

INVESTIGATING ACCESSIBILITY OF MEDICAL SERVICES: THE CASE OF AREA 23, LILONGWE, MALAWI.

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Introduction

Patients are regarded as customers of the hospital's health and medical services. This study finds out whether they are satisfied from the services they receive from public hospital. The study will explore whether there is a discrimination between customer's receipt of hospital treatment and educational and employment status and how this affects the way customers feel about the hospital. Two hypotheses will be tested in the study; H1 to identify the relationship between accessing treatments and customer's employment status, H2 to identify the relationship between accessing treatments and customer's education status. According to (Kanyuka, 2019) Malawi has a death rate of 6.3 deaths per thousand persons per year. Malaria contributes 7.7% of total early death or disability due to disease in Malawi (Ministry of Health, 2017). The findings of this study will identify market factors that enhance the limited uptake of malaria services provided by hospitals hence leading to untreated malaria disease contributing to early deaths among people. The findings of the study will also enable policy makers to strategize on how to reduce death rates among people. (Kuisma, Maatta, Hakala, Sivula, & Nousila-Wiik, 2003) found that emergency medical services' quality can be measured and improved upon by conducting customer satisfaction studies. Hospitals that are perceived as not being able to provide services that meet needs, health service providers that do not give introductions and hospitals that are not the first choice dissatisfies the customer (Kuisma, Maatta, Hakala, Sivula, & Nousila-Wiik, 2003). Customers are willing to maintain loyalty to hospitals that place more emphasis on how they provide their medical services as opposed to those that place emphasis on what medical services they provide (Shemwell, Yavas, & Bilgian, 1998). Hospital's customer satisfaction is determined by the conduct of its staff, staff competence, customer perception of its cost and quality of its medicines and medical equipment (Andaleeb, 1998; Naidu, 2009). Customer's intentions to re-visit the hospital is enhanced by a positive brand image of the hospital which increases perception of quality service at the hospital (Wu, 2011). Customers are satisfied with hospitals that provide medical services that meet their needs and are loyal to hospitals that provide medical services meeting their medical needs in an expected way (Mittal & Lassar, 1998). Quality of service and customer satisfaction are positively influenced by perception of

interpersonal-based medical service encounter, customer's trust is influenced by perception of hospital's quality of service, customer satisfaction is influenced by the perception of trust in the hospital (Chang, Chen, & Lan, 2013). The study will enhance understanding on the effects of customer's demographics on accessing hospital services meeting their medical needs and also how these effects affect the way customers feel about the hospital. This understanding will increase our knowledge on variables involved in customer satisfaction to services provided by the hospital.

Literature Review

Customers of medical services express their satisfaction or dissatisfaction through word of mouth or non-verbal communication. Customers that are dissatisfied with the medical service they obtain from a hospital use the word of mouth to express their dissatisfaction and the customers that are satisfied with the medical service are less likely to express their satisfaction through the word of mouth (Anderson, 1998). Medical service customers rate their satisfaction based on the interpersonal communication with the service provider. Customers' word of mouth is influenced by empathic approach of the service provider (Chaniotakis & Lymperopoulos, 2009). The customers' word of the mouth is indirectly influenced by the providers' ability to respond to customer needs, service deliverable as well as providers' confidence in discharge of the service (Chaniotakis & Lymperopoulos, 2009). Provider's confidence in the discharge of the service and empathic approach strongly influence customer satisfaction (Kitapci, Akdogan, & Dortyol, 2014). The word of mouth is strongly influenced by customer satisfaction (Kitapci, Akdogan, & Dortyol, 2014). The studies have identified provider empathy, provider's ability to respond to customer needs, provider's confidence and provider's competence as directly influencing what medical service customers say about the care they receive at a hospital through word of mouth.

Medical service customers are willing to patronize the hospital for their needs when quality services are guaranteed. Hospital's service quality strongly influences a customer to show loyalty to the hospital as a result of increased customer satisfaction (Murti, Deshpande, & Srivastava, 2013). Competitive environment within the health care industry enhances customer satisfaction (Rivers & Glover, 2008). Customer satisfaction is determined by hospital's service quality and costs of the health care systems (Rivers & Glover, 2008). Hospital's service quality is

determined by work systems that produce high performance (Lee, Lee, & Kang, 2012). Customer satisfaction and loyalty is improved through hospital's service quality, operations efficiency and employee policy (Lee, Lee, & Kang, 2012). Customer loyalty to the hospital is determined by customer satisfaction to the hospital's services through its quality of service (Naidu, Factors affecting patient satisfaction and Health care quality, 2009). Customer satisfaction and loyalty is affected by the hospital's service quality and value (Choi, Cho, Lee, Lee, & Kim, 2004). Customer satisfaction is determined more by hospital's service quality than hospital's service value (Choi, Cho, Lee, Lee, & Kim, 2004). Customer loyalty to the hospital is strongly determined by hospital's service quality and service value (Choi, Cho, Lee, Lee, & Kim, 2004). Hospital's customers value its services primarily by their perception towards hospital's service quality (Choi, Cho, Lee, Lee, & Kim, 2004). The studies on effects of hospital's service quality on customer satisfaction have shown that service quality influences customer loyalty and customer satisfaction. Competition among hospitals promotes customer satisfaction. Hospital's service quality is determined by its work systems. Value and cost of the health care system also influences customer satisfaction.

Strong customer satisfaction with the hospital is predicted from greater customer satisfaction with the service provider (Kersnik, 2001). Customer satisfaction for the medical service increases when the customer is given freedom to choose the service provider (Amyx & Bristow, 2001). Positive perceptions of medical service experience are found among many customers that got the service from their provider of choice whilst negative perceptions of medical service experience are found among many customers that did not get the service from their provider of choice (Amyx & Bristow, 2001). Medical service providers that discharge the medical service with respect to customer's personality evoke greater customer satisfaction to the service as compared to medical service providers that discharge the medical service with respect to competence only (Shemwell, Yavas, & Bilgin, Customer-service provider relationship: An empirical test of a model of service quality, satisfaction and relationship-oriented outcomes, 1998). Hospital's customer satisfaction is influenced by conduct of its staff, interpersonal communication between provider and customer, costs as well as the quality of hospital facilities (Andaleeb, Determinants of customer satisfaction with hospitals: A managerial model, 1998). Customer satisfaction with the hospital's services are strongly influenced by the provider's orientation of medical service (Andaleeb, Siddiqui, & Khandakar, Patient satisfaction with health

services in Bangladesh, 2007). The approach that the medical service provider follows during the course of providing medical service evokes strong customer satisfaction whilst longer times spent during the course of providing medical service evokes customer dissatisfaction (Assefa, Mosse, & Michael, 2011). Age and education of the customer is linked to customer's satisfaction with the medical service received (Assefa, Mosse, & Michael, 2011). Customer satisfaction with the hospital is positively affected by customer-provider, quality of hospital's facilities as well as communications between customer and hospital's support staff (Raposo, Alves, & Duarte, 2009; Koteswara, Kondasani, & Panda, 2015).

