



Assessment of Quality Health Care Delivery from the Perspectives of Nurses at the Trust Hospital Company Limited in the Greater Accra Region of Ghana

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Abstract

Background: Ghana's healthcare sector came under criticism regarding the quality of healthcare delivery, with issues relating to high-profile healthcare controversies, civil suits and unfavourable patient outcomes due to medical incompetence. Despite the implementation of quality health programmes, quality culture is yet to be institutionalized leading to poor ties between clinical care and public health at the district level, and unclear monitoring and governance mechanisms. These have resulted in quality approaches that have had no effect on patient satisfaction and health outcomes. Even though nurses devote more hours to patients than most healthcare staff and offer care to patients on a regular basis, the daily assessment of the care they provide to patients is conducted without a thorough understanding of what quality healthcare entail.

Methodology: This was a cross-sectional quantitative study carried out among 104 systematically selected nurses at the Trust Hospital Company Limited. A standard questionnaire designed in accordance with the Donabedian Model of Quality Care was administered, and a reliability analysis (α) was conducted to ensure internal validity and reliability of the items used to measure the constructs. Structure subscale consisted of 12 items ($\alpha = 0.51$), Process subscale, 12 items ($\alpha = 0.62$), and Service Quality (Outcome) also consisted of 12 items ($\alpha = 0.58$). Mardiam Skewness, Mardiam Kurtosis, Henze-Zirkler and Doornik-Hansen multivariate normality tests were conducted at p-values 0.006, 0.102, 0.034 and 0.048 respectively to ensure independence of each construct as well as to satisfy the normality criteria. Descriptive analysis was also run to determine the extent to which the items reflect the current state of healthcare delivery. Finally, correlation, linear regression, and MANOVA analyses were carried out at a significant level of ≤ 0.05 to determine relationships and effects on healthcare delivery outcomes.

Results: Findings indicated a general neutral opinion of the quality measures in relation to structures, processes, and outcomes of care at the Trust Hospital. Nurses faced limitations in providing needed care due to inadequate policy framework and enforcement, insufficient human resources, and lack of motivational packages. A Pearson r correlation matrix of the Donabedian constructs showed significant positive relationships between *Structure* and *Process* as well as *Outcome* and *Process* categories. A weak positive association between outcome and structure constructs was however deemed insignificant. A multivariate analysis of variance determined a significant effect of respondents' gender and educational levels on their perception of quality healthcare.

Conclusion: Supervision in the hospital company and staff-management relationship must be strengthened to ensure a holistic quality of nursing care delivery.

Keywords

Nursing care, Assessment, Healthcare quality assessment, Donabedian model

Introduction

In comparison to the past, where quality improvement was carried out because of unrelated incidents, healthcare providers around the world are making progress in their

efforts with policies to improve care in this period [1]. Quality improvement (QI) is a key aspect of health care, and it refers to the mechanism by which clinicians and organizations work to maximize performance, lower costs, increase accessibility,

and improve the care environment for both providers and employees. Improving care quality involves making healthcare services more attractive to consumers by making them more affordable and less expensive, as well as engaging patients during treatment [2].

The degree to which healthcare programs for patients and communities improve the probability of optimal health outcomes and are compatible with existing professional knowledge is referred to as quality in health services [3]. The ability to deliver and uphold sufficient requirements determines the quality of healthcare services rendered [4]. Inputs such as infrastructure and delivery of hospital support supplies and medical commodities; provider initiatives such as provider readiness, service decentralization agreements, oversight, and management structures; and provider capacities such as diagnosis precision and commitment to clinical standards are all essential elements of high-quality healthcare systems [5]. It will be impossible to develop and enforce successful strategies or techniques for service quality control without a valid metric. Patients, for example, tend to assess healthcare quality in terms of responsiveness to their individual needs, which contributes to varying perceptions and methods of quality assessment [6].

While Ghana has made considerable improvements in healthcare delivery, much needs to be done to ensure that quality care is available in the country [7]. Evaluating the perceptions of nurses' perceived quality of care can contribute significantly to healthcare planning and development, to the healthcare provider, and to improving decision-making processes. Assessing such perceptions about the quality of service may also improve care delivery, which is key to the Ghana Health Services' (GHS) context of policy reform.

