

Influence of Accountability on Health System Responsiveness: A Case of Pumwani Maternity Hospital, Kenya

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Abstract

Availability of quality healthcare services is essential to functioning of a society. While the government of Kenya is constitutionally mandated to ensure highest level of healthcare for all of its citizens, a number of hurdles remain on the way to realization of such priorities. To improve health system performance, accountability has been considered key to reducing abuse as well as assuring compliance with procedures and standards. The objective of this study was to examine the influence of accountability mechanisms on health system responsiveness in Pumwani Maternity Hospital (PMH) Nairobi in Kenya. The study was guided by the Principal-Agent theory. This was a cross-sectional study design with mixed data collection methods. The target population was health workers and patients from PMH. The study sample of 111 health workers was determined using Yamane (1967) formula, 25 middle level managers were purposively selected as key informants, and patients were included in 5 Focused Group Discussions (FGDs). Quantitative data was collected among health workers using a structured questionnaire, key informant and focused group discussion guides were used to collect qualitative data from key informants and patients. Quantitative data was analyzed using SPSS for descriptive and inferential statistics. Thematic content analysis was used to summarize qualitative data. The multivariate linear regressions results revealed that the two variables under investigation in this study, professional accountability ($\beta_1 = 0.075$, $P < .001$) and social accountability ($\beta_2 = 0.356$, $P < .002$) had a positive and significant influence on health system responsiveness. Results reviewed that patients did not mention any issues on social accountability. The study recommends that the PMH management should i) strengthen clinical audits in order to ensure good clinical governance in the institution, ii) develop strategies to ensure adherence of use of clinical practice guideline among all health workers, and iii) the Nairobi County government should work with community health workers and civic organizations to empower the community on social accountability issues.

Keywords: professional accountability, social accountability, health system responsiveness, Pumwani Maternity Hospital, Kenya

Date of Submission: 01-09-2021

Date of acceptance: 15-09-2021

I. Introduction

Accountability, as a component of governance and leadership function, is vital to health system strengthening and success due to its cross-cutting nature (Brinkerhoff & Bossert, 2014). It thus serves to ensure sound use of resources and/or authority, provides assurance of compliance with the best practice, and supports service improvement through feedback and learning, thereby making the health system more responsive (Bovens, 2007). A responsive health system is one in which individuals' legitimate needs are met or served and is thus capable of upholding their dignity, autonomy, choice, and appropriateness of care, among other qualities of safe and acceptable care (Nyongesa, et al., 2018). Increasingly, the health system has become more complex with multiple actors and a multitude of institutions and organizations, each with its own immediate goals, objectives, and perspectives, roles, rules, responsibilities, interactions, and incentives (Barasa, et al., 2017).

Globally, health services responsiveness challenges plague both developing and developed countries. In the African region, Kuruvilla, et al., (2014) point out how scorecards, as accountability mechanisms, are used at all levels of the health system to track progress and identify inequities in health services delivery in Ethiopia leading to increased utilization. In Kenya, free maternal health services were introduced in June of 2013 in order to raise the utilization of pre-natal care, skilled attendance at delivery, as well as increased the healthcare utilization among new mothers. The Maternal Mortality Rate (MMR) reduced dramatically to 392 per 100,000 live births in 2014, but this rate remains very high relative to World Health Organization target of less than 70 per 100,000 cases (Kenya National Bureau of Statistics, 2015).

In Kenya, mothers continue to encounter abuse, detention, egregious violations of their safety and basic rights at facilities where they go deliver their babies (Abuya, *et al.*, 2015). Poor standards of care in hospitals result in patients not seeking care from clinicians even when in need. This has in turn led to unmet care needs and high maternal and neonatal mortality rates. Notably, at Pumwani Maternity Hospital (PHM) Kenya, which is the largest maternity hospital in East Africa, instances of disrespect and abuse, baby swapping or sale have increasingly received public attention (Wanjama, 2018; Otieno, 2018). While these problems are not unique to Kenya or to PMH in particular, their resolution is urgent and imperative. Accountability has been touted for its ability to transform the health sector to deliver best possible care including reducing abuse, assuring compliance with procedure and standards, and improving performance and learning (Hilber, *et al.*, 2016). The objective of this study was to establish the influence of professional accountability and social accountability on health systems responsiveness at Pumwani Maternity Hospital, Kenya.