Customers that are not involved much in the decisions regarding their health care are satisfied with the hospital's services primarily through hospital's perceived performance (Shaffer & Sherrell, 1998). Increased customer involvement in the decisions regarding their health care evokes higher performance appraisal for the hospital (Shaffer & Sherrell, 1998). Customer's satisfaction with the hospital is linked to customer's perception and judgement regarding quality of service rendered in the course of discharging the entire medical service value chain at the hospital (Woodside, Frey, & Daly, 1981). Some activities within the medical service value chain are strongly linked to customer satisfaction with the hospital than other activities within the medical service value chain (Woodside, Frey, & Daly, 1981). Customer's willingness to seek medical services at the hospital is strongly linked to customer's satisfaction with the hospital's medical service value chain (Woodside, Frey, & Daly, 1981). Willingness of the customers to recommend a given hospital is linked to customer's satisfaction with the hospital's service quality (Zineldin, 2006)

The review of the literature on customer satisfaction to medical services has shown that customers are satisfied with hospitals that fulfil all customer desires regarding medicines and laboratory procedures (Crow, et al., 2002). This is good if the customer's desire is based on efficacy of the treatment. However, it can lead to poor health outcomes if the desire is not based on effectiveness of the treatment. The review highlighted links of customer's satisfaction to customer's predisposition factors. (Crow, et al., 2002). This suggests that service providers are expected to take into account customer's background in order to offered a satisfactory medical service. Customer satisfaction for the given medical service is affected by health outcome and health status of the customer (Crow, et al., 2002). Medical service providers must emphasize on

effectively discharging activities within the medical service value chain that are optimum to produce better health outcomes for the customers so as to maintain customer satisfaction levels. Psychologically affected and critically sick customers are less satisfied with the medical service (Crow, et al., 2002). Satisfaction of the medical service usually scores high among customers whose expectations have been met, so sick customers will likely not be satisfied with the service as most of them expects the hospital to cure all their ailments. Hospital's adult customers are more satisfied with the medical services provided by the hospital (Crow, et al., 2002). Adult customers are likely to have the knowledge that some medical solutions take time to cure the disease suffered by the customer whilst younger ones might not have this knowledge and experience. The literature is not clear on the effects of gender, socio-economic status and ethnicity of the customer on satisfaction (Crow, et al., 2002).

The satisfaction and dissatisfaction of the medical service customer depends on the alignment of customer's orientation to medical service and conditions provided by the medical service provider, alignment leads to satisfaction whilst the opposite leads to dissatisfaction (Gill & White, 2009). Proper awareness campaigns for potential customers of medical services is vital to ensure that customer's orientation to medical service is right. Resources are needed to ensure medical service provider meets all conditions necessary to discharge medical service. Customer's values and beliefs and expectations influence customer satisfaction to medical service (Gill & White, 2009). It is important for the customers to possess right values, right beliefs as well as right expectation in order for them to properly judge satisfaction or dissatisfaction of the provided medical service. Customer's subjectivity and bias determines whether the customer is satisfied or dissatisfied with the medical service (Gill & White, 2009). Hospitals can improve customer satisfaction levels by improving its operations that would lead to quality service so that customer's bias does not affect much the ratings on satisfaction as most prefer quality services. Customer's expectations from medical services are determined by the customer's health aspirations and the extent to which sickness and conditions at the hospital impacts on the customer's esteem (Gill & White, 2009). Hospitals need to involve customers in the decisions regarding their care to ensure customer's expectations are known and met. Interpersonal process of care influences whether the customer is satisfied or dissatisfied with the medical service (Gill & White, 2009). The technical and administrative staff of hospitals are required to ensure

productive communication between them and the customers so that the customer is satisfied with all activities involved in the medical service value chain.

Methodology

Population/Sample

The target population for the investigation are residents of Area 23 aged from one year to four years. Area 23 has a population of 5298 of people aged between 1 and 4 years (Kanyuka, 2019). The sample size at 10% of the target population was calculated as 530. The sample constituted one-tenth of the target population of people residing in Area 23. This is related to sample population used by (Siri, et al., 2008).

Location/Restrictions/Limiting Conditions

The study was conducted in Area 23 located in Lilongwe, capital city of Malawi. Children aged from one to four years were included and households with more than one year of stay in Area 23 were included in the study. Children below one year and people above four years and households with less than one year of stay in Area 23 were excluded from the study.

Sampling Technique

Stratified random sampling was used to identify sample of the target population. The six strata of Area 23 were represented by the market places within the area along the road from Chipasula secondary school to Kang'oma Health Centre.

Procedures

Cross-sectional research design was used to study participants residing in Area 23, Lilongwe. The data was collected by six people, each in his or her own stratus. The data was collected using questionnaire method. Each of the six data collectors visited households where the participants were interviewed using the questionnaire. The participants for the study were nursing mothers or any other parent to this population group. The data collectors were oriented on the questionnaire and how to administer a face-to-face questionnaire to the study participant before commencement of data collection. The sample was drawn using stratified random sampling

technique. The six data collectors collected the data from households within their designated stratus. The project aim was explained to the participant and the participant was required to sign a consent form to be recruited in the study. The questionnaire focused on a number of factors related to demographics and customer satisfaction. The data on demographics of the child was gender, age, health status for a period of twelve months, malaria disease burden for a period of twelve months and malaria treatment received at the routine hospital. The data on demographics of the parent was routine medical service provider, medical seeking behavior when the child is sick, education level and source of income. These factors reflect customer's predispositions that can affect perception of satisfaction of the provided medical service. The data on customer satisfaction focused on exploring customer satisfaction, routine hospital's customer service, satisfaction with service attributes and customer loyalty. These factors reflect utilization of medical services by customer thereby promoting health living and better health outcomes. The collected data was analyzed using SPSS version 20. The sample composition was known in terms of percentage male and female. Age distribution was reported in terms of mean and standard deviation. Two hypotheses were tested in the study; H1 Accessing treatment is associated with being employed, this hypothesis seeks to identify the relationship between accessing treatments and customer's employment status, H2 Accessing treatment is associated with education level of the customer, this hypothesis seeks to identify the relationship between accessing treatments and parent's education status. Regression analysis was used to analyze if employment and education status of the customer can explain how customers feel about the hospital's medical services. Health status of study participants for a period of one year was reported. Care giver's health seeking tendency was reported. Nearest health facilities to Area 23 residents were reported. One- year malaria disease burden among the study sample was reported. Nearest health facilities' capacity to treat malaria was reported. Care givers' education level and source of income was reported. Correlation between customer's employment status and accessing treatment was reported. Correlation between customer's education status and accessing treatment was reported. Predictors of customer satisfaction to hospital's medical service were explored. Percentage of parents satisfied with public hospital services was reported. Percentage of parents satisfied with customer service at public hospital was reported. Percentage of parents satisfied with service attributes offered at public hospital was reported. Percentage of parents loyal to public hospitals was reported.

