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Client's Satisfaction with Child Health Care Delivery in Tamale Teaching Hospital

ABSTRACT

Background: Studies conducted in public hospitals in Ghana have provided empirical evidence of an inadequate level of quality of health care services, both in terms of objective measures of client opinions and those of health care providers.

Aim: The purpose of this study was to assess client satisfaction with the quality of healthcare delivery at the Child Health Department of the Tamale Teaching Hospital (TTH).

Methods: A mixed-methods cross-sectional study design using purposeful and convenience sampling techniques were used to obtain 385 parents or caregivers and 6 health professionals at the Tamale Teaching Hospital (TTH) from July, 2021 to April, 2022. Structured questionnaires were used to collect quantitative data, and a semi-structured interview guide was used to collect qualitative data.

Results: Most (90.9%) of the respondents are of the view that their children's health needs were catered for in the facility while only 0.2% of respondents strongly disagreed that their child's health needs were catered for in the facility. The study indicates that the 1st most ranked important satisfactory factor to the client's healthcare service quality is tangibility with an RII of 1.20 and the least ranked was priority and responsiveness of RII of 0.40 respectively.

Conclusions: Child healthcare service patronage in TTH is generally high. Although the needs of the people are met, we recommend that the management of the hospital should prioritize medical and surgical conditions in the hospital by providing equipment and logistics.

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Keywords: Client satisfaction, Child healthcare, pediatric unit, Hospital, Healthcare delivery

1. INTRODUCTION

Clients' satisfaction and requirements have increased as a result of the increased competition in the healthcare environment, resulting in a situation where the majority of firms find it too challenging to keep up with the need of their clients. It has been argued that client satisfaction is linked to health outcomes and that measuring it could cause problems because service providers frequently fail to identify clients. [1]. Previously, hospitals evaluated clients' care services based on medical experts' opinions and managerial and technological personnel. In the first several years, this viewpoint was broadened to incorporate the perspectives of service beneficiaries. As a result, hospitals place a greater emphasis on client issues in order to increase patients' overall satisfaction [2]. Many accreditations and assessment programs for hospital services include standards for patient input and perceptions[3]. Hospitals are moving toward a business strategy and developing effective quality improvement initiatives by making client satisfaction the benchmark of organizational success. Client satisfaction is a critical indicator of medical service quality

28 because it reveals whether or not the provider has met the client's standards and beliefs,
29 which are topics over which the client has final authority[4].
30 Ghana's Ministry of Health (MOH) has always prioritized high-quality healthcare that is
31 responsive to customer needs. However, the rate of quality improvement in facility-based
32 healthcare delivery services has been slow and falls far short of the Ghana Health Service's
33 objectives. According to [5] this is due to a lack of emphasis on healthcare quality
34 improvement. In light of this, there is a rising need for study on the quality of health service
35 delivery in Ghana, particularly with regard to client satisfaction, which is a crucial indicator of
36 and integration of quality assurance in the country's health care system and facilities.
37 This study is unique in that it assesses client satisfaction with the quality of child healthcare
38 delivery at Tamale Teaching Hospital, which is new to Ghana's healthcare system. In this
39 regard, the goal of this research is to determine how satisfied clients are with the child health
40 care provided at Tamale Teaching Hospital. The study's findings are likely to assist service
41 providers (healthcare) in identifying the service quality aspects that most predict client
42 happiness so that they can focus on them based on their importance.

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44 **2. MATERIAL AND METHODS**

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46 **2.1 Study Setting**

47 The research was conducted in Tamale Teaching Hospital (TTH) from July, 2021 to April,
48 2022. Tamale Teaching Hospital (TTH) was founded in 1974 as a Regional Hospital to
49 provide comprehensive health care to the people of Tamale and the surrounding areas. The
50 Hospital, which has a land area of approximately 490,000 square meters, is located in the
51 eastern portion of the Tamale Metropolis, on the major Hospital Road.

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53 **2.2 Study Design**

54 A mixed-methods design was used in designing this study. The employment of both
55 quantitative and qualitative methodologies, rather than just one, was more acceptable in light
56 of the study's objectives

57

58 **2.3 Study Population and sample size**

59 Parents/caregivers whose children were admitted to Tamale Teaching Hospital's child health
60 department were recruited for the quantitative method. Health professionals who lead the
61 department's various units. A total of 385 respondents comprised of 49 respondents from the
62 children emergency ward, 148 from the paediatrics ward and 188 from the neonatal
63 intensive care unit were used for this study.

