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The Extent and Determinants of Passive Corruption in Hospitals: The Case of the Luambo Health Zone of the Kasaï-Central Provincial, Democratic Republic of Congo

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Abstract

Introduction Passive corruption undermines equity and quality in healthcare across developing countries. This study assessed its prevalence and determinants in the Luambo Health Zone (ZS), Democratic Republic of Congo.

Methodology A cross-sectional survey was conducted among 422 participants (300 patients and 122 providers). Data were collected through structured interviews using a standardized questionnaire. Passive corruption was defined as informal payments or tariff non-compliance. Independent variables included sociodemographic, institutional, and perceptual characteristics. Analyses were performed in SPSS 25, with descriptive statistics to estimate prevalence and chi-square tests to explore associations between corruption and explanatory factors.

Results Passive corruption was reported by 49.3% of patients and 52.5% of providers. The most affected services were maternity, emergency, laboratory, and pharmacy. Patients cited weak administrative oversight, lack of transparency, and dialect-based discrimination, while providers emphasized low remuneration, poor monitoring, and a culture of complacency. Reported consequences included deterioration of institutional image, reduced quality of care, declining patient attendance, and increased household costs. Chi-square analysis showed significant associations with education, employment, prior knowledge of official tariffs, and professional role among providers.

Conclusion Passive corruption is widespread in Luambo's health facilities, driven by both individual vulnerabilities and institutional weaknesses. Addressing it requires transparent fee display, stronger oversight, digitized payments, improved staff conditions, and community awareness. Future research should integrate qualitative approaches and monitor decentralization reforms to strengthen governance and ensure equitable access to healthcare.

1. Introduction

Corruption, defined as the abuse of entrusted power for private gain, is a pervasive challenge that undermines equity and trust in health systems worldwide. In the health sector, where integrity and justice should prevail, corruption compromises access to care and weakens institutional performance [1]. Globally, it is recognized as a major obstacle to economic and social development. In public health, corruption exacerbates fragile systems; for example, healthcare fraud and abuse cost governments in developed countries between $12 and $23 billion annually [2]. The World Bank has emphasized that corruption in health systems disproportionately harms the poor, who face both poverty and exclusion from care [4]. The U4 Anti-Corruption Resource Centre similarly highlights the systemic nature of corruption in healthcare, noting its persistence across contexts [5].

In this study, we adopt an operational definition of passive corruption as any unregulated or illegal practice—such as bribes, gifts, or services in kind—solicited or accepted by healthcare workers for services that are supposed to be free or standardized, without patient initiation. This distinguishes it from active corruption, where patients offer inducements to obtain preferential treatment. Such practices, often trivialized, have serious consequences for vulnerable populations, compromising equity and quality of care.

Evidence shows that corruption in health facilities can reach alarming levels. In Benin, for instance, the corruption rate in public health centers was estimated at 91.34% in 2020 [6]. Local reports from Kasai-Central Province also suggest that informal payments are widespread, particularly in maternity wards and laboratory services. These departments may be disproportionately affected due to high patient flow, urgent demand, financial pressures, or cultural expectations around childbirth and diagnostic testing.

Despite extensive global literature, little is known about the extent and determinants of passive corruption in the Democratic Republic of Congo, particularly among rural health zones such as Luambo. This gap is critical, as informal payments and weak oversight mechanisms directly threaten equitable access to care.

Against this backdrop, the present study was conducted in the Luambo Health Zone, under the jurisdiction of the Kasai-Central Provincial Health Division. Its objectives are twofold: first, to measure the extent of passive corruption in Luambo's health facilities; and second, to identify institutional, departmental, and socio-cultural factors associated with its occurrence. By moving beyond descriptive prevalence and interrogating underlying mechanisms, this study aims to generate evidence that can inform targeted interventions and strengthen accountability within the health system.

2. Methodology

Study Setting

The Luambo Health Zone in Kasai-Central, Democratic Republic of Congo, is a rural area of 4,320 km² with 37,096 inhabitants. Healthcare relies mainly on direct patient payments, with unclear pricing and weak oversight fostering informal practices. Cash transactions, limited subsidies, and poor separation of roles heighten risks of passive corruption. Existing anti-corruption measures remain ineffective, making Luambo a relevant setting to examine its extent, causes, and potential solutions.

Type of Study

This research was an analytical cross-sectional study. This type of study makes it possible to collect data at a specific point in time, providing a snapshot of the health situation
in the Luambo Health Zone.