Methods

Data was gathered using a standardized questionnaire similar to one developed by Yuri and Tronchin [8]. The questionnaire was divided into four (4) different parts: Sociodemographic characteristics of the respondents and the three dimensions of the Donabedian model. The first part of the questionnaire collected data on the socio-demographic and professional background of the respondents. The second elicited information on health facilities' service quality in the structure dimension, the third sought to assess service delivery quality in the process dimension and the last part sought information on service quality in the outcomes dimension. Each respondent was given at least 30 minutes to complete the questionnaire. The survey was completed by the respondents themselves.

Sample size

The sample for the study consisted of nurses working at the Trust Hospital Company Limited in Accra, Ghana. The total permanent nursing population of the Trust Hospital was 116. The sample size for the study was determined using the Yamane's formula [9]

$$n = \frac{N}{1 + N(e^2)}$$

where,

n = sample size

N = total population

e = margin of error

The margin of error for the study was determined at 5% and a confidence level of 95%. Hence, sampling error (e) = 0.05, N = 116.

$$n = \frac{116}{1 + (116)(0.05)^2} = 90$$

A 15% non-response rate of 14 was generated and added to the estimated sample size, making the sample needed for the study to 104 respondents. The first respondent was selected at random and every other nurse present was enrolled till 104 nurses were obtained.

All permanent working staff nurses were included for data collection. However, locum nurses, permanent nurses who were not present during the study period as well as participants who declined consent were excluded from the study.

Statistical analysis

Data were analyzed using Stata Corp.2007.Statistical Software. Release 14. Stata Corp LP, College Station, TX, USA. A univariate analysis was conducted on the demographic variables and results were presented in frequencies and percentages. Reliability analysis with a p-value ≤ 0.5 was conducted to ensure internal validity and reliability of the items used to measure the constructs of the variables. Mardiam Skewness, Mardiam Kurtosis, Henze-Zirkler, and Doornik-Hansen multivariate normality tests based on the skewness and kurtosis of the structure, process, and outcome responses were done to insure the independence of each of the three constructs as well as to satisfy the normality criteria required in the proceeding models. A descriptive analysis was also run to determine the extent to which the items reflect the current state of healthcare delivery at Trust hospital. Finally, correlation, linear regression, and MANOVA analyses were carried out at a significant level of $p \leq 0.05$ to determine how key variables related and affected the quality of healthcare delivery outcomes.

Results

All 104 respondents returned the needed responses for analysis resulting in a 100.0% response rate for the study. The age of study of respondents ranged from 20-60 years with

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respondents in the 31-35 group being the majority 36 (34.62%) in the study whilst the least 5 (4.81%) participating age groups were the 20-25 and 56-60-year groups respectively. Female nurses were more 84 (80.77%) than their male counterparts in the study (Table 1).

Table 1: Socio-Demographic characteristics of respondents.

| Variable | Categories | n (%) |
|----------------------------------|---|-----------|
| N = 104 | | |
| Age Group | 20-25 | 5(4.81) |
| | 26-30 | 25(24.04) |
| | 31-35 | 36(34.62) |
| | 36-40 | 20(19.23) |
| | 41-45 | 7(6.73) |
| | 46-50 | 3(2.880) |
| | 51-55 | 3(2.88) |
| | 56-60 | 5(4.81) |
| Gender | Female | 84(80.77) |
| | Male | 20(19.23) |
| Marital Status | Single | 33(31.73) |
| | Married | 69(66.35) |
| | Widowed | 2(0.96) |
| Ethnicity | Akan | 50(48.08) |
| | Dangme | 6(5.77) |
| | Ewe | 27(25.96) |
| | Ga | 16(15.38) |
| | Other | 5(4.81) |
| Highest Educational Level | Advanced Diploma | 9(8.65) |
| | Diploma | 27(25.96) |
| | Master's Degree | 20(19.23) |
| | PHD | 2(1.92) |
| | Bachelors | 46(44.23) |
| Rank | DDNS- Deputy Director of Nursing Services | 3(1.92) |
| | NO- Nursing Officer | 44(42.31) |
| | PNO- Principal Nursing Officer | 13(12.50) |
| | SN- Staff Nurse | 20(19.23) |
| | SNO- Senior Nursing Officer | 15(14.42) |
| | SSN- Senior Staff Nurse | 9(8.65) |
| Department | Dental | 1(0.96) |
| | Medical Surgical Ward A | 7(6.73) |
| | Medical Surgical Ward B | 12(11.54) |
| | Maternity Ward | 7(6.73) |

By marital status, 69 (66.35%) respondents were married, 33 (31.73) were single and those who were widowed or divorced were 2 (0.96%).