Discussion and Data Analysis

Findings

The number of questionnaires that were completed was 469 out of the 530 representing a response rate of 88%. The study sample comprised of 49.7% male and 50.3% female children aged from one to four. The mean of age was 2.52 years (SD = 0.97 years).

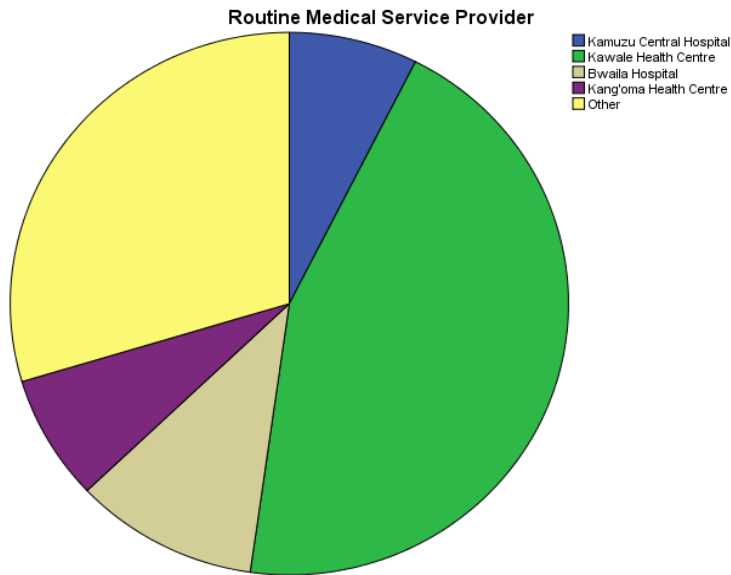
During a period of 12 months, 86.1% of children aged from one to four years had a symptom of a disease whilst 13.9% of the children maintained their wellness.

During a period of 12 months, 50.3% of children aged from one to four reported to have suffered from malaria whilst 49.7% of the children reported to not have suffered from malaria.

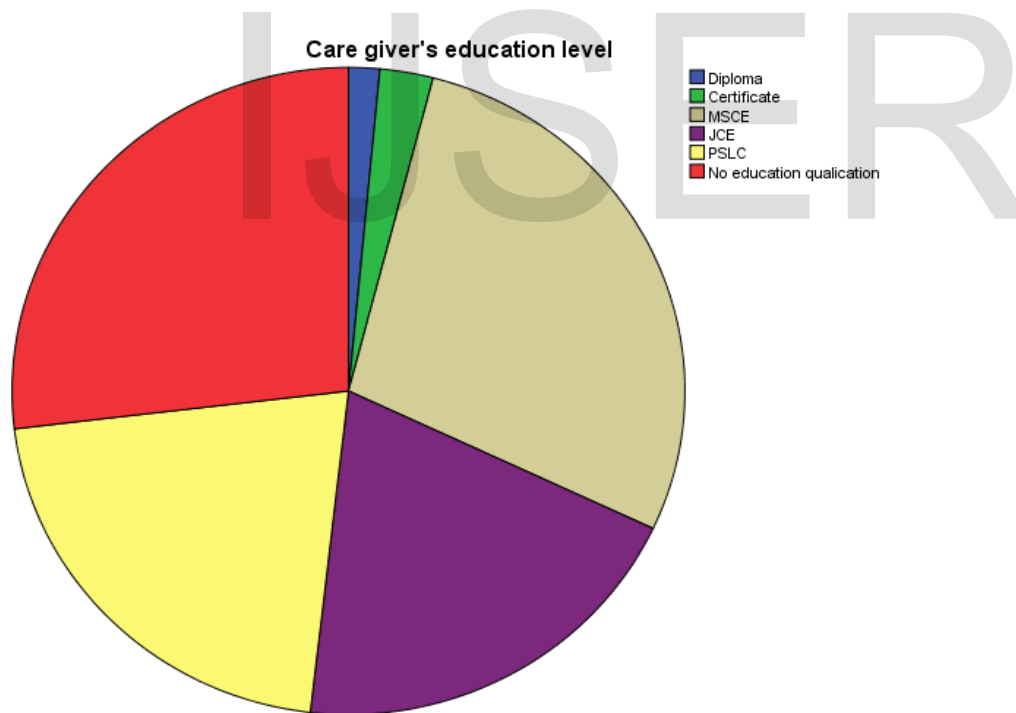
38.8% of the malaria cases in children aged from one to four were treated at public hospitals where parents routinely seek their medical attention whilst 61.2% were not treated at the routine public hospitals.

78.7% of parents seek medical attention when their children feel unwell whilst 21.3% of parents do not seek medical attention when their children feel unwell.

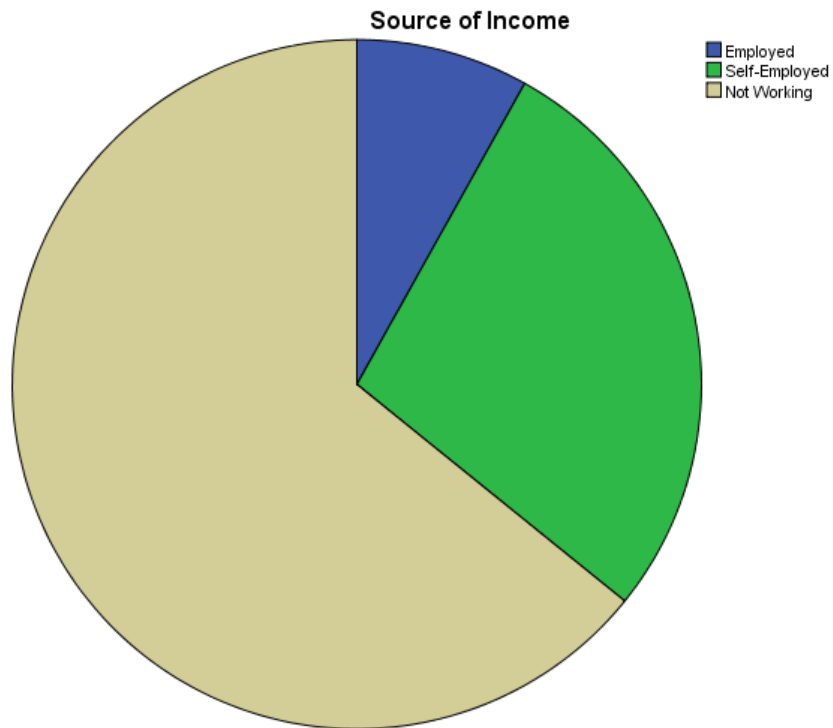
7.5% of parents seek medical attention to Kamuzu Central Hospital, 44.8% seek to Kawale Health Centre, 10.7% seek to Bwaila Hospital, 7.5% seek to Kang'oma Health Centre and 29.6% seek medical attention to other facilities.