Study Population

Two categories of participants were included: patients represented by heads of household who had used health services during the three months preceding the survey, and healthcare providers working in facilities in the same area. The three-month recall window was chosen to balance recall accuracy with sufficient sample size, minimizing memory bias while ensuring recent experiences were captured. The 70% patients / 30% providers composition reflected the relative weight of users in the system while retaining provider perspectives, optimizing the bias/variance trade-off and external validity.

Sampling

Since we did not know the extent of passive corruption in hospitals within the Luambo rural health zone, we estimated it at 50% (0.5) with a significance level of 5%. Thus, we calculated our sample size as follows:

Data

n = sample size

P = estimated prevalence of passive corruption in hospital settings: 50% = 0.5

q = 1-p 1-0.5 = 0.5

d = acceptable margin of error = 0.05

$Z\alpha$ = confidence coefficient: 1.96

= 384 survey participants.

To account for a 10% non-response rate, the final target was 422 participants. The achieved sample size was 422, composed of 300 patients (70%) and 122 healthcare providers (30%). This distribution was deliberately chosen to reflect the relative weight of service users in the health system while preserving the perspectives of providers.

Sampling Technique

Healthcare providers: Providers were selected through purposive (reasoned) choice based on their availability in health facilities. This approach was necessary in the specific context of the study, as many health workers were on strike during the data collection period. Although this non-probability recruitment ensured feasibility, it introduces potential selection bias and limits the generalizability of provider-related findings. Participation rate was 87%.

Households (patients): Patients were selected using a probability-proportional cluster sampling method. Health areas served as primary clusters, with household numbers determined by relative population size. Within each cluster, households were chosen by systematic random sampling. Participation rate was 92%, with replacements after three failed contact attempts. This probability-based approach strengthens representativeness of patient data.

The difference in sampling strategies between patients (probability-based) and providers (purposive/convenience-based) is explicitly acknowledged as a methodological limitation. While household data can be generalized to the wider population of the health zone, provider data may reflect only those available and willing to participate under strike conditions. This imbalance may affect comparability between strata and was be considered when interpreting results.

Study Variables

Dependent variable: Passive corruption, defined as any unregulated or illegal practice (bribes, gifts, gratuities, or services in kind) solicited or accepted by healthcare workers for services supposed to be free or standardized. While these practices may differ conceptually in the literature, they were grouped under a single operational definition to reflect the lived experience of patients in this setting. This definition is acknowledged as a limitation but justified by the need for a pragmatic measure of corruption in routine care.

• Independent variables:

Sociodemographic characteristics (age, sex, education, religion, income)

• Care experience (reception, respect for order of arrival, knowledge of rates, informal payments, satisfaction with transparency)

• Institutional factors (type of structure, service concerned, staff category)

• Social perceptions (perceived causes of corruption, cultural habits, community pressure, anti-corruption mechanisms)

Multiple-response items were explicitly labelled, and denominators reported to avoid confusion in percentage summation.

Data Collection

Structured interviews were conducted using standardized questionnaires administered via KoboCollect. Interviewers received training on study objectives, interviewing techniques, ethical principles, and confidentiality. A pre-test was carried out in a non-study district to validate the tool. Questionnaires were translated into local languages and back-translated to ensure accuracy. Non-response was managed by substitution after repeated attempts.

Data Analysis

Data were double-checked for quality, entered via KoboCollect, and exported to SPSS version 25. Descriptive statistics summarized qualitative and quantitative variables. Categorical variables were presented in both absolute and

relative frequencies, separately for patients and healthcare providers. Where data were not applicable, an empty space in the form of dashes was left on the line of the corresponding variable.

Associations between passive corruption and independent variables were assessed using chi-square tests at the 95% confidence level. Only variables with $p<0.05$ were considered statistically associated with passive corruption. Results are presented as proportions and percentages, with p-values reported to indicate statistical significance. It is emphasized that these associations do not reflect causal relationships, given the cross-sectional design of the study.

Ethical Considerations

Approval was obtained from the ethics committee of the Kinshasa School of Public Health (ESP/CE/213/2024). Informed consent was secured, with anonymity and confidentiality guaranteed. Confidentiality was emphasized to mitigate these effects. Future research will integrate qualitative methods to capture motivations and perceptions behind patient compliance and provider behavior.

3. Results

Socio-demographic and economic profile of patients

Patients (n = 300) were predominantly female (54.7%), while providers (n = 122) were mostly male (61.5%). The dominant age groups were 30–49 years. Education was higher among providers (44.3% university vs. 26.3% patients). Most participants were married (≈61%). Providers were mainly nurses (49.2%), while patients lived in small households (52.3%) with modest daily expenses. Over half of providers had less than five years of experience (Table I).

