



## Original Article

## Quality Management System: Customer Satisfaction Survey of The Haematology Unit of the Central Laboratory of the Teaching Hospital of Yopougon

*Management de la qualité: une enquête de satisfaction client au Laboratoire Central d'Hématologie du CHU de Yopougon*

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**Mots clés :** enquête de satisfaction, qualité, clients, unité d'hématologie, Côte d'Ivoire.

**ABSTRACT**

**Background.** Customer satisfaction is at the heart of laboratory strategies. It is an essential concept in the healthcare quality approach. In Cote d'Ivoire, there are few reports on biomedical laboratory customer satisfaction, especially those attending teaching hospitals. We conducted a survey to assess the perceived quality of the services offered in the haematology unit of the central laboratory at the teaching hospital of Yopougon, Abidjan, Cote d'Ivoire. **Methods.** A survey questionnaire was used to collect data on various aspects of the pre-analytical phase (including access to the premises, reception, cleanliness of the sampling room) and the post-analytical phase (turn-around times). **Results.** Customer's satisfaction was at 80 % of the surveyed sample for the opening hours, 67 % for the help desk and 58 % for turn-around times. Overall, less than 50 % of customers were satisfied with the services offered by the haematology unit of the teaching hospital of Yopougon. **Conclusion.** A customer satisfaction survey does not solve all the problems in the quality of the services offered. It makes it possible to pinpoint the strengths and weaknesses of the concerned unit, in order to take corrective actions.

**RÉSUMÉ**

**Introduction.** La satisfaction client est placée au cœur des stratégies des laboratoires. Elle est un concept essentiel dans la démarche qualité santé. En Côte d'Ivoire, il y a peu d'études sur la satisfaction des clients au sein des laboratoires centraux dans les CHU. C'est dans ce cadre que nous avons mené une enquête de satisfaction client pour évaluer la qualité des services proposés dans l'unité d'hématologie du laboratoire central du CHU de Yopougon. **Méthodes.** Une fiche d'enquête a permis d'obtenir des informations sur différents aspects de la phase pré-analytique (y compris l'accès aux locaux, l'accueil, la propreté de la salle de prélèvement) et la phase post-analytique (délai de rendu des résultats). **Résultats.** Lors de la phase pré-analytique, 80% des clients ont apprécié les horaires d'ouverture du laboratoire, alors que seulement 67% étaient satisfaits de l'accueil. Au cours de la phase post-analytique, 58% des clients étaient insatisfaits du délai de rendu des résultats. Globalement, moins de 50% des clients sont satisfaits des services proposés par l'unité d'hématologie du CHU de Yopougon. **Conclusion.** Une enquête de satisfaction client ne résout pas tous les problèmes mais permet au moins de diagnostiquer les forces et les faiblesses de l'unité de santé concernée, afin de prendre des mesures correctives.

**INTRODUCTION**

The medical biology act is part of a preventive, diagnostic, prognostic and therapeutic approach. Its results therefore contribute to the diagnosis and the care for most diagnoses and the monitoring of many diseases depend on it (1). With the evolution of the healthcare

world, competition has increased and customers have become more demanding. Customer satisfaction is placed at the heart of laboratory strategies. Satisfaction could be defined as customers' judgment of a consumption or usage experience resulting from a comparison between their expectations of the product

and their perceived performance. Satisfaction assessment is aimed at continuous improvement in the quality of services (2). As a result, quality research has become the primary concern of medical biology laboratories. The ISO 15189 standard (accreditation requirements for medical biology laboratories) defines quality as the ability of a product, process or service provided, to meet the expressed and implicit needs of the user. This corresponds to the adequacy between the means implemented and the information expected by the prescribing physician, as well as the response to the patient's expectations. The notions of quality and satisfaction are closely linked and most often perceived subjectively or not, depending on customer expectations. The judgment of the quality of services results from a comparison of service expectations with current performance. In Cote d'Ivoire, few studies report on the customer satisfaction in medical biology laboratory services, particularly in teaching hospitals. It is in this context that we conducted a satisfaction survey to assess the quality of the services offered by the haematology unit of the central laboratory of the teaching hospital of Yopougon.

## MATERIALS AND METHODS

This was a cross-sectional descriptive study carried out in the haematology unit of the central laboratory of the teaching hospital of Yopougon from May to June 2019. Patients at least 10 years of age who gave their consent and assent and whose examination report card included at least one analysis carried out in the haematology unit; were included in the study. Inpatients attending urgent care services or emergency room, and outpatients coming in only for biological analyses only related to the other units of the laboratory were not included in the study. A pre-survey was initially carried out on a small group of 15 costumers in order to make the necessary corrections to the initial survey questionnaire. Then, the survey itself was carried out in the form of an interview every working day from 8 am to 12 noon. While making it possible to collect the sociodemographic data on customers, the final survey questionnaire also made it possible to obtain information on various aspects of the pre-analytical phase (including access to the premises, reception, cleanliness of the sampling room) and the post-analytical phase (time to render results). After the survey, the data collected was analysed with Microsoft's Office EXCEL and EPI-info version 7.1.2 software.

