for evaluating the status of tertiary hospitals in Metro Manila and their capacity to respond to immediate community needs. Ultimately, the data collected can inform these hospitals of any necessary improvements to enhance overall quality and public awareness of their services.

Prior studies on Philippine hospitals suggest that access to emergency healthcare is fraught with systemic challenges. Patients from higher income groups predominantly utilize private hospitals, while public hospitals cater mainly to low-income groups, often operating with limited resources and staff.[9] Disparities in funding and service quality between public and private institutions are well documented; insured patients or those paying for higher-cost services often receive preferential care even within public hospitals.[10]

In major public hospitals such as the Philippine General Hospital (PGH), patient overcrowding and staff shortages exacerbate delays in emergency care.[11] Staff burnout is another pressing concern, as demonstrated by Tabunar and Rifareal (2009),[12] who found high levels of emotional exhaustion among emergency personnel, potentially compromising patient care.

Patients' perceptions of healthcare services—particularly regarding emergency care—play a critical role in their healthcare-seeking behavior. Factors influencing these perceptions include waiting times, perceived quality of care, trust in medical staff and prior experiences.[13-15] Studies comparing public and private hospitals in other countries[16,17] suggest that private hospitals often outperform public institutions in responsiveness, communication and tangible quality, though such disparities may be driven by structural and funding differences.

In the Philippines, emergency care capacity remains insufficient, with only a fraction of hospitals adequately equipped to handle neurological emergencies.[18] Laws such as Republic Act No. 10932 aim to mitigate financial barriers to emergency treatment, but service delivery gaps persist, particularly in rural areas and within the public sector.

Neurological emergencies—such as stroke, seizures and traumatic brain injury—require rapid and effective response to improve outcomes. However, public awareness of the urgency of these conditions remains suboptimal, with studies noting gaps in both knowledge and behavioral responses.[19] Moreover, the low neurologist-to-patient ratio and urban concentration of services[14] further highlight inequities in access to specialized emergency care.

While instruments such as the Patient Trust Questionnaire (PTQ) offer promising tools for assessing trust in emergency healthcare services,[20] more localized research is needed to understand the Filipino public's perception of neurological emergency care within Metro Manila. Addressing this gap can inform strategies to enhance both service quality and public trust across the healthcare system.

Based on existing literature, the conceptual framework for this study posits that adult perceptions of the AAA of healthcare services for neurological emergencies are influenced by factors such as perceived quality of care, perceived waiting time, trust in medical staff, prior experience, financial barriers and distance to healthcare facilities. In this framework, the independent variables include demographic characteristics of adults in Manila—particularly financial income—while the dependent variables are their perceptions of public and private healthcare services' AAA. The relationship between these variables may also be shaped by mediating factors, such as an individual's level of knowledge about and experience with emergency healthcare services. This framework informed both the survey design and analysis of results.

The general objective of this research is to determine the overall perception of adults in Manila regarding the AAA of private and public healthcare services for neurological emergencies in Manila.

The secondary objectives of the study are to further assess and explore various factors influencing these perceptions. Specifically, the study aims to evaluate how adults in Manila perceive private and public emergency healthcare services for neurological emergencies in terms of AAA. Under accessibility and convenience, the study will examine aspects such as ease of reaching emergency rooms equipped to handle neurological conditions, ease of obtaining medical attention, and time taken to see medical staff upon arrival at the emergency

room. In terms of availability and resources, it will assess the presence of essential diagnostic equipment (eg, CT scan, MRI), availability of necessary medications, adequacy of facilities and medical equipment, presence of neurologists and other specialists, ambulance response times and availability of specialized neurologic emergency services. Regarding affordability, the study will consider costs associated with emergency room visits, prescription medications, laboratory tests, neurologist consultations and ambulance services related to neurological emergencies.

In addition, the study seeks to explore specific subfactors that influence the perception of healthcare services for neurological emergencies. These include the availability and quality of equipment and facilities tailored to neurological care, dynamics of the doctor-client relationship—including the quality of after-hospital care and perceived compassion and attention provided by the medical staff—and evaluations of staff competence, facility cleanliness, trustworthiness and visual aesthetics of the healthcare environment. Location-related factors that affect healthcare accessibility and levels of trust in healthcare providers will also be considered.