Extent of passive corruption in hospitals

Among patients (Table IIa), nearly half (49.3%) reported having experienced passive corruption during their recent use of health services. The practices most frequently mentioned were linked to the laboratory (28.0%), emergency services (23.3%), and pharmacy (23.3%). Other services, including maternity, were grouped under “others” and accounted for 61.0% of reported cases. Patients also noted that referral centers and hospitals appeared more affected than primary health centers, suggesting that higher-level facilities may be more vulnerable to such practices.

Among healthcare providers (Table IIb), passive corruption was reported by 52.5% of respondents. Providers identified emergency (60.5%), laboratory (62.2%), pharmacy (62.2%), and maternity (54.5%) as the services most exposed, with “others” reaching 70.0%. Similar to patients, providers emphasized that referral centers and hospitals were more affected compared to basic health centers.

knowledge and practices of passive corruption

One-third of patients (33.3%) knew others affected, and 49.3% reported personal victimization. Informal payments included “coffee/tea” (44.3%) and cash (45.7%). (Table III).

Causes of passive corruption

Patients Patients most strongly associated passive corruption with weak administrative control and supervision (71.3%), followed by dialect-based discrimination (37.3%) and lack of transparency in management (35.3%). These perceptions highlight systemic weaknesses in oversight and fairness that directly affect access to care. Providers, in contrast, emphasized low pay for healthcare workers (51.6%), lack of control (42.6%), and a culture of complacency (33.6%) as the main drivers.. Together, these findings reveal that patients stress governance and equity issues, while providers highlight structural and managerial shortcomings, pointing to the multifactorial roots of corruption in healthcare. (Figure 1 and 2).

Factors associated with passive corruption

For patients, educational attainment was significantly associated with reporting corruption ($p = 0.001$), with university-educated individuals more likely to report. Employment status was also significant ($p = 0.003$), with employed respondents more exposed than the unemployed. Prior information about healthcare costs was associated with lower reporting ($p = 0.014$), while knowledge of corruption increased reporting ($p = 0.001$).

For providers, education level was significantly associated with reporting ($p = 0.002$), with higher-educated staff more likely to disclose cases. Profession was also significant ($p = 0.04$), with doctors and nurses reporting more frequently than administrative staff. (Table IV a and b)

4. Discussion

Key Results

The study in the Luambo Health Zone revealed a high prevalence of passive corruption, with 49.3% of patients and 52.5% of providers reporting involvement. Patients most frequently cited weak administrative control and supervision (71.3%), dialect-based discrimination (37.3%), and lack of transparency in management (35.3%) as the leading causes, while providers emphasized low pay for healthcare workers (51.6%), lack of control (42.6%), and a culture of complacency (33.6%). Chi-square tests showed significant associations among patients with educational attainment ($p = 0.001$), employment status ($p = 0.003$), prior information about healthcare costs ($p = 0.014$), and knowledge of corruption ($p = 0.001$), whereas among providers, significant associations were found with education level ($p = 0.002$) and profession ($p = 0.04$). These results highlight that both groups identified corruption as widespread, with patients stressing systemic weaknesses and providers pointing to institutional and professional vulnerabilities.

Extent and Causes of Passive Corruption

The findings in Luambo show that passive corruption is deeply embedded in hospital routines, with nearly half of patients (49.3%) and over half of providers (52.5%) reporting involvement. Patients emphasized weak administrative control (71.3%), dialect-based discrimination (37.3%), and lack of transparency (35.3%) as systemic drivers, while providers pointed to low pay (51.6%), lack of control (42.6%), and complacency (33.6%). These results mirror evidence from Burkina Faso and Senegal, where informal payments are normalized in hospital services [7,16]. Benin and Burkina Faso studies confirm similar dynamics, though Burkina Faso’s subsidy schemes reduce direct patient payments [2,7,8]. International reviews highlight that salary increases and transparent fee structures can reduce corruption [9,10]. Evidence from Nigeria and Guinea shows persistence of informal practices despite reforms [11,12]. In Europe, corruption manifests differently, often through preferential access [13]. Patient dissatisfaction linked to corruption has also been documented in public hospitals [14]. In Luambo, consequences included institutional image damage (64%), reduced care quality (44.3%), lower attendance (44%), increased household costs (39%), loss of trust (34.4%), and heightened inequalities (20.5%).