The study was anchored on principal-agent theory, which was proposed by Jensen and Meckling in 1976 and has been used in healthcare governance to explain the existence of vast and complex network of obligations between governmental and professional regulators, accreditors, payers, managers, patients, and individual clinicians (Deber, 2014; Wachter, 2013). The primary aim of accountability mechanisms is to mitigate or resolve agency problems and thereby raise system performance, protect against reduced service delivery violations, and encourage process improvement through learning (Brinkerhoff, 2004). The mechanisms may also help align interests between the actors in principal-agent relations. The study was informed by the conceptual framework shown in Figure 1.

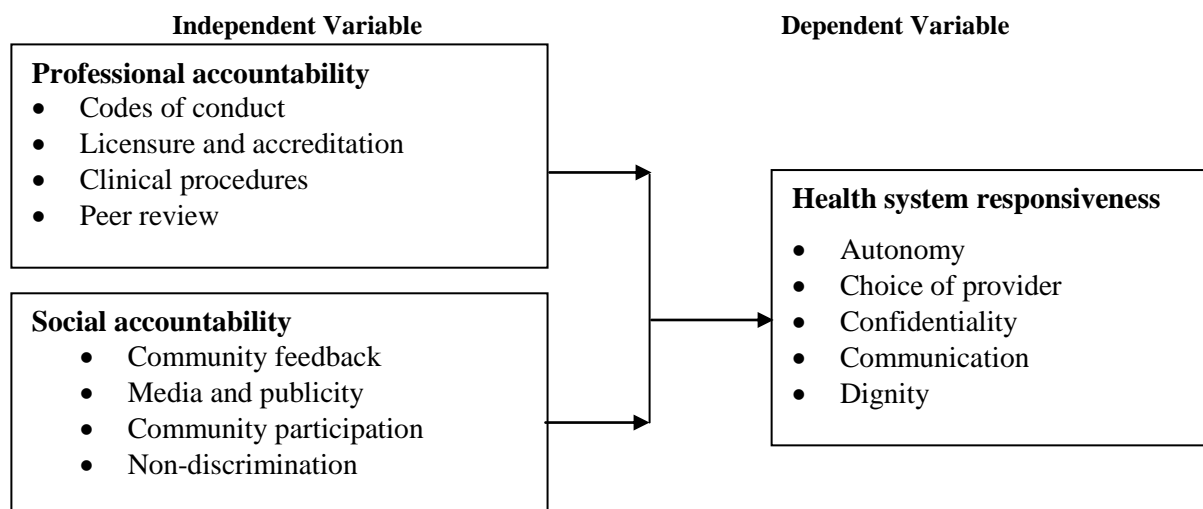


Figure 1: Conceptual Framework

II. Methods

This was a cross-sectional study design with mixed data collection methods. This study was conducted in Pumwani Maternity Hospital (PMH), Nairobi County, Kenya. It serves mainly low income clients and mainly young mothers from the surrounding Majengo informal settlement catchment area in Nairobi, and also clients from other places around Nairobi. It has been reported that lower social class patients often encounter poor services from health providers, and are less empowered to seek services or have options that are responsive to their needs (Darker, Donnelly-Swift, & Whiston, 2018).

The study sample of 111 health workers was determined using Yamane (1967) formula, 25 middle level managers were purposively selected as key informants, and patients were included in 5 Focused Group Discussions (FGDs). Quantitative data was collected among health workers using a structured questionnaire, key informant and focused group discussion guides were used to collect qualitative data from key informants and patients. The questionnaire was pre-tested in Nakuru Level 5 Hospital to ascertain validity and reliability. Ethical approval was obtained from the Science, Research and Ethics Committee of Kenya Methodist University. Research authorization was obtained from the National Commission for Science, Technology and Innovation (NACOSTI), Kenya, Nairobi County Health office, and PMH management. Quantitative data was analyzed using SPSS for descriptive and inferential statistics. Thematic content analysis was used to summarize qualitative data. Multiple regression analysis was performed to assess the degree to which a composite of independent variables explained the changes in dependent variable.

III. Results

A total of 111 questionnaires were distributed to the health workers but only 76(69%)questionnaires were complete and were included in the analysis. The socio-demographic characteristics of the respondents are shown in **Table 1**. Majority of the respondents 57(74.77%)were female. This may be attributed to the fact that generally maternity hospitals' health workers are traditionally female dominated with roles such as nursing and midwifery. A third of the respondents 37(33.33%) had worked in the hospital for 15 years.