By addressing these objectives, the study aims to offer a comprehensive understanding of how adults in Manila perceive the AAA dimensions of private and public healthcare services for neurological emergencies, with the goal of informing potential improvements in service delivery and shaping public healthcare policy.

STUDY DESIGN

Study Design and Procedure

This study aimed to assess adult perceptions in Manila on the AAA of public and private hospital services for neurological emergencies. A descriptive survey design was used, with Likert-scale items capturing quantitative data via online (Google Forms) and paper-based surveys.

Participants were recruited through social media, community networks and referrals, using a combination of snowball and quota sampling to ensure demographic diversity. Eligible respondents were Manila residents aged 20 and above. Screening filters were embedded in the survey to ensure eligibility.

As no existing validated tool was available, the team developed a questionnaire grounded in literature and expert feedback. It underwent face and content validation via the Delphi technique and was translated into Filipino for cultural appropriateness. The survey assessed perceptions of AAA in public and private hospitals, with indicators covering:

- Accessibility: distance, transport, wait times, registration, ER response time
- Availability: equipment, medications, specialists, ER hours, ambulance access
- Affordability: costs of ER visits, medications, diagnostics, neurologist consults, ambulance use

A total of 427 valid responses were collected, exceeding the required minimum of 385 (95% confidence level, 5% margin of error).

Study Population and Setting

The study targeted adult residents of Manila. Manila was chosen due to its high concentration of healthcare facilities, including 20 public, 20 private and 1 NGO-owned hospitals. Major tertiary hospitals such as the Philippine General Hospital (PGH) and the Jose R. Reyes Memorial Medical Center (JRRMMC) are located in Manila and serve both local and provincial patients.

Of 463 responses received, 427 (92.3%) were valid and analyzed. Participants were categorized by financial income into three groups: Poor (below Php 21,914 monthly), Middle (Php 21,914 to Php 131,484 monthly) and Rich (Php 131,485 and above monthly).

This categorization allowed for a nuanced analysis of how socioeconomic status influences perceptions of AAA.

Sampling Design and Sample Size Estimation

The study employed quota sampling, appropriate for descriptive studies with time and resource constraints. Based on Manila's adult population (~1.12 million), a minimum sample of 385 was calculated using SurveyMonkey and OpenEpi tools.

Sampling quotas targeted income-based subgroups (±128 each for poor, middle and rich), with additional balancing for educational background and neurological emergency experience.

Data Collection Tools and Outcomes

Data were collected using a semi-structured, 5-point Likert-scale questionnaire developed by the research team. Key outcome measures included Accessibility and Convenience (proximity, transport, ER wait times, registration), Availability and Resources (diagnostic equipment, medications, specialists, ambulance services) and Affordability (cost of ER visits, medications, tests, consultations, ambulance rides). Additional items measured participants' overall perception of healthcare quality and trust in healthcare services.

Statistical Applications and Analysis

We applied descriptive statistics to summarize adult perceptions of AAA in Manila's healthcare services. This included frequency distributions for response patterns by hospital type, and measures of central tendency (mean, median) for perceptions of AAA factors.

To explore differences in perceptions based on income levels and demographic characteristics, we conducted ANOVA (Analysis of Variance) to assess whether perceptions of AAA differed across income groups. If significant differences were found, post-hoc tests (Tukey's HSD) were applied to identify specific group differences.

Sample Size Equations

The sample size calculation used the following formula:

$$n = \frac{Z^2 \times p \times (1-p)}{e^2}$$

Where:

Z = Z-score for 95% confidence level (1.96)

p = estimated proportion of population (0.5 for maximum variability)

e = margin of error (0.05)

The resulting required sample size was 385, which was exceeded by 427 valid responses. The study was conducted following approval from the Institutional Review Board, ensuring that all ethical standards were upheld, including obtaining informed consent from participants. Participants were fully informed about the nature, risks and benefits of the study, and their confidentiality and right to withdraw at any time without penalty were strictly maintained.