1.5% of parents possessed a diploma, 2.6% possessed a certificate, 27.9% held MSCE, 19.8% held JCE, 21.3% held PSLC and 26.9% held no education qualification.



8.1% of parents are employed, 27.7% are self- employed and 64.2% of parents are not working.



70% of parents were generally satisfied with public hospital services

Overall satisfaction with the public hospitals that provide medical services

Extremely satisfied	36%
Moderately satisfied	20%
Slightly satisfied	14%
Neither satisfied nor dissatisfied	4%
Slightly dissatisfied	6%
Moderately dissatisfied	4%
Extremely dissatisfied	16%

42% of parents generally find it easy to getting treated at public hospitals

Ease or difficulty of getting treated at public hospitals

Extremely easy	24%
Moderately easy	16%
Slightly easy	2%

Neither easy nor difficult	6%
Slightly difficult	20%
Moderately difficult	22%
Extremely difficult	10%

32% of parents contact the public hospital directly with specific concerns

Contacting the public hospital directly with specific questions or concerns

Extremely often	2%
Very often	4%
Occasionally	10%
Rarely	16%
Never	68%

21.1% of the concerns raised by parents directly with the public hospital were resolved in a timely manner.

35.3% of parents that had raised a specific concern to the public hospital were satisfied with the final resolution to the concern

Satisfaction with the final resolution to the question or concern

Extremely satisfied	23.5%
Moderately satisfied	5.9%
Slightly satisfied	5.9%
Neither satisfied nor dissatisfied	17.6%
Slightly dissatisfied	11.8%
Extremely dissatisfied	35.3%

82% of parents were satisfied with customer service at the public hospital

Extremely satisfied	40%
Moderately satisfied	26%
Slightly satisfied	16%

Slightly dissatisfied	2%
Extremely dissatisfied	16%

78% of parents are generally satisfied with medical services offered by public hospital

Overall satisfaction with medical services offered by public hospital

Extremely satisfied	26%
Moderately satisfied	20%
Slightly satisfied	32%
Neither satisfied nor dissatisfied	2%
Slightly dissatisfied	10%
Moderately dissatisfied	2%
Extremely dissatisfied	8%

70% of parents are generally satisfied with the quality of medical services offered at public hospital

Overall satisfaction with the quality of medical services offered at public hospital

Extremely satisfied	30%
Moderately satisfied	20%
Slightly satisfied	20%
Neither satisfied nor dissatisfied	8%
Slightly dissatisfied	8%
Moderately dissatisfied	4%
Extremely dissatisfied	10%

82% of parents are generally satisfied with the value of medical services offered at public hospital

Extremely satisfied	24%
Moderately satisfied	26%

Slightly satisfied	32%
Neither satisfied nor dissatisfied	2%
Slightly dissatisfied	10%
Moderately dissatisfied	2%
Extremely dissatisfied	4%

72% of parents are generally satisfied with the variety of medical services offered at public hospital

Overall satisfaction with the variety of services offered at public hospital

Extremely satisfied	38%
Moderately satisfied	22%
Slightly satisfied	12%
Neither satisfied nor dissatisfied	4%
Slightly dissatisfied	10%
Moderately dissatisfied	12%
Extremely dissatisfied	2%

58% of parents are generally satisfied with the price of medical services at public hospital

Overall satisfaction with the price of medical services at public hospital

Extremely satisfied	36%
Moderately satisfied	10%
Slightly satisfied	12%
Neither satisfied nor dissatisfied	2%
Slightly dissatisfied	10%
Moderately dissatisfied	8%
Extremely dissatisfied	22%

72% of parents are generally satisfied with the exclusivity of medical services at public hospital

Overall satisfaction with the exclusivity of medical services at public hospital

Extremely satisfied	14%
Moderately satisfied	30%
Slightly satisfied	28%
Neither satisfied nor dissatisfied	4%
Slightly dissatisfied	4%
Moderately dissatisfied	8%
Extremely dissatisfied	12%

78% of parents are generally satisfied with the usefulness of medical services offered at public hospital

Extremely satisfied	24%
Moderately satisfied	36%
Slightly satisfied	18%
Neither satisfied nor dissatisfied	10%
Slightly dissatisfied	4%
Moderately dissatisfied	2%
Extremely dissatisfied	6%

62% of parents are generally satisfied with the ability to customize medical services at public hospital

Overall satisfaction with the ability to customize medical services at public hospital

Extremely satisfied	26%
Moderately satisfied	14%
Slightly satisfied	22%
Neither satisfied nor dissatisfied	4%
Slightly dissatisfied	8%
Moderately dissatisfied	16%

Extremely dissatisfied	10%
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Most parents are generally influenced by price of medical services in order to decide to go to public hospital

Most important factor that is most influential in the decision to go to public hospital for medical services

Quality of medical services	22%
Price of medical services	44%
Exclusivity of medical services	12%
Usefulness of medical services	10%
Ability to customize medical services	2%
Value of medical services	6%
Variety of medical services	2%
Other factors	2%

Most parents generally say usefulness of medical services is the second most important factor influential to go to public hospital

Second most important factor that is influential in the decision to go to public hospital for medical services

Quality of medical services	12.5%
Price of medical services	14.6%
Exclusivity of medical services	12.5%
Usefulness of medical services	20.8%
Ability to customize medical services	2.1%
Value of medical services	14.6%
Variety of medical services	4.2%
Other factors	18.8%

74% of parents are generally likely to continue seeking medical services at public hospital

Likelihood of continuing seeking medical services at public hospital

Extremely likely	38%
Moderately likely	20%
Slightly likely	16%
Neither likely nor unlikely	6%
Slightly unlikely	2%
Moderately unlikely	6%
Extremely unlikely	12%

Most parents generally recommend a public hospital to a friend or colleague

Recommending public hospital for medical services to a friend or colleague on a scale from 0 to 10

0	12%
1	6%
2	6%
3	2%
4	6%
5	16%
6	2%
7	14%
8	4%
9	6%
10	26%

There is significant correlation between accessing treatment and parent's education status ($p < 0.05$). Accessing treatment is negatively correlated with education status of the parent

There is no significant correlation between accessing treatment and parent's employment status ($p > 0.05$).