Furthermore, 43 (44.23%) of the respondents reported holding Bachelor's degree, 20 (19.23%) had Master's Degree, while a 27 (25.96%) and 9 (8.65%) had a Diploma and Advanced Diploma respectively.

The respondents were mostly from the out-patient department 49 (47.12%) with the majority of 44 (42.31%) being nursing officers, 20 (19.23%) were staff nurses, 15 (14.42%) were Senior Nursing Officers, and 13 (12.50%) being Principal Nursing Officers.

Additionally, the length of service of the various respondents was assessed. The findings indicated that about 40% had served between 1 and 3 years, 28% had served between 4 and 6 years, 20% had served for less than a year, while 12% had served for more than 6 years.

Reliability test

To ensure the internal validity and reliability of the items used to measure each of the constructs of this study, a reliability test was conducted (Table 2).

According to George & Mallery, a questionnaire with a Likert scale is deemed reliable when the statistical alpha value is equal to or greater than 0.5 (50%) [10]. Therefore, all the items used to measure the various constructs of this study were deemed reliable and valid, capable of predicting the quality of healthcare at Trust hospital.

The structure measured the framework in which healthcare is provided at the trust hospital which included hospital buildings, vehicles, staff, funding, and equipment. Twelve (12) items were used to measure structure outcome in quality of care and the reliability test showed a Cronbach's alpha of 0.51, thus confirming that the items used to measure structure were reliable and valid.

Similarly, the process, which refers to the interactions between patients and caregivers during the delivery of healthcare, was also assessed using 12 items and yielded a Cronbach's alpha value of 0.62. The Cronbach Alpha value of 0.62 affirms that the 12 items used to measure the process were reliable and valid.

Finally, outcome, which refers to the impact of healthcare on patients' and communities' health status, was also measured using 12 elements and yielded a Cronbach's alpha value of 0.58. The Cronbach Alpha value of 0.58 affirms that the 12 items used to measure the process were reliable and valid.

Multivariate normality test

A multivariate normality test carried out yielded a

| | | |
|--|----------------|-----------|
| | OPD | 49(47.12) |
| | P. House | 4(3.85) |
| | Pediatric Ward | 12(11.54) |
| | Theatres | 12(11.54) |

Mardiam Skewness (0.006), Mardiam Kurtosis (0.010), Henze-Zirkler (0.034) and Doornik-Hansen (0.005) respectively. The skewness and kurtosis of the structure, process, and outcome responses were done to ensure the independence of each of the three constructs as well as to satisfy the normality criteria required in the proceeding models.

From Table 3 above, all but Mardiam Skewness test showed significant p-values. Thus, the data from the three constructs of this study are normally distributed and fit for use in required linear models.

Descriptive statistics of the Donabedian constructs

Descriptive statistics were run on the items used to measure each of the constructs. The descriptive statistics gave the mean score and standard deviation of each of the items. The descriptive statistics also gave the minimum score and the maximum score for each item. This analysis was run in order to determine the extent to which the items reflect the current state of healthcare delivery at the Trust Hospital. To measure the extent to which the respondents consented to the items presented on the questionnaire, a five-point Likert Scale was used. The scale was rated as 1 = [Totally Disagree],

2 = [Partially Disagree], 3 = [Neither Agree nor Disagree], 4 = [Partially Agree], and 5 = [Totally Agree] and the mean score for each item was regarded as the nurse’s true perspective of quality care. Thus, the mean was matched against the point on the Likert scale in order to draw a conclusion on the perception of quality. The outputs of the descriptive statistics of the three key constructs in this study are detailed below:

Structure: Descriptive statistics were run on the indicators of structure category in order to present a clear picture of the context in which healthcare is delivered at the Trust Hospital, including the accessibility of emergency vehicles, adequate supplies among others. A summary of the descriptive statistics output on structure practices is presented in Table 4.

An overview of the descriptive results indicates that on average, most respondents neither agree nor disagree with the adequacy and efficiency of services and equipment, the sufficiency of service professionals, the administrative structure, and the operations of treatment systems at Trust Hospital. The mean scores for the indicators ranged from 1.39 to 4.70, demonstrating this assertion.