Factors Associated with Passive Corruption

Chi-square tests revealed that among patients, higher education ($p = 0.001$), employment ($p = 0.003$), prior knowledge of healthcare costs ($p = 0.014$), and awareness of corruption ($p = 0.001$) were significant. These associations align with findings that educated individuals are more aware of rights and more likely to report corruption [9]. Transparency in official fees is protective [9], while employment increases exposure, as seen in Burkina Faso [8]. Among providers, education ($p = 0.002$) and profession ($p = 0.04$) were significant, with doctors and nurses reporting more frequently

than administrative staff, consistent with evidence from Nigeria and Cameroon [11]. Other variables such as sex, age, marital status, and years of experience were not significant. These results confirm that professional role and institutional knowledge shape reporting behavior [10,13,14].

Contextual Implications for Luambo

In Luambo's fragile provincial system, where financing relies heavily on direct patient payments, corruption exacerbates inequities and undermines trust. Unlike Burkina Faso's subsidy schemes [7,8], Luambo lacks protective mechanisms, leaving households vulnerable to informal charges. The reliance on self-reported quantitative data highlights awareness rather than exposure, but the consistency with international literature [9–14] strengthens validity. Implications include the urgent need for reforms that combine transparent fee structures, improved oversight, and salary adjustments, adapted to Kasai-Central's decentralization context. Without such measures, corruption will continue to erode institutional credibility, reduce service utilization, and deepen socio-economic inequalities

Strengths And Weaknesses

The study's strengths lie in its use of recent empirical data from both patients and providers, enabling cross-analysis of socio-economic and institutional variables. This dual perspective provides a nuanced understanding of corruption dynamics tailored to Luambo's financing and governance context, where facilities depend heavily on direct patient payments.

The weaknesses are methodological. The cross-sectional design limits interpretation to associations rather than causation; observed links between low salaries, poor supervision, and corruption cannot be inferred as causal. Reliance on self-reported data introduces recall, reporting, and social desirability biases, which may distort prevalence estimates. The absence of qualitative insights restricts exploration of motivations, while limited consideration of concurrent reforms reduces contextual depth. Future mixed-methods research is needed to strengthen validity and capture perceptions

.

5. Conclusion

This study documented the prevalence and determinants of passive corruption in Luambo's health facilities, highlighting its persistence in curative and maternity services through informal payments, tariff non-compliance, and weak oversight. Drivers were multifaceted, spanning individual vulnerabilities such as low purchasing power and limited awareness, and institutional weaknesses including inadequate remuneration, poor monitoring, and lack of transparency. Addressing these challenges requires structural reforms: transparent fee display, stronger supervision, digitized payments, community awareness, and improved staff conditions. Future implications point to integrating qualitative research, monitoring decentralization reforms, and embedding governance accountability to ensure equitable, corruption-resilient healthcare delivery.

What is already known

• Passive corruption is common in health systems of resource-limited countries.

• It manifests through informal payments and non-compliance with official tariffs.

• Determinants are both individual and institutional.

What this study adds

• Evidence of high prevalence of passive corruption in curative and maternity services in Luambo.

• Identification of key local drivers of the phenomenon.

• Practical recommendations tailored to the local context to mitigate corruption.

Data availability: Data supporting this study are available from the authors upon reasonable request. Funding: No external funding was received for this study.

Conflicts of interest: The authors declare no conflicts of interest.

Author Contributions

• LUBEMBA TSHILOMBA Tharcisse: designed the research protocol, conducted data collection and analysis, drafted the manuscript.

• Bernard Kennedy Nkongolo: conducted data training and analysis, drafted the final manuscript.

• MPUNGA Dieudonné: provided scientific supervision, methodological guidance, and critical review.

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References

1. Ablakpa JA, Koffi CL, Adjoumani K. Sociological analysis of the logics of corruption and their systemic impact on the governance of health services in Côte d'Ivoire. ACAREF Rev. 2025. Available from: https://revues.acaref.net/wp-content/uploads/sites/3/2025/07/16-Ablakpa-Jacob-AGOBE.pdf

2. Acclassato Houensou D. Corrupt behavior and access to public healthcare centers in Benin. Rev Mar Econ. 2020;3. Available from: https://revues.imist.ma/index.php/RME/article/download/16253/11075/52671

3. Acclassato Houensou D. Corrupt behavior and access to healthcare services in Benin [thesis]. Abomey-Calavi: University of Abomey-Calavi; 2019.