Correlations

		Malaria Treated at Routine Medical Service Provider	Source of Income	Care giver's education level
Malaria Treated at Routine Medical Service Provider	Pearson Correlation	1	-.006	-.104*
	Sig. (2-tailed)		.889	.024
	N	469	469	469

Source of Income	Pearson Correlation	-0.006	1	.381**
	Sig. (2-tailed)	.889		.000
	N	469	469	469
Care giver's education level	Pearson Correlation	-.104*	.381**	1
	Sig. (2-tailed)	.024	.000	
	N	469	469	469

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Linear regression finds no evidence that education status of the parent does predict satisfaction of medical services at public hospital ($r = 0.103$).

Linear regression finds no evidence that employment status of the parent does predict satisfaction of medical services at public hospital ($r = 0.012$).

Discussions

Every year, 13.9% of children maintain their health living. The majority of children suffer from various forms of diseases that need provision of medical services from public hospitals. Child's sickness needs the attention of pediatricians at public hospitals that offer curative and preventive medical services to children to restore and maintain their health (Segura, et al., 2014). Public hospitals have a customer base of 86.1% of children every year to provide preventive and curative medical services in order to meet the needs of this segment.

Every year, 61.2% of children suffering from malaria do not access malaria treatment at public hospitals that provide routine medical services to them. Public hospitals do not meet the needs of the majority of its children customer segment. The demand for medical services is unpredictably increasing posing a challenge for public hospitals to meets the needs of all their customer

(Pencheon, 1998). Public hospitals are expected to develop innovative approaches to meeting the needs of the ever- rising demand for their services.

Among the children that are in need of medical services, 21.3% of their parents do not demand medical services from hospitals. The majority of the hospital's customers are not aware of the importance the medical services they provide. (Cropley, 2004) reported that only 24.3% of parents demanded for medical services when their children needed the services. Public hospitals are expected to promote their medical services to all their customer segments so that customers are empowered with relevant information concerning the medical services supplied by the hospital.

Customer satisfaction with medical services is determined by brand image of the hospital and quality of the provided medical services, improvements in brand image and quality of services is required to improve customer satisfaction and achieve customer loyalty (Juhana, Manik, Febrinella, & Sidharta, 2015). Public hospitals have customer satisfaction of 70% of the parents, the remaining parents can be satisfied through improvements in the brand image of the hospital and service quality. Medical services are not easily accessed by customers with only 46% of parents finding it easy to access treatments. Improvements in accessibility of medical services is required to improve service quality thereby gaining customer satisfaction. Public hospitals are fairly user friendly with only 32% of parents engage the hospital directly with concerns. Customers of medical services need to feel free to voice any concern and provide service feedback to hospital management so that service quality is improved. Public hospitals provide medical services to many customers with 82% of parents satisfied with the customer service offered by the hospitals. Customer service helps the customer to easily get the services required without wasting much time. Medical services provided by public hospitals are usually acceptable with 78% of parents satisfied with the medical services provided. Quality of medical services in public hospitals is fairly good with 70% of parents satisfied with the excellence of medical services provided to their sick children. Public hospitals offer better value of medical services with 82% of parents satisfied with the importance of medical services provided to their sick children. The variety of medical services in public hospital is fairly good with 72% of parents satisfied with the choices available to them to access the needed medical service for their sick children. Public hospitals usually offer free medical services; however, customers feel that

indirect costs are paid before the free service is accessed thus only 58% of parents are satisfied with the free medical services that public hospitals offer. Excessive demand for medical services in public hospital makes it difficult for customers to access the services, 72% of parents are satisfied with easiness of access found in public hospitals. Public hospitals offer preventive and curative medical services that restore and maintain health of their customers with 78% of parents satisfied with usefulness of medical services that public hospitals offer. Customer specific needs are fairly met during provision of medical services at public hospitals with 62% of parents satisfied with the public hospital's ability to customize medical services. Public hospitals have a large customer base with 74% of parents show loyalty to the public hospitals.

Consumers of services need to be lured by service providers in order to succeed in consumer oriented markets, service providers maintain awareness of the factors influencing consumer behavior in order to achieve customer satisfaction, studying consumer behavior yields market success (Rani, 2014). Most parents are influenced by price and usefulness when deciding access of medical services in public hospitals with 44% and 20.8% mentioning price and usefulness as first and second most important factor that is most influential in the decision to go to public hospital for medical services respectively. Public hospitals are able to maintain large customer bases through provision of free medical services that address the needs of the customers.

Socio-economic factors affect the delivery of medical services for example use mosquito nets and use of medicines used to prevent suffering from malaria (Hill, et al., 2013). Education status of parents is negatively associated with accessing treatments at public hospital. Parents with lower education status are likely to receive treatment for their sick children at public hospital than parents with higher education status. Employment status of parents is not associated with accessing treatments at public hospital. Public hospitals need to ensure that discrimination of providing treatments to sick children based on education status of their parents does not occur.

Education and employment status of parents does not explain parent's satisfaction with medical services that public hospital offer. (Crow, et al., 2002) found limited evidence of the effects of socio-economic status on customer satisfaction with medical services. Public hospital management is therefore expected to concentrate on service quality, communication and brand image of their hospitals than socio-economic factors of their customers to achieve customer satisfaction.

Conclusion and Recommendation

Conclusion

Public hospitals provide medical services to patients as customers. Some customers are satisfied with the provided medical services whilst others are dissatisfied. There is discrimination at public hospital in consumption of medical services among sick children based on the education status of their parents. Employment status of the parents does not affect consumption of medical services by sick children at public hospitals. Factors that contribute to limited consumption of medical services by sick children in public hospitals include higher education qualification of the parent, price associated with accessing medical services in public hospitals and difficulties in accessing medical services for example long queues and long waiting times. Public hospitals have a large proportion of its customers whose needs are not met. Most of the customers to public hospitals are not aware of the medical services that the hospital offer hence are unable to utilize them when in need. Customer satisfaction with public hospital's services can be achieved primarily through ensuring the public hospital is sensitive to the needs of the market.

Public hospitals have a large customer base to provide preventive and curative medical services. The demand for medical services is ever-increasing requiring strategies to match the supply with demand. Hospital's brand image and service quality affects customer satisfaction with the provided medical services. Service quality can be enhanced through improved quality, value, variety, price, exclusivity, usefulness and ability to customize the services. Price and usefulness are the most important factors parents say influences their decision to consume medical services provided by public hospitals.

In the competitive health care market, public hospitals need to embrace market-oriented approach in order to succeed in the market and achieve customer loyalty to its services.

Managers of public hospitals need to emphasize on improving customer satisfaction to maintain and restore the health of many of its customers.