Process: Descriptive statistics were run on the indicators of process category in order to present a clear picture of

Table 2: Reliability test on constructs.

| Variable | No. of Items | Cronbach Alpha | Average Covariance |
|-----------|--------------|----------------|--------------------|
| Structure | 12 | 0.51 | 0.14 |
| Process | 12 | 0.62 | 0.18 |
| Outcome | 12 | 0.58 | 0.14 |
| Total | 36 | 0.74 | 0.11 |

Table 3: Test for multivariate normality.

| | | |
|-----------------------------|-------------------|----------------------|
| Mardia mSkewness = 1.356108 | chi2(10) = 24.534 | Prob > chi2 = 0.0063 |
| Mardia mKurtosis = 16.75624 | chi2(1) = 2.673 | Prob > chi2 = 0.1021 |
| Henze-Zirkler = 1.085689 | chi2(1) = 4.508 | Prob > chi2 = 0.0337 |
| Doornik-Hansen | chi2(6) = 12.711 | Prob > chi2 = 0.0479 |

Table 4: Descriptive statistics on structure.

| Item | N | Minimum | Maximum | Mean | Standard Deviation |
|------|-----|---------|---------|------|--------------------|
| Q10 | 104 | 1 | 5 | 4.70 | 0.68 |
| Q11 | 104 | 1 | 5 | 2.41 | 1.59 |
| Q12 | 104 | 1 | 5 | 2.11 | 1.50 |
| Q13 | 104 | 1 | 5 | 3.90 | 1.29 |
| Q14 | 104 | 1 | 5 | 4.25 | 1.23 |
| Q15 | 104 | 1 | 5 | 3.62 | 1.36 |
| Q16 | 104 | 1 | 5 | 4.29 | 1.09 |
| Q17 | 104 | 1 | 5 | 1.39 | 0.88 |
| Q18 | 104 | 1 | 5 | 2.40 | 1.52 |
| Q19 | 104 | 1 | 5 | 4.21 | 1.22 |
| Q20 | 104 | 1 | 5 | 3.46 | 1.53 |
| Q21 | 104 | 1 | 5 | 2.32 | 1.54 |

the interaction between patients and providers throughout the delivery of healthcare at Trust Hospital. A summary of the descriptive statistics output on structure practices is presented in Table 5.

An overview of the descriptive results indicates that on average, most respondents neither agreed nor disagreed with the sets of healthcare delivery practices that exist between health care providers at the Trust Hospital and the target group they serve. The mean scores for the indicators ranged from 2.40 to 4.74, representing a varied perception of the laid-out processes.

Outcome: Descriptive statistics were run on the indicators of the outcome category in order to present a clear picture of the effects of healthcare at the Trust hospital on the health status of its patients and the communities it serves. A summary of the descriptive statistics output on outcome practices is presented in Table 6.

An overview of the descriptive results indicates that the respondents neither agreed nor disagreed with improvements in the population's well-being, health literacy, health choices, and happiness that can be linked to antecedent healthcare at the Trust Hospital are good. The mean scores for the indicators ranged from 1.78 to 4.68, reflecting the widely varied perceptions of the quality of outcomes.

It is observed from the correlation matrix above (Table 7) that, there is a significant weak positive association between structure and process (correlation coefficient is 0.34) and process and outcome (correlation coefficient is 0.32) categories. Also, an observed weak positive association between structure and outcome categories was insignificant.

Predictors of quality of healthcare service delivery outcomes

This part presents estimations of the predictive effect of structure and process constructs on the quality of outcomes

Table 5: Descriptive process on process.

| Item | N | Minimum | Maximum | Mean | Standard Deviation |
|---------------------|-----|---------|---------|------|--------------------|
| Q22 | 104 | 1 | 5 | 4.59 | 0.78 |
| Q23 | 104 | 1 | 5 | 4.36 | 1.05 |
| Q24 | 104 | 1 | 5 | 4.14 | 1.15 |
| Q25 | 104 | 1 | 5 | 4.63 | 0.87 |
| Q26 | 104 | 1 | 5 | 3.87 | 1.30 |
| Q27 | 104 | 1 | 5 | 3.80 | 1.35 |
| Q28 | 104 | 1 | 5 | 3.76 | 1.32 |
| Q29 | 104 | 1 | 5 | 4.74 | 0.64 |
| Q30 | 104 | 1 | 5 | 2.40 | 1.54 |
| Q31 | 104 | 1 | 5 | 3.56 | 1.65 |
| Q32 | 104 | 1 | 5 | 4.32 | 1.19 |
| Q33 | 104 | 1 | 5 | 3.81 | 1.41 |
| Valid N (list wise) | 104 | | | | |