RESULTS

This section presents the findings of a survey assessing the perception of adults in Manila regarding the AAA of private and public healthcare services for neurological emergencies. A total of 463 surveys were distributed and 427 valid responses obtained for analysis (response rate: 92.3%). The participants came from various socioeconomic backgrounds in Manila. The following sections will detail the key results, including frequencies, percentages and relevant statistical tests.

Demographics

Most respondents were female (267), followed by males (156); a few identified as non-binary (2) or preferred not to disclose (2). The sample skewed younger, with the largest age group being 20–29 (188), followed by 30–39 (90) and fewer in older brackets. The majority was single (279) or married (124), with small numbers widowed, separated, annulled, or undisclosed.

In terms of education, most held a college degree (267), followed by high school graduates (84) and smaller numbers with vocational (28), graduate-level (28), elementary (7), no formal education (3) or other backgrounds (10).

Employment-wise, most were employed full-time (141), with many self-employed/freelance (62) or students (62). Other groups included the unemployed (70), part-timers (22), unable to work (24), retirees (16), interns (5), military (4) and others (31).

Preferences

Respondent Preferences for Various Subfactors of Healthcare Providers

The survey examined healthcare provider preferences across several subfactors—such as facilities, staff quality, environment, trust and personalized care—while also comparing trends by socioeconomic status (poor, middle, rich). Across nearly all factors, private healthcare providers were strongly favored.

For equipment and facilities, 354 out of 427 participants preferred private providers. Even among the poor, 168 chose private over 57 for public. Similar trends were seen for doctor-client

Table 1: Respondent Preferences for Various Subfactors of Healthcare Providers

	Poor			Middle			Rich			Total		
PB = PUBLIC PR = PRIVATE TT = TOTAL	**PB**	**PR**	**TT**	**PB**	**PR**	**TT**	**PB**	**PR**	**TT**	**PB**	**PR**	**GRANDTT**
Equipments and facilities	57	168	225	14	142	156	2	44	46	73	354	427
Doctor-client relationship	91	134	225	18	138	156	4	42	46	113	314	427
Compassionate staff	91	134	225	26	130	156	5	41	46	122	305	427
Staff competence	80	145	225	41	115	156	7	39	46	128	299	427
Cleanliness	52	173	225	5	151	156	2	44	46	59	368	427
Visual aesthetics of the environment	54	171	225	7	149	156	1	45	46	62	365	427
Better facilities for neurological emergencies	49	176	225	10	146	156	1	45	46	60	367	427
After-hospital care (e.g. check ups)	78	147	225	20	136	156	2	44	46	100	327	427
Gives more personal attention to each patient	68	157	225	13	143	156	4	42	46	85	342	427
Location	103	122	225	39	117	156	11	35	46	153	274	427
Trustworthiness	67	158	225	9	147	156	3	43	46	79	348	427

relationships (314 favored private), compassionate staff (305) and staff competence (299), with strong private preference across all income levels.

In terms of cleanliness, 368 respondents preferred private facilities; just 59 chose public. Aesthetic environment followed the same pattern, with 365 choosing private. For neurological emergency readiness, 367 selected private providers, including 176 from the poor group.

Preferences also leaned toward private hospitals for after-hospital care (327), personalized attention (342) and trustworthiness (348). In each of these, the poor group consistently mirrored the overall pattern.

However, location was the only subfactor where public providers gained more support, particularly from the poor (103 preferred public), suggesting that accessibility remains a key factor in provider choice.