The study has the following limitations;(1) used only one customer segment of medical services i.e. children aged from one to four. The findings might differ in other customer segments. (2) used one disease program, malaria. Other disease programs like HIV/AIDS, Tuberculosis, Reproductive health, and other diseases might present a different picture. (3) time required to

collect data; smaller area of study was used. Larger area of study can give a more representative picture

Recommendations

Brand image and service quality are important factors that ensures public hospitals achieve customer satisfaction, there is more knowledge on how service quality affects customer satisfaction and subsequently customer loyalty. There is need for further studies to identify factors contributing to brand image of public hospitals. These factors would enhance public hospital managers practically improve brand images of their respective public hospitals.

To reduce early deaths from treatable medical conditions; policy makers need to increase efforts on increasing access to preventive malaria services as more children aged from one to four are affected by this disease every year, increase capacity for public hospital to be able to provide malaria services to children aged from one to four as the majority of the cases do not receive malaria treatments at routine public hospitals, increase promotion of medical services to parents so that they are aware on the services provided by the hospitals as some parents do not seek medical attention when their children are sick, maintain free medical services in public hospitals as many parents are influenced by the free price to continue seeking medical services in public hospitals, ease of accessing medical services in public hospitals can be achieved through increasing the number of medical service points so that customers are not delayed by long queues and long waiting times as many parents find it difficult to access treatments in public hospitals.

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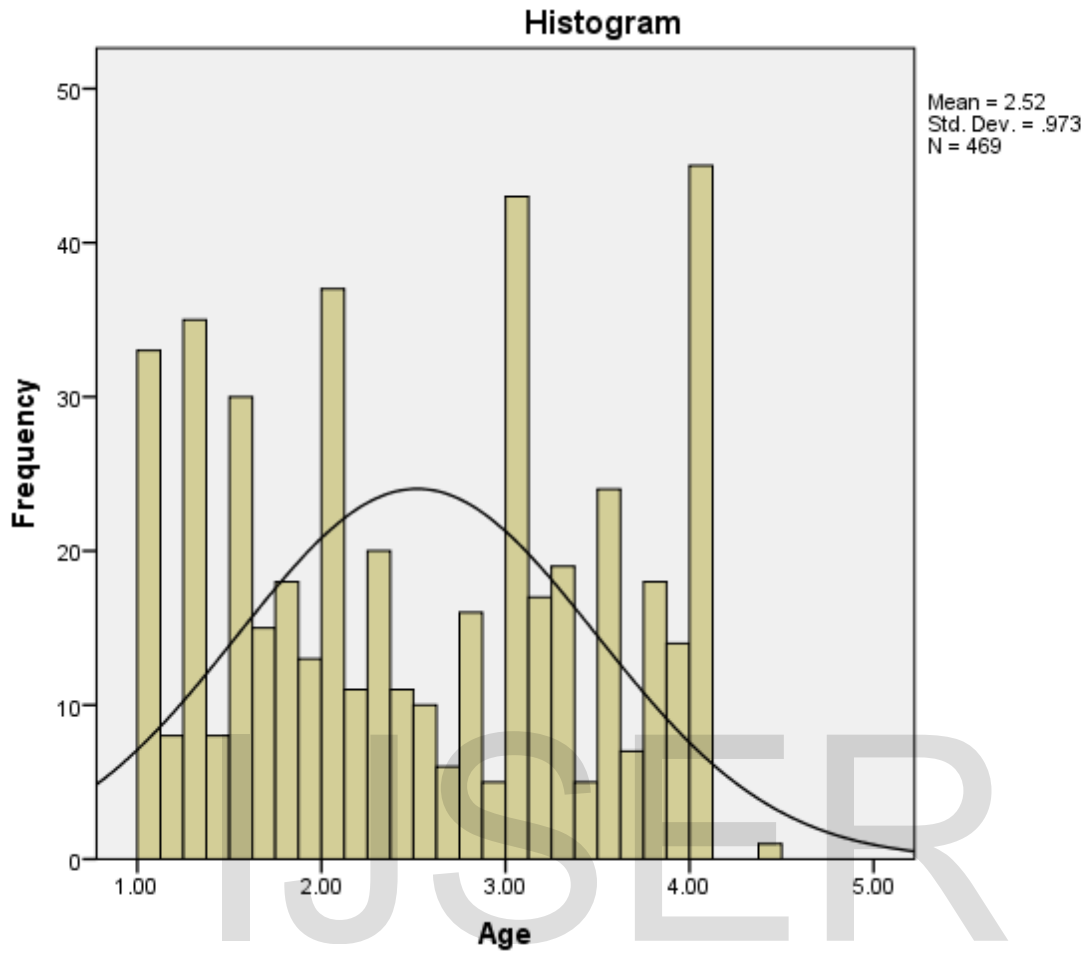
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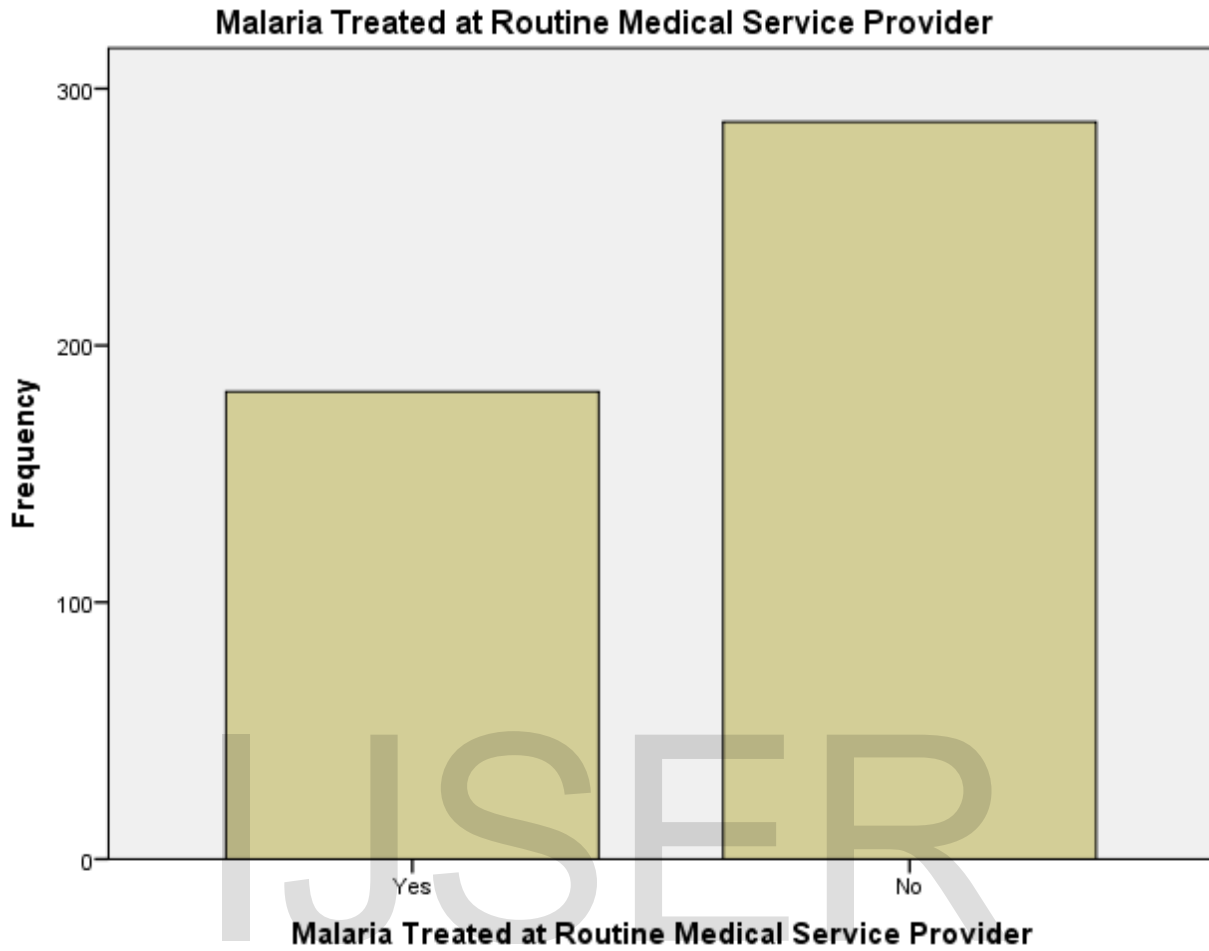
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Appendices