4. World Bank. Strengthening transparency in African health systems. Washington (DC): World Bank; 2021. Available from: https://documents.worldbank.org/en/publication/documents-reports/documentdetail/120541633011500775

5. Anti-Corruption Resource Centre. Corruption in the health sector. Bergen: U4; 2009. Available from: https://www.u4.no/publications/corruption-in-the-health-sector-2

6. Anti-Corruption Resource Centre. U4 Issue. Bergen: U4; 2009.

7. Ouedraogo A, Zongo A, Kafando B. Informal payments and access to care in public hospitals in Burkina Faso. Rev Econ Dev. 2022;30(1):45–62.

8. Kabore B. Study of the determinants of passive corruption at the Dédougou Regional Hospital [master's thesis]. Ouagadougou: University of Ouagadougou; 2007.

9. Vian T. Review of corruption in the health sector: theory, methods and interventions. Health Policy Plan. 2015;30(2):110–21. doi:10.1093/heapol/czu109. Available from: https://www.jstor.org/stable/45090444

10. Gaitonde R, Oxman AD, Okebukola PO, Rada G. Interventions to reduce corruption in the health sector. Cochrane Database Syst Rev. 2021;(8):CD008856. doi:10.1002/14651858.CD008856.pub2. Available from: https://www.cochrane.org/evidence/CD008856_interventions-reduce-corruption-health-sector

11. Mas G. Informal payments in health care: evidence from Nigeria. Afr J Health Econ. 2015;4(2):23–34.

12. Traoré A. The fight against corruption and human rights: a comparative approach to the Guinean, French and Cameroonian cases [thesis]. Toulouse: Université Toulouse 1 Capitole; 2024.

13. European Commission. Study on corruption in the healthcare sector. Brussels: European Commission; 2017.

14. Kobeissi H, Aubert B. Patient satisfaction and corruption in public hospitals. Health Soc. 2014;12(2):45–60

Tables

Table I. Sociodemographic and economic profile of Households (n = 300) and Care Providers (n = 122)

Variables	Households n (%)	Providers n (%)
Health area		
Kalamba mbuji	24 (8.0%)	11 (9.0%)
Kambongo	33 (11.0%)	8 (6.6%)
Kangambo sector	31 (10.3%)	9 (7.4%)
Kasombo bishi	32 (10.7%)	9 (7.4%)
Luambo	37 (12.3%)	—
Bcz Luambo	—	9 (7.4%)
HGR Luambo	—	16 (13.1%)
Lueta State	31 (10.3%)	8 (6.6%)
Lueta Kabelekese	—	15 (12.3%)
Minkolo	26 (8.7%)	11 (9.0%)
Muangala Ngoma	23 (7.7%)	10 (8.2%)
Muzodi	30 (10.0%)	9 (7.4%)
Ndolo Mayimbu	33 (11.0%)	7 (5.7%)
Sex		
Female	164 (54.7%)	47 (38.5%)
Male	136 (45.3%)	75 (61.5%)
Age range (years)		
19–29	57 (19.0%)	33 (27.0%)
30–39	73 (24.3%)	37 (30.3%)
40–49	99 (33.0%)	23 (18.9%)
≥50	71 (23.7%)	29 (23.8%)
Education level		
None / Primary	44 (14.7%) / 79 (26.3%)	15 (12.3%)
Secondary	98 (32.7%)	53 (43.4%)
University / Higher Education	79 (26.3%)	54 (44.3%)
Marital status		
Bachelor	46 (15.3%)	19 (15.6%)
Divorcee)	32 (10.7%)	13 (10.7%)
Bride)	184 (61.3%)	76 (62.3%)
Widower	38 (12.7%)	14 (11.5%)
Profession / Employment		
Employee / Yes	118 (39.3%)	—
Not employed / No	182 (60.7%)	—
Administrative	—	30 (24.6%)
Nurse	—	60 (49.2%)
Doctor	—	12 (9.8%)
Other	—	20 (16.4%)
Household size		
1–3 people	157 (52.3%)	—
3–6 people	108 (36.0%)	—
6 people or more	35 (11.7%)	—
Daily expenses (DDA)		
1000–3000	153 (51.0%)	—
3000–6000	100 (33.3%)	—
≥6000	47 (15.7%)	—
Years of experience	—	<5: 64 (52.5%) ≥5: 58 (47.5%)

Table IIa. Passive corruption declared by heads of households (n = 300)