Table 1: Socio-demographic Characteristics of the Health Workers (N=76)

Characteristics	N	%
Gender	Male	25
	Female	57
Experience	< 5 years	24
	6-10 years	31
	11-15 years	12
	>16 years	33
Education	Diploma	55
	Undergraduate degree	35
	Postgraduate degree	10
Age	< 29 years	12
	30–39 years	38
	40–49 years	16
	50–59 years	28
	> 60 years	6

Professional accountability was measured using various dimensions of maintaining professional norms and standards in service delivery. See **Table 2**. Majority of the respondents agreed that they adhere to professional codes of conduct (mean 4.56); that they meet licensure and accreditation conditions (mean 4.30), that professional associations exercise oversight (mean 4.19), that they use clinical guideline procedures (mean 4.58) and that they have continuous professional education training (mean 4.50).

Table 2: Professional Accountability Mechanisms in PMH

Dimension of Professional Accountability	N	Mean	STD
I always adhere to professional codes of conduct	76	4.56	0.90
I always meet licensure and accreditation conditions	76	4.30	0.97
Most professional associations exercise oversight	76	4.19	0.90
I often use clinical guideline procedures	76	4.58	0.86
My work is often being reviewed by another professional	76	4.07	1.12
I often attend continuous professional education	76	4.50	0.95

Qualitative results revealed that the hospital staff tends to appreciate standard operating procedures as a means to distil and present the best available evidence in a clear and practical way for clinicians and hospital administration. A key informant participant said:

“...professional accountability mechanisms are important since they ensure patient safely and right things are done at the right time and use right skill and right attitude...”
(Health Manager, 4).

The most common professional accountability issue according to the patients was related to disrespect by health workers. Although, disrespect was not widely experienced by most patients, there were instances where they were mentioned in service encounters. For instance, a patient in one of the FGD complained that:

“...Pumwani is better than another hospital I attended. I was feeling pain so I asked a sister to assist me get attention of a doctor. Each of the sisters on duty kept on telling me to be a bit patient as the doctor was coming to see me soon. But that never happened as nurses became rude and even abusive. Some began asking me why the other nurses in earlier shifts did not attend to my issue. After four days in that hospital I had to transfer to a private hospital where there was always someone on hand to attend to me and my baby, all the time...”(FGD Participant, 5).

Social accountability was also assessed based on the extent to which the hospital engaged the civil society as representative of the ordinary citizens who may not have the skills and time to participate directly or indirectly in exerting accountability. See **Table 3**. From the findings most of the respondents agreed that the hospital conducts client surveys (mean 3.94), that the hospital conducts citizen participation e.g. workshops, open days (mean 4.01), that the hospital conducts media publicity for both positive or negative news (mean 3.89), that the hospital has regulatory reporting requirements (mean 3.78) and that the hospital is monitored by civil society organizations (mean 3.93).

Table 3: Social Accountability Mechanisms in PMH

Dimension Social Accountability	N	Mean	STD
The hospital often conducts client surveys	76	3.94	0.95
The hospital conducts citizens participation through workshops, open days etc.	76	4.01	1.02
They conduct media publicity for both positive or negative news	76	3.89	1.15
The hospital has regulatory reporting requirements	76	3.78	1.18
The civil society organizations often monitor our activities in the hospital.	76	3.93	1.11
The hospital always provides complaints and redress mechanisms	76	4.08	1.10

Qualitative results however, unveiled the mechanisms through which social accountability take place at PMH to include alliance with Non-governmental Organizations, mainly to facilitate financing of various projects, as well as through open days and fairs. AKII participant said:

“...Kangaroo Care is supported by UNICEF, Save the Children and AfyaJijini in many ways including in staff training, renovating and expansion of the unit which is a big support...”(Hospital Manager, 05)

In addition, interactions with the general public through open days and fairs were also stressed, and KII had the following to say:

“...We usually get feedback in open air talks, they (the general public) also air what they require and do not get so that the hospital can meet their needs...”
(Hospital Manager, 12)

According to patients, the various aspects of social accountability were never mentioned. This could have been attributed to the fact that there is dearth of healthcare focused civil organizations working with patients on various fronts including payment, service quality, and patient rights, among others. However, one FGD participant obliquely narrated how these factors affect service responsiveness when she asserted that:

“...In private hospital, you are served well right from the gate, you are given a clean room, the food is good, your child is very well taken care of, you have warm water for bathing. There is always someone on hand to listen to you and see how they can assist you. But here, instead of their services improving, they are deteriorating...”(FGD 2, Participant).

Health system responsiveness was used to signify the degree to which Pumwani Maternity Hospital was able to attend to the legitimate expectations of their patients. From the findings more than two thirds of the respondents agreed that patients get care as soon as they need it, that patients are shown respect by hospital staff, and that staff explain things to patients for understanding with a mean of 4.39, 4.28 and 4.19 respectively. See **Table 4**.