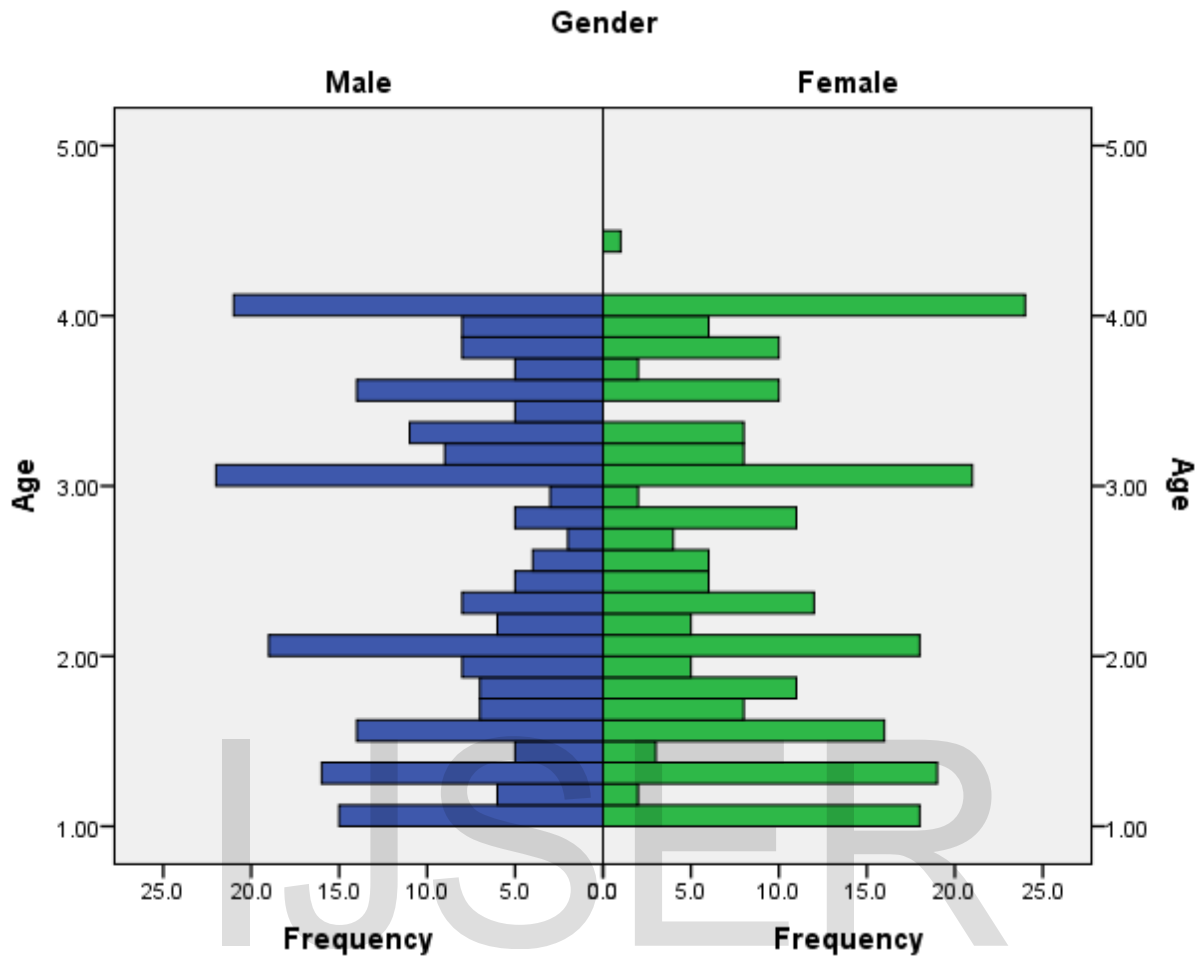
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Appendix 1: Mean of Age of Children aged from one to four in Area 23, Lilongwe



Appendix 2: Children aged from one to four in Area 23 who suffered from malaria and received malaria treatment at a routine public health facility



Appendix 3: Age and Gender distribution among children aged from one to four in Area 23, Lilongwe

Routine Medical Service Provider

	Frequency	Percent	Valid Percent	Cumulative Percent
Kamuzu Central Hospital	35	7.5	7.5	7.5
Kawale Health Centre	210	44.8	44.8	52.2
Bwaila Hospital	50	10.7	10.7	62.9
Kang'oma Health Centre	35	7.5	7.5	70.4
Other	139	29.6	29.6	100.0
Total	469	100.0	100.0	

Appendix 4: Health facilities where parents in Area 23 routinely seek medical attention in times of need, Other represented Kamuzu barracks hospital and private health facilities

List of Data Collectors		
Name	Education	Institution
George Jobe II	Diploma in Law	Staff Development Institute, Malawi
Mordecai Kamanga	BSc Agriculture Enterprise Development and Microfinance, Year 3	Lilongwe University of Agriculture and Natural Resources, Malawi
Davidson Chinoko	Bachelor of Philosophy	Inter-congregational Institute of Philosophy and Human Sciences, Malawi
Joseph Chinoko	BSc Applied Agricultural Economics, Year 3	Lilongwe University of Agriculture and Natural Resources, Malawi
Mwiza M. Nthakomwa	National High Certificate in Film and Television Production	Revolution Media College, South Africa
Madalo Jobe	Bachelor of Social Science (Social Work), Year 1	Catholic University of Malawi, Malawi