## RESULTS

### Sociodemographic data

Four hundred people were included in the study. The mean age of the study population was 33 years with extremes of 10 to 70 years. The 21-30 age group was the most represented (37.25 %). The sex ratio (M / F) was 0.81 showing a female predominance. The majority of customers surveyed had a high school education level (44 %). And students were the most represented occupational group (24.3%). Eighty-eight-point five percent of the customers interviewed had been consulted at the Teaching Hospital of Yopougon, compared to 11.5 % coming in from a different hospital (Table 1).

**Table I: Sociodemographic data of the study population**

Parameters	Workforce	N (%)
<b>Years</b>		
[10 – 21[	44	11
[21 – 31[	149	37.3
[31 – 41[	141	35.3
[41 – 51[	47	11.8
>50	19	4.8
<b>Educational level</b>		
Unschooling	48	12.0
Primary education	50	12.5
High school-educated	176	44.0
College-educated	126	31.5
<b>Profession</b>		
Students	97	24.3
Self-employed	81	20.3
Tradespeople	63	15.8
Company Executives	62	15.5
Unemployed	42	10.5
Construction workers	33	8.3
Healthcare workers	17	4.3
Retirees	5	1.3
<b>Doctor visit place</b>		
Teaching hospital of Yopougon	354	88.5
Others Teaching hospitals	27	6.8
Private Clinics	19	4.8

### Quality of service

Access to the laboratory was easy through the medical staff and 63 % of customers were satisfied. During the pre-analytical phase, 80 % of customers appreciated the laboratory's opening hours, while only 67 % were satisfied with the help desk. The cleanliness of the waiting room, the sampling room and the sampler were also among the aspects that interested the customers. Satisfaction rates were 60.5 %, 77.0 % and 87.3 %, respectively. More than 85 % of customers admitted to being satisfied with the speed of the collection and compliance with hygiene rules during it. During the post-analytic phase, 58 % of customers were dissatisfied with the time taken to report results (Table 2).

**Table 2: Evaluation of the different stages of the customer's journey**

Parameters	Workforce	N (%)
<b>Judgement</b>		
<b>Access to the laboratory</b>		
Very satisfying	3	0.8
Satisfactory	252	63.0
Unsatisfactory	127	31.8
Not at all satisfactory	18	4.5
Medical staff	259	64.8
<b>Laboratory indication</b>		
Intermediary of a relative	77	19.3
Orientation signs	64	16.0
<b>Laboratory's opening hours</b>		
Very satisfying	5	1.3
Satisfactory	320	80.0
Unsatisfactory	66	16.5
Not at all satisfactory	9	2.3
<b>Help desk</b>		
Very satisfying	14	3.5
Satisfactory	268	67.0
Unsatisfactory	105	26.3
Not at all satisfactory	13	3.3

**Table 2: Evaluation of the different stages of the customer's journey (Ctd)**

Parameters		
<b>Cleanliness of the sampling room</b>		
Very satisfying	14	3.5
Satisfactory	308	77.0
Unsatisfactory	65	16.3
Not at all satisfactory	13	3.3
Very satisfying	3	0.8
<b>Turn-around times</b>		
Satisfactory	106	26.5
Unsatisfactory	232	58.0
Not at all satisfactory	59	14.8

Although geographic proximity (15.8 %) and affordability (7 %) were drivers of the choice of the haematology unit of the teaching hospital of Yopougon as the go-to laboratory, 31 % of the customers surveyed mentioned medical follow-up as main reason for their choice. Overall, less than 50 % of customers were satisfied with the services offered by the haematology unit of the teaching hospital of Yopougon (Table 3). As a result, they rated the quality of the service offered as fair. The main suggestion made by customers was to improve internal organization (26 %) and the time it takes to deliver results (14.8 %).

**Table 3: Evaluation of the quality of the services provided by the haematology unit.**

Parameters	Judgement	Workforce	N (%)
Overall quality assessment			
	Very satisfying	3	0.75
	Satisfactory	180	45
	Unsatisfactory	186	46.50
	Not at all satisfactory	31	7.75

## DISCUSSION

The most represented age group consisted of 37.3 % of subjects aged between 21 and 30 years. This result highlights the youthfulness of the customers seen at the hematology unit of the central laboratory of the teaching hospital of Yopougon. This seems to reflect the general population of the Ivory Coast. According to statistics from the 2014 general census, 56 % of the Ivorian population was aged 15 to 64 and 2.5 % were over 65 years of age (3). A female predominance was observed with a sex ratio of 0.81. This result is superior to those of Seka et al., as well as Kouadio et al., who found a female predominance of 0.40 (4) and 0.35 (5) respectively. Indeed the latter had carried out their investigations within social medical centres. In addition, 43.8 % of clients had a high school education. This result is superior to that of Seka et al., who obtained 30.9 % of patients with secondary education (4). This could be explained by the government's efforts to ensure education for all as stipulated in the Sustainable Development Goals.