Accessibility and Convenience Across Income Groups

1. This section compares how respondents from different income brackets (poor, middle, rich) rated the accessibility and convenience of public versus private healthcare providers in emergency neurological care, based on ease of reaching the ER, receiving medical attention and time to see a doctor or staff.
2. Poor Income Group: Public hospitals received neutral ratings (mean range: 3.06–3.22; overall: 3.16). Private hospitals were rated more favorably across all indicators (mean range: 3.42–3.44; overall: 3.43 – Agree).
3. Middle Income Group: Public hospital ratings remained neutral (means: 2.90–3.10; overall: 3.03), while private providers were rated more positively (3.69–3.86; overall: 3.77 – Agree).
4. Rich Income Group: Public facilities received the lowest scores (2.78–2.85; overall: 2.82 – Neutral), while private providers were rated more favorably (3.26–3.59; overall: 3.46 – Agree).
5. Combined Data: Aggregated responses across all groups showed public hospitals with neutral ratings (2.98–3.14; overall: 3.08), while private hospitals consistently scored in the Agree range (3.50–3.60; overall: 3.56).
6. In summary, across all income levels, private hospitals were perceived as more accessible and convenient than public hospitals, with the gap most pronounced among middle- and high-income respondents.

Availability and Resources Across Income Groups

This section summarizes how respondents from poor, middle- and rich-income groups perceived the availability and resources of public versus private healthcare for emergency neurological care, based

on eight indicators (eg, diagnostics, specialists, ambulance access).

Poor Income Group: Public healthcare received neutral ratings (2.96–3.22; overall mean: 3.09), while private hospitals scored higher (3.34–3.54), with six of eight indicators rated Agree (overall mean: 3.41).

Middle Income Group: Public providers remained in the neutral range (3.04–3.29; mean: 3.17), whereas private facilities received the most favorable ratings among all groups (3.61–3.99; mean: 3.66), with all indicators rated Agree.

Rich Income Group: Public hospitals were rated lowest (2.76–3.17; mean: 2.93 – Neutral). Private providers were rated more positively (3.35–3.72; mean: 3.42), though ambulance travel time remained neutral.

Combined Results: Across all income groups, public hospitals stayed within the neutral range (3.02–3.19; mean: 3.10), while private healthcare was consistently rated higher (3.48–3.72), with Agree ratings on seven of eight indicators (mean: 3.50).

In summary, perceptions across income groups indicate a clear preference for private healthcare in terms of availability and resources, especially among middle-income respondents.

Availability and Resources Across Income Groups

This section summarizes how respondents from different income levels perceived the affordability of public versus private healthcare for neurological problems, based on five cost-related indicators (eg, ER visits, prescriptions, labs and specialist fees).

Poor Income Group: Both public (2.91–3.01) and private (2.78–2.85) healthcare were rated Neutral in affordability, with overall means of 2.93 and 2.83, respectively.

Middle Income Group: Public healthcare remained Neutral (2.97–3.15; mean: 3.03) and private healthcare was rated Disagree for ER visits (2.56) and lab tests (2.50), and Neutral for medications and specialist fees. Overall mean for private: 2.59 (Disagree), suggesting affordability concerns, especially for diagnostics and emergency care.

Rich Income Group: Public healthcare was again rated Neutral (2.78–3.04; mean: 2.83) and private healthcare was consistently rated Disagree across all indicators (2.43–2.59; mean: 2.50), showing a perception of high cost despite higher income.

Combined Results: When aggregated, public healthcare remained Neutral (2.93–3.06; mean: 2.95). Private care was also rated Neutral (2.66–2.76; mean: 2.71), though this average masks the more negative views from middle- and high-income respondents.

In summary, while public healthcare is perceived as moderately affordable by all groups, private care is viewed less favorably—particularly by middle- and rich-income respondents, who associate it with higher out-of-pocket costs.

This comprehensive table presents the mean scores and verbal interpretations for three main factors (Accessibility and Convenience, Availability of Resources and Affordability) across different income groups (Poor, Middle, Rich) and in total, comparing public (PB) and private (PR) healthcare providers.

In summary, across all income groups and factors, there was a consistent neutral perception of public healthcare. However, for private healthcare, there was a strong "Agree" for accessibility, convenience and availability of resources, but a significant "Disagree" regarding affordability among the middle- and rich-income groups, which surprisingly becomes "Neutral" when averaged across all income groups, including the poor income group who also view it as neutral.