Appendix 5: Data Collectors

Questionnaire

Participant's identity number:

1. Gender
 - (a) Male
 - (b) Female
2. Age
3. Have you felt unwell in the past 12 months?
 - (a) Yes
 - (b) No

4. If yes to question 3, did you seek medical attention?
 - (a) Yes
 - (b) No
5. Where do you seek your medical services?
 - (a) Kamuzu Central Hospital
 - (b) Kawale Health Centre
 - (c) Bwaila Hospital
 - (d) Kang'oma Health Centre
 - (e) Other
6. Have you had malaria in the past 12 months?
 - (a) Yes
 - (b) No
7. If yes, did you receive treatment at the facility?
 - (a) Yes
 - (b) No
8. What is your highest education level?
 - (a) PhD
 - (b) Master's
 - (c) Bachelor's
 - (d) Diploma
 - (e) Certificates
 - (f) MSCE
 - (g) JCE
 - (h) PSLC
9. Source of income
 - (a) Employed
 - (b) Self-employed
 - (c) Not working
10. Overall, how satisfied or dissatisfied are you with the public hospital you get medical attention?

- (a) Extremely satisfied
- (b) Moderately satisfied
- (c) Slightly satisfied
- (d) Neither satisfied nor dissatisfied
- (e) Slightly dissatisfied
- (f) Moderately dissatisfied
- (g) Extremely dissatisfied

11. Referring to the choice you gave in Q10. Please explain why you selected the choice in the space provided below

12. How would you rate the ease or difficulty of accessing medical services at the public hospital?

- (a) Extremely easy
- (b) Moderately easy
- (c) Slightly easy
- (d) Neither easy nor difficult
- (e) Slightly difficult
- (f) Moderately difficult
- (g) Extremely difficult

13. How often have you contacted the public hospital directly with specific questions or concerns?

- (a) Extremely often
- (b) Very often
- (c) Occasionally
- (d) Rarely
- (e) Never

14. Was your question or concern resolved in a timely manner?

- (a) Yes

(b) No

15. How satisfied or dissatisfied were you with the final answer or resolution to your question or concern?

(a) Extremely satisfied

(b) Moderately satisfied

(c) Slightly satisfied

(d) Neither satisfied nor dissatisfied

(e) Slightly dissatisfied

(f) Moderately dissatisfied

(g) Extremely dissatisfied

16. Overall, how satisfied or dissatisfied are you with the customer service of the public hospital?

(a) Extremely satisfied

(b) Moderately satisfied

(c) Slightly satisfied

(d) Neither satisfied nor dissatisfied

(e) Slightly dissatisfied

(f) Moderately dissatisfied

(g) Extremely dissatisfied

17. Please share any additional comments or feedback regarding the public hospital's issue resolution process in the space provided below

18. Overall, how satisfied are you with the medical services provided by the public hospital?

(a) Extremely satisfied

(b) Moderately satisfied

(c) Slightly satisfied

(d) Neither satisfied nor dissatisfied

(e) Slightly dissatisfied

(f) Moderately dissatisfied

(g) Extremely dissatisfied

19. Overall, how satisfied are you with the **quality** of medical services provided at the public hospital?

(a) Extremely satisfied

(b) Moderately satisfied

(c) Slightly satisfied

(d) Neither satisfied nor dissatisfied

(e) Slightly dissatisfied

(f) Moderately dissatisfied

(g) Extremely dissatisfied

20. Overall, how satisfied are you with the **value** of medical services provided at the public hospital?

(a) Extremely satisfied

(b) Moderately satisfied

(c) Slightly satisfied

(d) Neither satisfied nor dissatisfied

(e) Slightly dissatisfied

(f) Moderately dissatisfied

(g) Extremely dissatisfied

21. Overall, how satisfied are you with the **variety** of medical services provided at the public hospital?

(a) Extremely satisfied

(b) Moderately satisfied

(c) Slightly satisfied

(d) Neither satisfied nor dissatisfied

(e) Slightly dissatisfied

(f) Moderately dissatisfied

(g) Extremely dissatisfied

22. Overall, how satisfied are you with the **price** associated with medical services at the public hospital?

- (a) Extremely satisfied
- (b) Moderately satisfied
- (c) Slightly satisfied
- (d) Neither satisfied nor dissatisfied
- (e) Slightly dissatisfied
- (f) Moderately dissatisfied
- (g) Extremely dissatisfied

23. Overall, how satisfied are you with the **exclusivity** of medical services provided at the public hospital?

- (a) Extremely satisfied
- (b) Moderately satisfied
- (c) Slightly satisfied
- (d) Neither satisfied nor dissatisfied
- (e) Slightly dissatisfied
- (f) Moderately dissatisfied
- (g) Extremely dissatisfied

24. Overall, how satisfied are you with the **usefulness** of medical services provided at the public hospital?

- (a) Extremely satisfied
- (b) Moderately satisfied
- (c) Slightly satisfied
- (d) Neither satisfied nor dissatisfied
- (e) Slightly dissatisfied
- (f) Moderately dissatisfied
- (g) Extremely dissatisfied

25. Overall, how satisfied are you with the **ability to customize** medical services provided by public hospital?

- (a) Extremely satisfied
- (b) Moderately satisfied
- (c) Slightly satisfied
- (d) Neither satisfied nor dissatisfied

- (e) Slightly dissatisfied
- (f) Moderately dissatisfied
- (g) Extremely dissatisfied

26. Please choose the top 1 or 2 factors that are most influential in your decision to go to the public hospital for medical services

Type “1” for the most important factor and “2” for the second most important factor in the space provided next to each attribute

- _____ Quality
- _____ Price
- _____ Exclusivity
- _____ Usefulness
- _____ Ability to customize
- _____ Value
- _____ Selection
- _____ Other

27. Based on your experience with the public hospital, how likely or unlikely are you to continue seeking medical services at this public hospital in the future?

- (a) Extremely likely
- (b) Moderately likely
- (c) Slightly likely
- (d) Neither likely nor unlikely
- (e) Slightly unlikely
- (f) Moderately unlikely
- (g) Extremely unlikely

28. On a scale from 0-10, how likely are you to recommend this public hospital to a friend or colleague

- (a) 0
- (b) 1
- (c) 2

- (d) 3
- (e) 4
- (f) 5
- (g) 6
- (h) 7
- (i) 8
- (j) 9
- (k) 10

29. Please share any additional comments or feedback regarding medical services at this public hospital in the space provided below

Appendix 6 Data collection tool

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