During the course of the survey, the assessment of perceived satisfaction focused on the access to the laboratory, the helpfulness of the help desk, the cleanliness of the premises, the turn-around times. Many

customers attended the hematology unit of the teaching hospital of Yopougon based on its good reputation. This seems to be due to the ease of access to the laboratory and the perceived quality of the reception. In fact, 63 % of customers were satisfied with the ease of access to the laboratory. The level of patient satisfaction with hospitality relates to 67% of customers who had a satisfactory staff appreciation. These results are comparable to those obtained by previous studies. Indeed, the study of customer satisfaction carried out by N'Goran et al., at the hospitality office of the Community Medicine at the National Institute of Public Health of Adjamé showed that 90.7 % of customers were satisfied with the quality service (6). N'Guessan et al., and Wiart et al., respectively found satisfaction rates of 97 % in the outpatients ward of the Military Hospital of Abidjan (7) and 95 % in a healthcare centre of Renazé, in France (8). Since it is difficult for the customers to assess the quality of medical care, his or her opinion of a healthcare centre is very often influenced by the perceived quality of the help desk. Therefore, help desks are the showcase rooms for the entire healthcare facilities, and their staff must be able to conduct themselves in a professional manner at all time. Indeed the help desk requires excellent relational skills and self-control. In hospitals of developed countries, there are procedures for welcoming clients and working methods to improve the quality of care.

The cleanliness of the premises was satisfactory for more than 60% of the surveyed costumers. Indeed, it was almost not decried as was the case in the Koudjourné study where 10% of respondents found it not at all suitable (9). This result could be due to the influence of customer's previous experience; complaints about lack of hygiene in hospitals are becoming more and more recurrent in Cote d'Ivoire. In terms of the turn-around times (TAT), long delays were factors of dissatisfaction for customers. Thus, 58 % of customers were dissatisfied with the TAT which were due to insufficient laboratory technicians and staff showing up late to work. It could also be explained by the frequent overcrowding of the laboratories due to the influx of customers. According to Meyer, the structure becomes congested when the number of customers admitted simultaneously is greater than four (10). The TAT should be carefully managed by the management of the laboratory because it affects the prognosis of patients. Although geographic proximity (15.8 %) and affordability (7 %) were factors in the choice of the haematology unit of the teaching hospital of Yopougon by costumers, 31 % of the surveyed mentioned medical follow-up as main reason for their choice. This could be due to the fact that the majority of inpatients at the clinical hematology unit are sickle cell disease patients monitored for their pathology. The clinical hematology ward of the teaching Hospital of Yopougon is the only Ivorian public healthcare service to receive and care for patients suffering from this pathology in the country.

Overall 46.5% were dissatisfied with the laboratory's services. Barry et al., for their part, found that the level of overall satisfaction was 98.2% for private clinics

against 85.2% for public primary care structures in one health district of the Republic of Guinea (11). In contrast, the study carried out by Kouadio et al, also in Cote d'Ivoire showed only 13.1% of overall dissatisfaction (5).

### CONCLUSION

Assessing customer satisfaction is an essential element in maintaining and improving the quality of services in a medical biology laboratory. Unfortunately, this exercise is not commonplace in Cote d'Ivoire. Of course, a customer satisfaction survey does not solve all the problems but at least makes it possible to identify the strengths and weaknesses of the healthcare structure concerned, in order to take corrective actions. At the hematology unit of the central laboratory of the teaching Hospital of Yopougon where our study took place, the problems encountered revolved mainly around the failure to meet the deadline for turning over laboratory results due to the insufficient number of staff and the defective organization of the hematology unit. Despite these difficulties, one of the main strengths of this laboratory remains the quality of its help desk in assisting costumers. This asset is the main reason costumers still come to that laboratory unit. We hope that this work would constitute a case study of the Ivorian medical practices and that other healthcare institutions will learn from it in order to improve the quality of services provided to patients.

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### Authors' contributions

Tchako Valere: Protocol design and development, writing of the manuscript

Yayo Mireile: Protocol design and development

Yapo Vicent: Protocol design and development, proofreading of the manuscript

Adje Louis: Data collection; data analysis and interpretation of results

Zachari-Yaou Amina: Data collection; data analysis and interpretation of results

Sawagogo Duni : Proofreading of the manuscript

### Conflicts of interests

The authors declare that they have no conflict of interest

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