Tukey's HSD post-hoc test revealed a significant difference in the perception of private hospital accessibility between the poor and middle income groups ($p = 0.01$), with middle income individuals rating accessibility and convenience more positively. No significant differences were found between the poor versus rich or middle versus rich groups.

When analyzed by specific income brackets, two significant differences emerged. Respondents earning P76,669–P131,484 rated private hospital accessibility significantly higher than those earning below P10,957 ($p = 0.03$). Additionally, those in the P21,914–P43,828 bracket perceived greater accessibility compared to the P43,829–P76,668 group ($p = 0.03$). Other pairwise comparisons did not show statistically significant differences.

The ANOVA test showed that income groups differed significantly only in their perception of Accessibility and Convenience of Private Hospitals ($p = 0.02$). This indicates that perceptions vary meaningfully across income brackets for this factor, warranting further analysis through post-hoc tests.

Table 2: Mean Scores by Income Group (Public vs. Private) for the Main Factors

	Poor				Middle				Rich				Total			
	PB		PR		PB		PR		PB		PR		PB		PR	
Composite Table	**Mean**	**VI**	**Mean**	**VI**	**Mean**	**VI**	**Mean**	**VI**	**Mean**	**VI**	**Mean**	**VI**	**Mean**	**VI**	**Mean**	**VI**
Accessibility and Convenience	3.16	Neutral	3.43	Agree	3.03	Neutral	3.77	Agree	2.82	Neutral	3.46	Agree	3.08	Neutral	3.56	Agree
Availability of resources	3.09	Neutral	3.41	Agree	3.17	Neutral	3.66	Agree	2.93	Neutral	3.42	Agree	3.10	Neutral	3.50	Agree
Affordability	2.93	Neutral	2.83	Neutral	3.03	Neutral	2.59	Disagree	2.83	Neutral	2.50	Disagree	2.95	Neutral	2.71	Neutral
Grand Mean	3.06	1.10	3.27	1.10	3.11	1.10	3.41	1.10	2.88	1.10	3.20	1.10	3.06	1.10	3.31	1.10

No significant differences were found across income groups for other variables, including:

- Public hospitals: Accessibility ($p = 0.07$), Availability ($p = 0.19$), Affordability ($p = 0.38$)
- Private hospitals: Availability ($p = 0.12$), Affordability ($p = 0.06$)
- Overall perception: Public ($p = 0.19$), Private ($p = 0.24$)

These results suggest that aside from accessibility perceptions of private hospitals, income level does not significantly influence how adults in Manila view hospital services for neurological emergencies.

Table 5: ANOVA Test - Accessibility and Convenience, Availability of Resources, Affordability by Social Class

This table summarizes the results of a one-way Analysis of Variance (ANOVA) examining differences in perceptions of healthcare services across social classes, focusing on three key aspects: Accessibility and Convenience, Availability of Resources and Affordability for both public and private hospitals.

Similar to the income group analysis, the ANOVA results show that the only statistically significant difference based on social class is in the perception of Accessibility and Convenience of private hospitals ($p = 0.007$). All other variables—Availability of Resources and Affordability in both public and private hospitals, including overall perception—yielded no significant differences ($p>0.05$). Notably, the result for availability of resources in private hospitals was close to significance ($p = 0.054$).

This finding highlights that Accessibility and Convenience of private hospitals is a key perception that varies significantly across both income and social class demographics, underscoring a potential equity issue in how private emergency healthcare is experienced and perceived.

This survey aimed to assess the perception of adults in Manila regarding the AAA of private and public healthcare services for neurological emergencies. A total of 463 surveys were distributed, and 427 valid responses were obtained for analysis (response rate: 92.3%).