	PS/ heads of households	PS/ heads of households
Variables	Yes n (%)	No n (%)
Total	148 (49.3%)	152 (50.7%)
Services exposed		
Emergency	70 (23.3%)	230 (76.7%)
Laboratory	84 (28.0%)	216 (72.0%)
Pharmacy	70 (23.3%)	230 (76.7%)
Others (incl. maternity)	83 (61.0%)	117 (39.0%)
Health area		
Bcz Luambo	23 (62.2%)	14 (37.8%)
Kalamba mbuji	11 (45.8%)	13 (54.2%)
Kambongo	15 (45.5%)	18 (54.5%)
Kangambo sector	15 (48.4%)	16 (51.6%)
Kasombo bishi	20 (62.5%)	12 (37.5%)
Lueta State	14 (45.2%)	17 (54.8%)
Minkolo	15 (57.7%)	11 (42.3%)
Muangala Ngoma	9 (39.1%)	14 (60.9%)
Muzodi	11 (36.7%)	19 (63.3%)
Ndolo Mayimbu	15 (45.5%)	18 (54.5%)

Table IIb. Passive corruption reported by healthcare providers (n = 122)

	PS/ healthcare providers	PS/ healthcare providers
Variables	Yes n (%)	No n (%)
Total	64 (52.5%)	58 (47.5%)
Type of FOSA		
Health Center (HC)	28 (45.2%)	34 (54.8%)
Reference Health Center (CSR)	22 (55.0%)	18 (45.0%)
General Referral Hospital (GRH)	14 (58.3%)	10 (41.7%)
Services exposed		
Emergency	26 (60.5%)	17 (39.5%)
Laboratory	23 (62.2%)	14 (37.8%)
Pharmacy	23 (62.2%)	14 (37.8%)
Maternity	24 (54.5%)	20 (45.5%)
Others	28 (70.0%)	12 (30.0%)
Health area		
Bcz Luambo	6 (66.7%)	3 (33.3%)
HGR Luambo	8 (50.0%)	8 (50.0%)
Kambongo	3 (37.5%)	5 (62.5%)
Kangambo sector	4 (44.4%)	5 (55.6%)
Kasombo bishi	2 (22.2%)	7 (77.8%)
Lueta State	4 (50.0%)	4 (50.0%)
Lueta Kabelekese	8 (53.3%)	7 (46.7%)
Minkolo	7 (63.6%)	4 (36.4%)
Muangala Ngoma	4 (40.0%)	6 (60.0%)
Muzodi	4 (44.4%)	5 (55.6%)
Ndolo Mayimbu	5 (71.4%)	2 (28.6%)

Table III. Knowledge and practices of passive corruption reported by patients

Variables	n=300	%
Knowledge of other patients/clients who have experienced passive corruption	Knowledge of other patients/clients who have experienced passive corruption	Knowledge of other patients/clients who have experienced passive corruption
No	200	66.7
Yes	100	33.3
Has already been subjected to fee demands in the last 3 months in the form	Has already been subjected to fee demands in the last 3 months in the form	Has already been subjected to fee demands in the last 3 months in the form
Coffee/tea	133	44.3
beverage	99	33.0
transportation	60	20.0
Others	58	19.3
Practices applied in this healthcare facility		
Informal cash payment	137	45.7
Services rendered in exchange	90	30.0
Cultural custom of giving "gifts" to expedite a service	137	45.7
Others	63	21.0

Table IVa. Factors associated with passive corruption reported by patients based on the Chi-square test