Table 6: Descriptive statistics on outcome.

| Item | N | Minimum | Maximum | Mean | Standard Deviation |
|---------------------|-----|---------|---------|------|--------------------|
| Q34 | 104 | 1 | 5 | 4.44 | 0.87 |
| Q35 | 104 | 1 | 5 | 4.68 | 0.90 |
| Q36 | 104 | 1 | 5 | 2.10 | 1.54 |
| Q37 | 104 | 1 | 5 | 3.96 | 1.28 |
| Q38 | 104 | 1 | 5 | 4.34 | 0.99 |
| Q39 | 104 | 1 | 5 | 3.83 | 1.43 |
| Q40 | 104 | 1 | 5 | 1.78 | 1.42 |
| Q41 | 104 | 1 | 5 | 1.97 | 0.46 |
| Q42 | 104 | 1 | 5 | 4.07 | 1.22 |
| Q43 | 104 | 1 | 5 | 4.43 | 1.00 |
| Q44 | 104 | 1 | 5 | 4.30 | 0.82 |
| Q45 | 104 | 1 | 5 | 4.52 | 0.89 |
| Valid N (list wise) | 104 | | | | |

Table 7: Correlation matrix of the donabedian constructs.

| | | Structure | Process | Outcome |
|-----------|----------------|-----------|----------|----------|
| Structure | Pearson | 1.0000 | **0.3438 | 0.1361 |
| | Sig.(2-tailed) | | 0.0004 | 0.1684 |
| | N | 104 | 104 | 104 |
| Process | Pearson | **0.3438 | 1.0000 | **0.3266 |
| | Sig.(2-tailed) | 0.0004 | | 0.0007 |
| | N | 104 | 104 | 104 |
| Outcome | Pearson | 0.1361 | **0.3266 | 1.0000 |
| | Sig.(2-tailed) | 0.1684 | 0.0007 | |
| | N | 104 | 104 | 104 |

**Correlation is significant at $p \leq 0.05$

Table 8: Influencing factors on quality of healthcare service delivery outcomes.

| Model | R | R square | Adj. R | Change statistics | | | | |
|------------------------|-------|----------|--------|-------------------|----------|-----|-----|---------------|
| | | | | R Square Change | F change | Df1 | Df2 | Sig. F change |
| 1. Structure | 0.113 | 0.018 | 0.008 | | 1.70 | 1 | 102 | 0.1959 |
| 2. Process | 0.281 | 0.106 | 0.097 | | 12.18 | 1 | 104 | 0.007 |
| 3. Structure & Process | 30.47 | 0.107 | 0.089 | | 6.07 | 2 | 101 | 0.003 |

Table 9: Analysis of variance.

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|-----|-------------|-------|--------|
| 1 | Regression | 48.595 | 1 | 48.595 | 1.92 | 0.16 |
| | Residual | 2575.36 | 102 | 25.248 | | |
| | Total | 2623.96 | 103 | | | |
| 2 | Regression | 279.96 | 1 | 279.96 | 12.18 | 0.0007 |
| | Residual | 2343.99 | 102 | 22.980 | | |
| | Total | 2623.96 | 103 | | | |
| 3 | Regression | 281.653 | 2 | 140.82 | 6.07 | 0.0032 |
| | Residual | 2342.30 | 101 | 23.19 | | |
| | Total | 2623.96 | 103 | | | |

a. Predictors: (Constant), Structure, Process; b. Dependent Variable: Outcome

of healthcare service delivery. It looks at the influence of structure and process constructs on the outcome of care. The results are based on a linear regression estimation technique and are reported in Table 8. Evidence from the table suggests that the process category has a positive effect on the outcome of healthcare delivery services.

From model 1 in the summary Table 8 above, it showed an R square of 0.018 which indicated a 1.8% quality healthcare service delivery at trust hospitals is explained by the structures put in place. The R squared further indicates that the structure category is not a good predictor of quality healthcare outcomes. Hence, the structure has no impact of the outcome of healthcare at Trust hospital.