The results presented in this section explored participant demographics and their preferences for various subfactors of healthcare providers. We further examined mean scores on accessibility and

Table 3: Tukey's HSD Test - Accessibility and Convenience of Private Hospitals by Financial Classification

Dependent Variable	(1) Financial Classification	(J) Financial Classification	Mean Difference (I-J)	Std. Error	Sig.	
Accessibility and Convenience of Private Hospitals	Poor	Middle	-0.35	0.11	0.01	Significant
		Rich	-0.04	0.17	0.98	Not Significant
	Middle	Rich	0.31	0.18	0.20	Not Significant

Table 4: ANOVA Test - Accessibility and Convenience, Availability of Resources, Affordability by Income Group

ANOVA between Income Brackets							
		Sum of Squares	df	Mean Square	F	Sig.	Significance
Accessibility and Convenience of Public Hospitals	Between Groups	14.50	6	2.42	1.96	0_07	Not Significant
	Within Groups	517.18	420	L23			
	Total	531.68	426				
Availability of resources of Public Hospitals	Between Groups	9.34	6	1.56	1.46	0A9	Not Significant
	Within Groups	448,44	420	1.07			
	Total	457.78	426				
Affordability of Public Hospitals	Between Groups	8.68	6	1.45	1.07	038	Not Significant
	Within Groups	567.86	420	1.35			
	Total	576.54	426				
Accessibility and Convenience of Private Hospitals							
	Between Groups	17,78	6	2.96	2.57	0.02	Significant
	Within Groups	484,45	420	1.15			
	Total	502,23	426				
Availability of resources of Private Hospitals	Between Groups	10.36	6	1.73	1.72	0A2	Not Significant
	Within Groups	421.79	420	1.00			
	Total	432.16	426				
Affordability of Private Hospitals	Between Groups	18.41	6	3.07	2.08	0_06	Not Significant
	Within Groups	620.22	420	1.48			
	Total	638.63	426				
Public Overall	Between Groups	8.72	6	1.45	1.47	0A9	Not Significant
	Within Groups	415.98	420	0.99			
	Total	424.69	426				
Private Overall	Between Groups	7.24	6	1.21	1.34	0_24	Not Significant
	Within Groups	378.66	420	0.90			
	Total	385.90	426				

Table 5: ANOVA Test - Accessibility and Convenience, Availability of Resources, Affordability by Social Class

ANOVA between Social Class							
		Sum of Squares	df	Mean Square	F	Sig.	Significance
Accessibility and Convenience of Public Hospitals	Between Groups	5.013	2	2.506	2.018	0.134	Not Significant
	Within Groups	526.666	424	1.242			
	Total	531.679	426				
Availability of resources of Public Hospitals	Between Groups	2.228	2	1.114	1.037	0.355	Not Significant
	Within Groups	455.552	424	1.074			
	Total	457.78	426				
Affordability of Public Hospitals	Between Groups	1.746	2	0.873	0.644	0.526	Not Significant
	Within Groups	574.792	424	1.356			
	Total	576.539	426				
Accessibility and Convenience of Private Hospitals	Between Groups	11.534	2	5.767	4.983	0.007	Significant
	Within Groups	490.699	424	1.157			
	Total	502.233	426				
Availability of resources of Private Hospitals	Between Groups	5.927	2	2.964	2.948	0.054	Not Significant
	Within Groups	426.229	424	1.005			
	Total	432.157	426				
Affordability of Private Hospitals	Between Groups	7.265	2	3.632	2.439	0.088	Not Significant
	Within Groups	631.365	424	1.489			
	Total	638.63	426				
Public Overall	Between Groups	1.844	2	0.922	0.924	0.398	Not Significant
	Within Groups	422.85	424	0.997			
	Total	424.694	426				
Private Overall	Between Groups	2.758	2	1.379	1.526	0.219	Not Significant
	Within Groups	383.144	424	0.904			
	Total	385.902	426				

convenience, availability of resources and affordability, categorized by socioeconomic status (poor, middle, rich) and healthcare provider type (public versus private). Additionally, statistical tests were conducted to identify significant differences in these perceptions across income groups and social classes.

Key findings include:

- Participants from all income groups reported neutral scores regarding affordability of neurological care at both public and private hospitals.
- There were statistically significant differences in perceptions of accessibility and convenience for private hospitals based on income group. Those with a monthly income between P76,669 and P131,484 rated accessibility and convenience of private hospitals significantly lower than participants from other income brackets.
- No statistically significant differences were found in perceptions of availability of resources between income groups or social classes for either public or private hospitals.