64

65 **2.4 Sampling procedure**

66 The study relied on convenience sampling to select clients who were admitted to the
67 department at the time of the survey. Based on their availability, the questionnaires were
68 administered to the clients until the needed sample size was reached. Purposive sampling
69 was used to collect data for the qualitative investigation. As key informants, a medical
70 doctor, the department's administrator, the deputy director of nursing services, and the
71 heads of the department's various units were chosen.

72

73 **2.5 Data Collection tools**

74 Structured questionnaires were utilized in the quantitative approach. This tool was used to
75 access the extent of client satisfaction, identify factors that influence child health care
76 delivery and explore innovations to improve child health delivery. Also, semi-structured
77 interview guide was used as the major data-gathering instrument in this study.

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79 **2.6 Data Analysis**

80 The Statistical Package for Social Sciences (SPSS) version 22.2 was used to generate
 81 population-based conclusions and generalizations. Because of their convenience,
 82 consistency, validity, and reliability, tables and bar graphs, as well as the Relative Important
 83 Index (RII) was used for further analysis.

84

85 **2.7 Limitations of the Study**

86 Intervening or confounding variables, such as respondent honesty and personal biases, that
 87 were beyond the researcher's control. Extraneous variables such as remarks from other
 88 respondents, anxiety, stress, and motivation on the part of the respondents throughout the
 89 process of responding to the questionnaires were designated as uncontrolled variables in
 90 the research contexts

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93 **3. RESULTS AND DISCUSSION**

94 **3.1 Results**

95 **From Table 1**, out of 385 respondents, 165 of them representing 42.9 % are males and 220
 96 representing 57.1% of respondents are females constituting the majority. The results
 97 indicate that 81% representing most of the respondents' wards are between the ages of 0-4,
 98 17.1% are between the ages of 5-9 whereas 1.8% are between 10-14 years. No child is
 99 between the ages of 15-19. The results further revealed that 7.1 percent of respondents had
 100 no education, 7 percent had primary level of education and 10.9 percent had secondary
 101 education whereas 64.9 percent representing the majority has tertiary level of education.
 102 The fact that 75 percent of the respondents can read and write gives an indication that they
 103 are capable of giving an independent assessment of the service delivery at the hospital.

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105 **Table 1:** Demographic characteristics of respondents

Variables	Categories	Frequency N=385	Percentage (%)
Sex patients	Male	165	42.9
	Female	220	57.1
Age of patients	0-4	312	81
	5-9	66	17.1
	10-14	7	1.8
	15-19	0	0
Level of education of caregivers/parent	No formal education	66	17.1
	Primary	27	7
	Secondary	42	10.9
	Tertiary	250	64.9
Employment status of caregivers/ parents	Unemployed	13	3.4
	Trader/businessman	82	21.3
	Farmer	49	12.7
	Government employee	179	46.5
	Private sector employee	58	15.1
	Student	4	1
Religion of caregivers/ parents	Christianity	135	35.1
	Islam	249	64.7
	Traditionalism	1	0.3

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107 Also from **table 2** it can be seen that, 33% of key informants are males whiles 67% are
 108 males. Also, 67% of respondents are nurses and 16.5% are Medical Doctors and
 109 Administrators respectively. Table 4.2 also shows that, 16.5% of respondents were between
 110 the ages of 25-35 years and 67% are between the ages of 36-45 years whiles 16.5% are 46
 111 years and above.