	Passive corruption of patients	**Passive corruption of patients**	**Passive corruption of patients**
Variables	Yes n(%)	No n(%)	p-value
Passive corruption reported	Passive corruption reported	Passive corruption reported	
Health area	Health area	Health area	0.43
Kalamba mbuji	11 (45.8%)	13 (54.2%)	
Kambongo	15 (45.5%)	18 (54.5%)	
Kangambo sector	15 (48.4%)	16 (51.6%)	
Kasombo bishi	20 (62.5%)	12 (37.5%)	
Luambo	23 (62.2%)	14 (37.8%)	
Lueta State	14 (45.2%)	17 (54.8%)	
Minkolo	15 (57.7%)	11 (42.3%)	
Muangala ngoma	9 (39.1%)	14 (60.9%)	
Muzodi	11 (36.7%)	19 (63.3%)	
Ndolo mayimbu	15 (45.5%)	18 (54.5%)	
Respondent's gender	Respondent's gender	Respondent's gender	0.154
Female	87 (53.0%)	77 (47.0%)	
Male	61 (44.9%)	75 (55.1%)	
Age	Age	Age	0.43
20–25 years old	27 (47.4%)	30 (52.6%)	
25–30 years old	42 (57.5%)	31 (42.5%)	
30–40 years old	47 (47.5%)	52 (52.5%)	
40 and over	32 (45.1%)	39 (54.9%)	
Education level	Education level	Education level	0.001
None	9 (20.5%)	35 (79.5%)	
Primary	36 (45.6%)	43 (54.4%)	
Secondary	56 (57.1%)	42 (42.9%)	
University	47 (59.5%)	32 (40.5%)	
Religion	Religion	Religion	0.44
Catholic	55 (47.4%)	61 (52.6%)	
Revival Church	32 (43.8%)	41 (56.2%)	
Kimbanguist	11 (57.9%)	8 (42.1%)	
Muslim woman	14 (56.0%)	11 (44.0%)	
Protestant	26 (49.1%)	27 (50.9%)	
Without religion	10 (71.4%)	4 (28.6%)	
Marital status	Marital status	Marital status	0.64
Bachelor	24 (52.2%)	22 (47.8%)	
Divorcee	13 (40.6%)	19 (59.4%)	
Bride	94 (51.1%)	90 (48.9%)	
Widower(	17 (44.7%)	21 (55.3%)	
Job	Job	Job	0.003
Yes	71 (60.2%)	47 (39.8%)	
No	77 (42.3%)	105 (57.7%)	
Welcome	Welcome	Welcome	0.35
Yes	80 (51.9%)	74 (48.1%)	
No	68 (46.6%)	78 (53.4%)	
Informed of the pricing	Informed of the pricing	Informed of the pricing	0.014
Yes	52 (60.5%)	34 (39.5%)	
No	96 (44.9%)	118 (55.1%)	
Knowledge of passive corruption	Knowledge of passive corruption	Knowledge of passive corruption	0.001
Yes	103 (58.9%)	72 (41.1%)	
No	45 (36.0%)	80 (64.0%)	

Table IVb. Factors associated with passive corruption reported by healthcare providers (Chi-square test)

	Passive corruption by healthcare providers	**Passive corruption by healthcare providers**	**Passive corruption by healthcare providers**
Variables	Yes n (%)	No n (%)	p-value
Health area			0.42
Bcz Luambo	6 (66.7%)	3 (33.3%)	
HGR Luambo	8 (50.0%)	8 (50.0%)	
Kalamba mbuji	11 (57.9%)	8 (42.1%)	
Kambongo	3 (37.5%)	5 (62.5%)	
Kangambo sector	4 (44.4%)	5 (55.6%)	
Kasombo bishi	2 (22.2%)	7 (77.8%)	
Lueta State	4 (50.0%)	4 (50.0%)	
Lueta Kabelekese	8 (53.3%)	7 (46.7%)	
Minkolo	7 (63.6%)	4 (36.4%)	
Muangala Ngoma	4 (40.0%)	6 (60.0%)	
Muzodi	4 (44.4%)	5 (55.6%)	
Ndolo Mayimbu	5 (71.4%)	2 (28.6%)	
Sex			0.15
Female	29 (61.7%)	18 (38.3%)	
Male	35 (46.7%)	40 (53.3%)	
Age range (years)			0.39
19–29	18 (54.5%)	15 (45.5%)	
30–39	20 (54.1%)	17 (45.9%)	
40–49	12 (52.2%)	11 (47.8%)	
≥50	14 (48.3%)	15 (51.7%)	
Education level			0.002
None/Primary	5 (33.3%)	10 (66.7%)	
Secondary	28 (52.8%)	25 (47.2%)	
University/Higher	31 (57.4%)	23 (42.6%)	
Marital status			0.61
Bachelor	10 (52.6%)	9 (47.4%)	
Divorcee	6 (46.2%)	7 (53.8%)	
Married	40 (52.6%)	36 (47.4%)	
Widower	8 (57.1%)	6 (42.9%)	
Profession			0.04
Administrative	12 (40.0%)	18 (60.0%)	
Nurse	34 (56.7%)	26 (43.3%)	
Doctor	8 (66.7%)	4 (33.3%)	
Other	10 (50.0%)	10 (50.0%)	
Years of experience			0.21
<5 years	36 (56.3%)	28 (43.7%)	
≥5 years	28 (48.3%)	30 (51.7%)	