The following sections will discuss these findings in more detail and explore their implications for improving healthcare access for neurological emergencies in Manila.

DISCUSSION

Interpretation

Results showed favorable responses that point towards private hospitals in all three factors assessing Accessibility (ease of reaching emergency rooms equipped to handle neurological conditions, ease of obtaining medical attention and time taken to see medical staff after arrival at the ER) as compared to more neutral responses towards public hospitals. This is in contrast with the study done by previous researchers that found that those from lower-income groups relied more on public hospitals and rural health units.[9] Rather, based on our result, participants from the poor income group would prefer private hospitals in terms of their accessibility and convenience (overall mean score = 3.43). A similar preference towards private over public hospitals was also noted in the middle-income group (overall mean score = 3.77) and rich income group (overall mean score = 3.46). Regardless of financial income, participants consistently favored private hospitals for accessibility and convenience factors.

In terms of availability and resources (ie, essential diagnostic equipment, medication, facilities, medical equipment and specialists, ambulances) all three income groups were in favor of private hospitals (overall mean scores Poor = 3.41; Middle = 3.66; Rich = 3.42) compared to a more neutral view regarding public hospitals (overall mean scores Poor = 3.09 Middle = 3.17; Rich = 2.93). These findings are in line with previous studies that showed patients having different perceptions of healthcare services between public and private institutions.[13,14,21]

With regards to affordability, perception towards private institutions was less favorable. Responses were based on the costs of emergency room visits, medications, laboratory tests, consultation fees and ambulance rides. The poor income group had an overall neutral view of both private and public hospitals (overall mean score = 2.83, 2.93). Middle- and rich-income groups had neutral responses towards public hospitals (overall mean scores Middle = 3.03, Rich = 2.83) and less favorable responses towards private hospitals (overall mean scores Middle = 2.59, Rich = 2.59). These respondents viewed public hospitals as more affordable in all aspects.

Implications

The findings in this study highlight the need to enhance accessibility and availability of public healthcare services for neurological emergencies, based on a unanimous preference for private hospitals in these aspects among all socioeconomic classes. Policymakers could take this into account to improve both the quality of care and general perception of public hospitals by providing them with better equipment, medicines and infrastructure.

Limitations

The research's focus on adults in Manila may limit the generalizability of findings to other localities. The use of a quantitative approach may have also limited the researchers' ability to probe into the nuances that influence the public's perception of the AAA of private and public hospitals for neurological emergencies.

Suggestions for Future Research

The researchers would suggest that future studies into the topic utilize qualitative research methods, such as interviews or focus groups, to further explore the nuances that influence one's perception of the AAA of private and public institutions and their consequent health-seeking behaviors for neurological emergencies. Future studies could also be conducted in locales outside of Manila to give a more general overview of the public perception of private versus public hospitals, and could shed light on disparities in healthcare services between regions.

CONCLUSION

The study reveals a consistent preference for private hospitals across all income groups in terms of accessibility and availability of resources for

neurological emergencies, while public hospitals were viewed as more affordable but less accessible and well-equipped. These findings suggest a need for policymakers to prioritize improving infrastructure, equipment and overall service quality of public hospitals to bridge the gap in public perception and healthcare delivery. Enhancing the accessibility and availability of public healthcare services could encourage equitable health-seeking behaviors among all socioeconomic classes. Future research employing qualitative methods and exploring perspectives beyond Manila would provide deeper insights and broader applicability of the findings.

Declaration of Competing Interests

The authors declare that there are no competing interests related to this study. This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

AUTHOR CONTRIBUTIONS

1. Research Project
- A. Conception
- B. Organization
- C. Execution

2. Statistical Analysis
- A. Statistical Design
- B. Execution
- C. Review and Critique

3. Manuscript Drafting and Preparation
- A. Writing the First Draft
- B. Review and Critique

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