From model 2 in the summary table above, it showed an R square of 0.106 which indicates that about 10.6% of the healthcare outcomes at Trust Hospital are explained by the

processes in care delivery. The R square further indicates that process is a weak predictor of healthcare delivery outcomes. Hence, process plays a role in promoting quality healthcare outcomes at Trust Hospital.

Model 3 shows the interactive effect of structure and process on healthcare delivery outcomes. The interactive effect shows an R square of 0.107 which indicates that 11% of the variations in healthcare outcomes are due to the interactive effect of structure and process.

Analysis of variance: The ANOVA table (model 1) above also reveals that the model as a whole is insignificant, hence structure does not predict outcomes in healthcare delivery outcomes. This is because the p-value-0.16 > 0.05 significant level. This also reveals no significant relationship between structure and outcome of healthcare delivery (Table 9).

On the other hand, model 2 in the ANOVA table above was significant, showing that *process* is a good predictor of outcomes of healthcare delivery at Trust Hospital. This is so because the p-value of 0.0007 is very significant at the 0.05 level.

Also, the interactive effect of process and structure on the quality of health outcomes at Trust Hospital was found to be significant at the 0.05 level. This shows a significant interactive relationship between structure and process on the quality of healthcare delivery outcomes.

Multivariate analysis (MANOVA) of factors influencing perception of quality- Healthcare service delivery outcomes

A MANOVA was run to determine the effect of the respondents’ age, gender, work experience, ranking position, department, branch, and education level, on the quality of healthcare delivery at Trust Hospital Limited in terms of the structures, processes, and outcomes of care. There was a statistically significant difference between the educational levels of the respondents as well as their gender and branch, on the perception of quality in terms of structure, process, and outcome (Table 10).

Discussion

This study sought to assess the quality of health care service delivery from the nurses’ perspective at The Trust Hospital Company Ltd using the Donabedian model of quality care as an organizing framework. This chapter discusses the findings of the study in relation to the specific objectives. Specifically, the findings are synthesized in relation to the structural factors that influence healthcare service delivery quality, processes that affect healthcare service delivery quality, and the factors that influence quality healthcare service delivery outcomes.

Structural factors that influence healthcare service delivery quality

One objective of this study was to assess the structural factors that influence healthcare service delivery quality. The study revealed that a greater percentage of respondents had a neutral position on the adequacy, efficiency, and

quality of services and equipment, the sufficiency of service professionals, the administrative structure, and the operations of treatment systems at Trust Hospital. It further showed that the structure category was not a good predictor of quality healthcare outcomes. Hence, the structures had no impact on the outcome of healthcare delivery at Trust hospital.

Systematic evaluations of basic health services in high-mortality countries showed serious shortcomings in the care provided. In one study spanning eight countries in Sub-Saharan Africa, quality-adjusted (effective) coverage for antenatal treatment, family planning, and sick child care averaged 28%, which was significantly lower than crude service coverage [11]. In five countries in Sub-Saharan Africa, over 40% of facility-based deliveries occurred in primary care facilities with significant resource and technological knowledge deficits [12]. Nearly 40% of healthcare facilities in low- and middle-income countries lack improved water, and nearly 20% lack sanitation, with obvious consequences for care quality [13].

In Liberia, there was found a shortage of properly trained health workers in hospitals and communities; there were no long-term procurement mechanisms; there were no necessary supply chain networks or centralized health information systems; there was no infection prevention and control, and the links between health care and the population were insufficient. These flaws jeopardized the distribution of high-quality services, allowing the Ebola virus to spread quickly [14].

In essence, despite significant improvements in access to basic health services, inadequate quality of care is to blame for persistently high levels of maternal and infant mortality in low- and middle-income countries.

Processes that affect healthcare service delivery quality

This study also sought to evaluate processes that affect healthcare service delivery quality at Trust Hospital. An overview of the descriptive results indicated that on average, most respondents neither agreed nor disagreed with the quality of the sets of healthcare delivery practices that existed

Table 10: MANOVA of Factors Influencing Perception of Quality Healthcare Service- Delivery Outcomes.

| Independent Variables | Structure, Process & Outcome (N = 104) | | |
|-----------------------|---|----|------------|
| | Wilks’ Lambda statistic | Df | Sig (0.05) |
| Age | 0.7600 | 7 | 0.1796 |
| Gender | 0.9181 | 1 | **0.0354 |
| Work Experience | 0.9768 | 3 | 0.9850 |
| Ranking Position | 0.7914 | 5 | 0.0833 |
| Department | 0.8487 | 6 | 0.5987 |
| Branch | 0.6941 | 7 | **0.0267 |
| Education Level | 0.8092 | 4 | **0.0510 |

**Statistically significant MANOVA at the 0.05 level

between healthcare providers at the Trust Hospital and the target group they serve. Regression analysis further showed that the processes in care delivery were a good predictor of healthcare delivery outcomes at the Hospital.