Figures

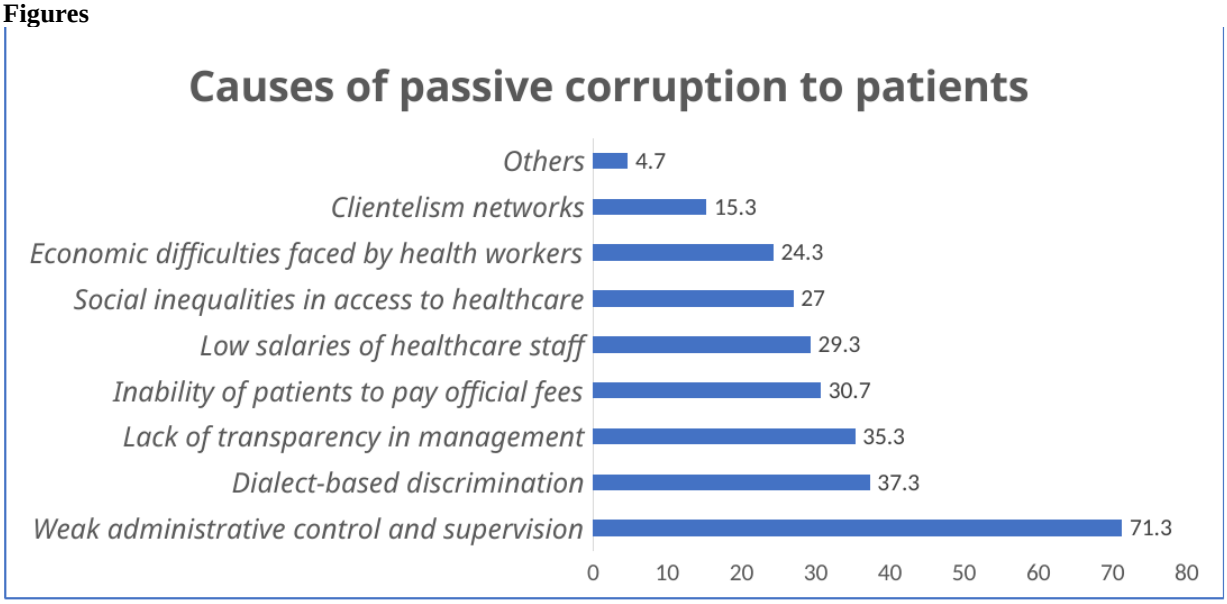

Figure 1. Causes of passive bribery practice according to patients

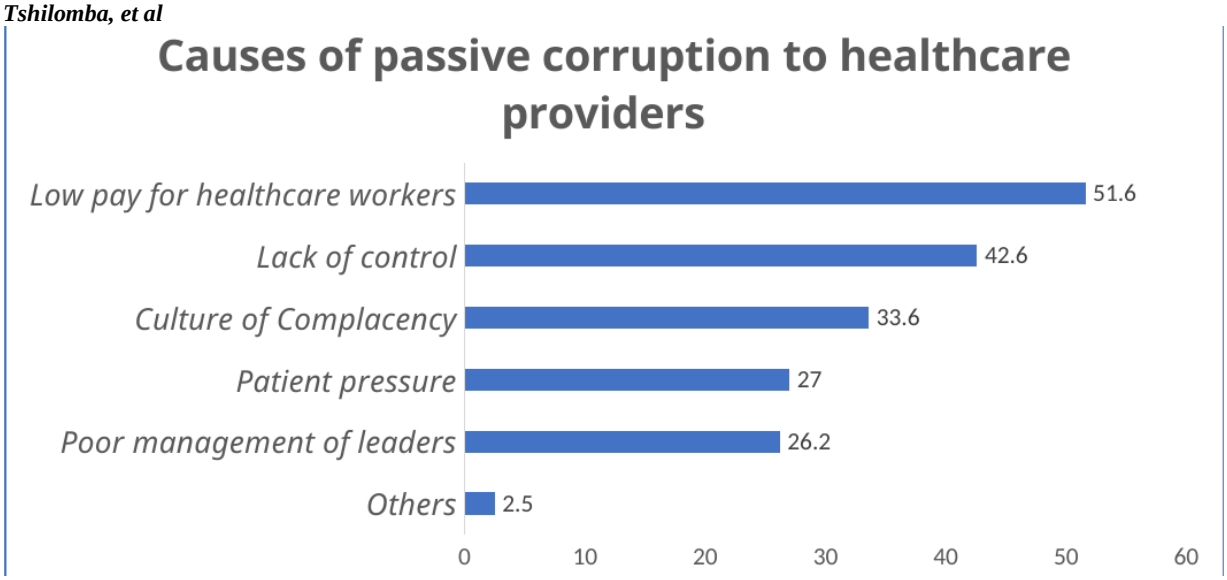

Figure 2. Causes of passive corruption according to service providers