Table 4: Status of Health System Responsiveness at PMH

Dimension of Health System Responsiveness	N	Mean	STD
Patients always get care as soon as they need it	76	4.39	0.90
Patients are always shown respect by hospital staff	76	4.28	0.98
Most staff explain things to patients for understanding	76	4.19	1.06
I always involve patients in decision making	76	4.13	1.11
I always keep patient medical history confidential	76	4.18	1.20
Patients can often choose the healthcare specialist /provider they are happy with	76	3.58	1.42
The hospital avails quality basic amenities e.g. clean waiting room with	76	3.80	1.35

TV, wards etc.

Furthermore the respondents agreed that staff involve patients in decision making (mean 4.13); that they keep patient medical history confidential (Mean 4.18); that patients can choose healthcare specialist or provider they are happy with (mean 3.58), and that the hospital provides quality basic amenities e.g. clean waiting room with TV, wards (mean 3.80).

Results on health systems responsiveness were consistent with Valentine et al. (2003) assertion that perceived responsiveness is dependent on mixture of factors, including perceived need, individual expectations, and the experience of care, which inevitably lead to varied responses for nearly similar conditions of service delivery.

However, from the FGD, participants who had negative experience with service provision at the hospital made the following remarks:

“...No, I was not impressed with the services, for example, the toilets were not clean, beds were congested, the mosquito net was torn and dirty, and the place was congested generally. I won't go there (Pumwani) again...” (FGD 1, Participant)

“ ... I shared a bed with another patient ... it was not nice ... ”(FGD 3, Participant)

Bivariate analysis was done to establish the influence of professional accountability and social accountability on a one to one relationship with health systems responsiveness. See **Table 5**.

Table 5: Bivariate Analysis: All Variables

		Professional Accountability	Social Accountability	Health Systems Responsiveness
Professional Accountability(X₁)	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	76		
Social Accountability(X₂)	Pearson Correlation	.369**	1	
	Sig. (2-tailed)	.001		
	N	76	76	
Health Systems Responsiveness(Y)	Pearson Correlation	.382**	.643**	1
	Sig. (2-tailed)	.001	.000	
	N	76	76	76

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

The bivariate correlations analysis revealed that there is a positive and significant influence of the Professional accountability (X₁) on health system responsiveness (r = 0.382**, P < 0.001). In addition, social accountability (X₂) had positive and significant influence on health system responsiveness (r = 0.643**, P < 0.001). The implication is that improvements in each accountability measures will positively lead to improvement in health system responsiveness in Pumwani Maternity Hospital.

The main model under investigation in this study intended to establish the combined influences of the two key variables (professional accountability and social accountability) on health system responsiveness in PMH in Kenya.

The model was expressed as: $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$

Where: Y = health system responsiveness, β_0 = Intercept (constant) β_1, β_2 = slope coefficients representing the influence of the associated independent variable with the dependent variable, X₁ = professional accountability, X₂ = social accountability, and ε = error term, was the basis under which the two specific objectives were set. See **Table 6**.

The multivariate linear regressions results in Table 6 indicate that the two variables professional accountability ($\beta_1 = 0.075, P < .001$) and social accountability ($\beta_2 = 0.356, P < .002$) had a positive and significant influence on health system responsiveness.

Table 6: Regression Coefficients^a Showing Direction and Strength of Relationships

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.275	.373		3.418	.001
Professional accountability	.075	.066	.110	1.130	.001
Social accountability	.356	.110	.406	3.231	.002

a. Dependent variable: Health system responsiveness

The constant (β_0) is also positive and significant ($P < .001$), which indicates that the responsiveness in health systems will always exist at a certain minimum even without the two factors (professional accountability and social accountability) under investigation in this study. The coefficient of X_1 that is ($\beta_1 = .075, P < .001$), indicates that a unit increase in the professional accountability by the health workers index leads to an increase in responsiveness in the health system. The coefficient of X_2 that is ($\beta_2 = 0.356, P < .002$), indicates that a unit increase in the social accountability by the health worker index leads to an increase in responsiveness in the health system index by .356 which is statistically significant ($P < .002$)

In summary, it therefore follows that, this study found statistical and significant evidence that the professional and social accountability in a combined relationship, significantly influences health systems responsiveness in PMH, Kenya.