Good practices of healthcare delivery ultimately aim to improve, rather than simply increase inputs or refine health system processes and should reflect the desires of key stakeholders; including service users and communities. Emerging evidence shows that unjustified disparities in health-care provision and delivery exist in Africa, as a significant number of patients are not receiving sufficient, evidence-based care [15]. In Africa, poor-quality care has been linked to a higher rate of neonatal mortality [16]. For instance, although the rate of professional birth attendance rose from 58 percent in 1990 to 73 percent in 2013, owing to an uptick in hospital-based births, many women and babies still die or experience permanent disorders as a result of inadequate treatment, often after accessing a health facility [17]. Also, owing to the low standard of care delivered at health institutions, an improvement in institutional deliveries from 14% to 80% in India did not decrease maternal and infant mortality [18].

Poor care delivery not only adds to the global disease burden and unmet health needs, but it also has a significant economic effect, with significant financial consequences for health services and societies around the world. In high-income nations, about 15% of hospital spending is used to correct preventable errors of treatment and patient injury. Poor-quality care significantly impacts society's most disadvantaged populations, and the wider economic and social effects of medical damage resulting from long-term disability, impairment, and reduced income total trillions of dollars per year [19].

Factors that influence quality healthcare service delivery outcomes

This study also explored the factors influencing quality healthcare service delivery outcomes at the Trust Hospital. The educational levels of respondents, their gender, as well as their branch were found to be significantly associated with the nurses' perception of quality in terms of structure, process, and care outcomes at Trust Hospital. In a similar study in the East Gojjam zone, Amhara Regional State, Ethiopia [20]. Also found that residence, facility structure, communication, and accessibility had a significant association with perception of quality.

The primary goal of high-quality patient care is to increase the likelihood of desired health outcomes. Quality patient care has seven observable characteristics that maximize the probability of desirable health outcomes: Efficacy, reliability, people-centeredness, timeliness, equity, integration of care, and performance [21]. Poor-quality care, even if made available at a reasonable cost, is a roadblock to comprehensive universal health coverage. This is due to the fact that communities will not use programs that they distrust and that provide them with no value.

In high-income nations, seven out of every 100 hospitalized

patients are likely to contract a healthcare-associated infection (one out of every ten in developed countries), diseases that can be conveniently prevented with proper sanitation and antimicrobial judicious usage [22]. According to WHO figures, 40% of healthcare facilities in low- and middle-income countries lack potable water, while almost 20% lack sanitation. The basic necessities, such as clean water, stable electricity, adequate hygiene, and safe waste management, are used to assess the quality of healthcare services [23]. According to a 2014 poll, only about a quarter of Nigerian facilities had reliable water, sanitation, and electricity [24]. These fundamental foundations are critical for providing high-quality care.

Conclusion

If healthcare is to be offered, it must be of high quality; otherwise, the very fundamental objectives that underlie basic healthcare services are from the start defeated. The alternative - low-quality care - is not only detrimental but also consumes valuable money that could be used to better people's lives through other essential drivers of social and economic growth. Therefore, national quality policy and strategies must be applied and aimed at achieving excellent quality healthcare delivery.

Compliance with Ethical Standards

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Disclosure of conflict of interest

All authors declare no conflict of interest.

Statement of ethical approval

Ethical approval to conduct this study was obtained from the Ethics Review Board of Ensign Global College. Also, administrative permission was sought and obtained from the Management of the Trust Hospital to allow data to be collected from the facility.

Statement of informed consent

The study participants were informed of their rights to voluntarily consent or decline to participate and to withdraw their participation at any time without penalty. All respondents were treated equally after explaining to them the purpose of the study and their roles.

Authors Contribution

This work was carried out in collaboration with all authors. MD and EKS participated in conceiving the study and in the development of data collection tools. MD carried out data collection. SHA and EKS participated in the data analysis and drafting of the manuscript. All authors read and approved the final manuscript.

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