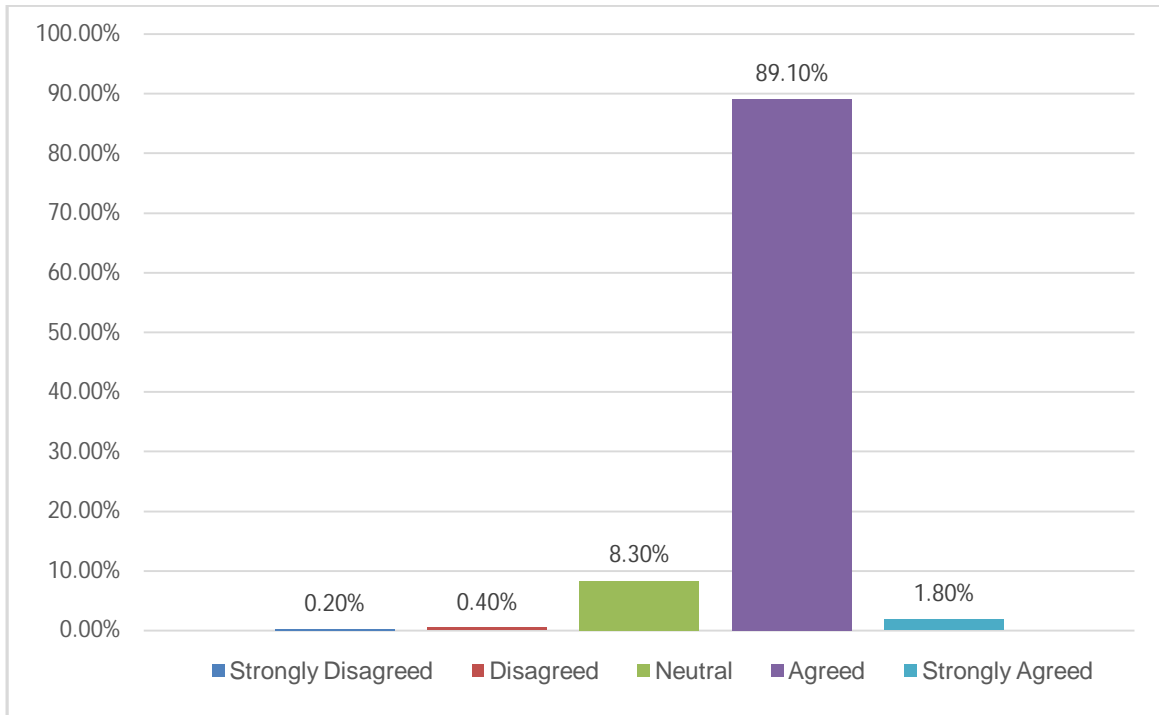
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Table 2: Demographic characteristics of key informants

	Frequency	Percentage %
Gender		
Male	2	33.0
Female	4	67.0
Total	6	100.0
Position		
Nurses	4	67.0
Medical Doctor	1	16.5
Administrator	1	16.5
Total	6	100.0
Age group		
25-35	1	16.5
36-45	4	67.0
46 and above	1	16.5
Total	6	100.0

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The results revealed that, 0.2% of respondents strongly disagreed that their child's health needs were catered for in the facility, 0.4% disagreed and 8.3% said they neither agree nor disagree whereas 89.1% and 1.8% agreed and strongly agreed respectively that their child's health needs were catered for in the facility. It is clear the majority (90.9%) of the respondents are of the view that their children's health needs were catered for in the facility as shown in **Figure 1**.



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Figure 1: Clients' satisfaction with services for their children

As shown in **table 3** the study indicates that the 1st most ranked important satisfactory factor to the client's healthcare service quality is tangibility with an RII of 1.20 and the least ranked is The factor comprised issues of parking space for vehicles, clean and adequate washrooms, adequate sitting space, playing materials for children as well as the facility has a resting place for caregivers. The second most ranked important satisfactory factor of healthcare service quality to clients was empathy and communication with RII of 1.00 respectively. The factors for empathy comprised issues of support for the child's emotional well-being, fairness and respect, showing care to children and staff interest in children's wellbeing. The factors for communication included receipt of helpful, regular feedback about the progress of children's condition, receipt of reliable and clear details about the child's condition, and ease in giving a concern, a suggestion, or a query. The least ranked were priority and responsiveness.

Table 3: Relative Importance Index of Satisfactory Factors

Satisfaction Factors	Ranks								
	(1)	(2)	(3)	(4)	(5)	$\sum W$	Mean	RII	Rank
Tangibility	70	1086	321	824	8	2309	6.00	1.20	1 st
Empathy	1	8	115	1784	17	1925	5.00	1.00	2 th
Communication	2	122	204	1575	23	1925	5.00	1.00	2 nd

Accessibility and affordability	6	593	186	739	17	1541	4.01	0.81	3 rd
Assurance	1	11	110	1406	12	1540	4.00	0.80	4 th
Reliability	3	23	380	1120	9	1540	4.00	0.80	4 th
Culture	4	6	6	728	26	770	2.00	0.40	5 th
Priority	2	36	109	620	3	770	2.00	0.40	5 th
Responsiveness	1	28	304	433	4	770	2.00	0.40	5 th

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141 It is therefore clear that, the type of child health care services provided at TTH are medical
 142 and surgical emergencies which includes: dehydration, respiratory distress, trauma,
 143 convulsions, burns, Severe Acute Malnutrition (SAM), anaphylaxis and birth asphyxia.

144 **From figure 2**, 37% of respondents said inadequate finances was a factor influencing child
 145 healthcare delivery and 18% said poor information delivery. Ten per cent said they find it
 146 difficult to identify service location and 8% of respondents said language barrier while only
 147 16% and 11% said inadequate water supply and drugs respectively. Clearly, inadequate
 148 finance was the major factor influencing child healthcare delivery in TTH as indicated by
 149 majority (37%) of respondents.