IV. Discussion:

The findings on professional accountability are in line with Graham et al., (2015) assertion that clinical procedures are highly valued within clinical settings. According to Brinkerhoff (Brinkerhoff, 2004), high rating of professional accountability measures showed primacy placed on procedural and quality standards by the providers. Disrespect of patients encounter has also been reported on by Burrowes, Holcombe, Jara, Carter and Smith (2017) observing that disrespect and abuse of patients, particularly during childbirth, persists, and is prevalent throughout East Africa. Furthermore, professional accountability measures such as continuing professional education have been attributed to reduction of maternal mortality rate of 1071 deaths per 100,000 live births in the year 2000 to 383 in 2010 in Africa (Tuyisenge, et al., 2018). Moreover, hospital licensure and accreditation, with its periodic reviews of health facility performance standards, can potentially provide ongoing regulatory pressure for service improvement (Peabody et al., 2006).

These results have implications for Principal-Agent theory. First, professional accountability measures help ensure alignment of interests where professional staff members maintain credentials with professional bodies to ensure they discharge quality clinical care and professional services within the hospital, such as procurement of hospital supplies. This promotes resolve clinician-patient adverse selection and moral hazard problems. Secondly, professional standards are mechanisms through which staff members scan their environment and develop schema representing interpretive and action rules. This helps to ensure emergent nature of accountability to ensure improvement in health responsiveness as per CAS postulations.

As Burrowes, Holcombe, Jara, Carter and Smith (2017) contends, social accountability mechanisms, such as those that enable patients to be informed of their rights, encourage them to participate in their own healthcare, which has the tendency to improve the overall service responsiveness. According to Afulukwe-Eruchalu (2017), social accountability involving participation of civil society organizations helps empower patients, especially the poor, are in a weak position to confront this power thereby resulting in greater health system responsiveness. Importantly, reporting and use of Electronic Medical Records enhance dissemination of information to key stakeholders who can act accordingly to reduce abuse as well as help provide guidelines (Peabody et al., 2006). The other practice is requiring the hospital to voluntarily report its quality/safety performance to the general public. Thus the hospital can explore different ways of producing this kind of public report for enhancing transparency and accountability, which helps promote further responsiveness improvement (Jiang, Lockee, & Fraser, 2012).

According to the hospital staff, the most highly rated responsiveness item was prompt attendance to the patient while the least rated were issues related to choice. These results are consistent with Ortiz, et al., (2003) study that found out that being able to quickly receive care is the dimension that is most important to people in relation to service responsiveness.

In this study, the professional and social accountability had a positive and significant influence on health systems responsiveness. Professional standards and norms provide the maternity hospital with a comprehensive baseline for intervention efforts to support and to improve service provision (Edwards, et al., 2014). On the other hand, since civil society organizations are involved in funding various projects at the hospital, it anticipated that through terms of

contracting arrangements, these organizations are able to require the hospital to meet service and quality standards, and to report on costs as well as a variety of other indicators, thus improving health system responsiveness (Brinkerhoff, 2004). These results confirm the CAS's central assertion that as an emergent phenomenon, accountability components impact responsiveness differently. Thus organizational controls, such as budget, performance review, audits, and standards can provide feedback mechanisms for maintaining equilibrium (Dooley, 1997). According to Afulukwe-Eruchalu (2017), social accountability involving participation of civil society organizations helps empower patients, especially the poor who are in a weak position to confront this power thereby resulting in greater health system responsiveness.

V. Conclusions

From the findings, the study concluded that there is a positive and significant correlation between professional and social accountability and health system responsiveness. According to patients, the most common professional accountability issue was lack of respect to patients. Professional accountability measures help to ensure alignment of interests where professional health worker ensures they discharge quality clinical care and professional services within the hospital.

From the patients' responses, the various aspects of social accountability were never mentioned. This could have been attributed to the fact that patients may not be aware of social accountability mechanisms by the healthcare workers and yet there is a dearth of healthcare focused civil organizations working in the community which are supposed to empower the populace on these issues.

The study recommends that i) PMH management should strengthen clinical audits in order to ensure clinical governance relate to an organization-wide approach to continuous improvement of healthcare quality by all the individuals who are involved in a patient's care, ii) PMH management should develop strategies to ensure adherence of use of clinical practice guidelines for each medical procedure or process when needed in order to avoid wide variability in quality, improve health outcomes, and lower costs. iii) The Nairobi City County government should work with community health workers and civic organizations to empower the community on social accountability issues.

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Joseph Kisur Samich, et. al. "Influence of Accountability on Health System Responsiveness: A Case of Pumwani Maternity Hospital, Kenya." *IOSR Journal of Nursing and Health Science (IOSR-JNHS)*, 10(5), 2021, pp. 01-08.