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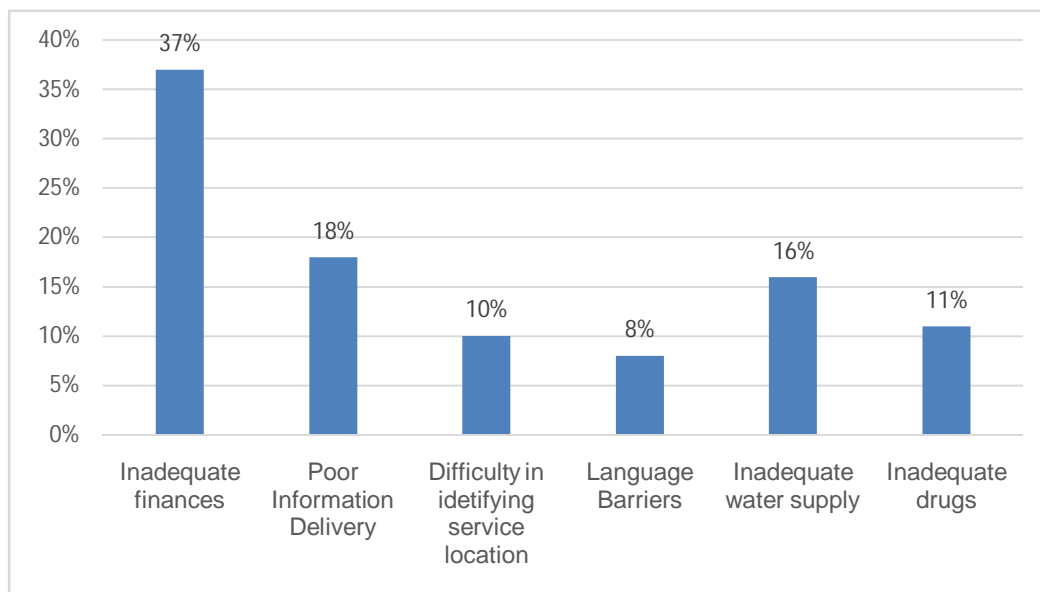
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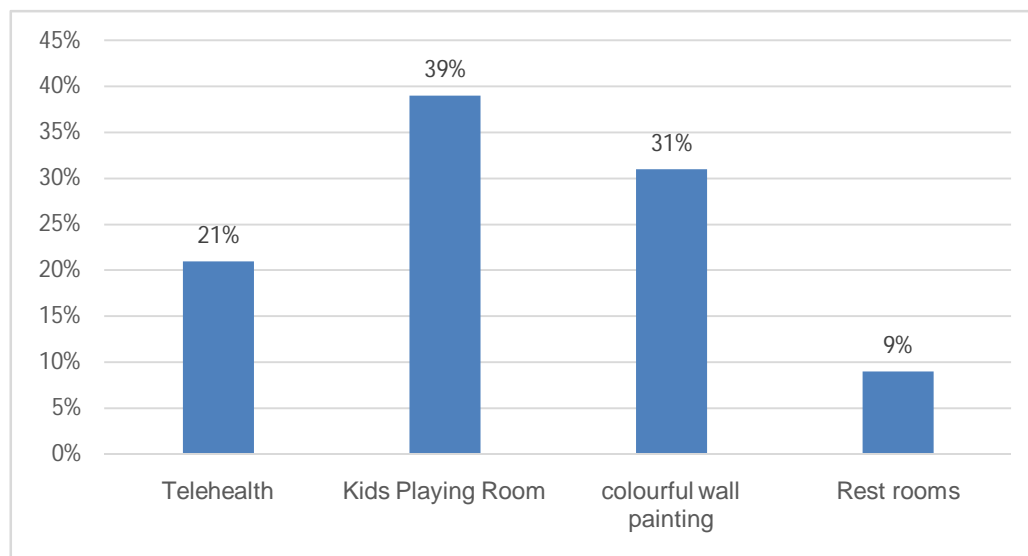
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Figure 2: Factors that influence quality of child Healthcare Delivery at TTH
 It is indicated in **Figure 3** that, 21% of respondent said telehealth, 39% said kids playing room and 31% said colourful wall painting whereas 9% said rest rooms. It is clear majority

170 (39%) of respondents are of the view that, kids playing room should be considered in the
171 hospital as an innovation to improve the quality of child healthcare.



182 Figure 3: Innovation for improvement in the quality of child healthcare services

188 3.2 Discussion

189 The demographic findings indicate that females largely utilized the hospitals in accessing
190 healthcare services in diverse ways. Again, the result reveals that patients with higher levels
191 of education thus those from the senior secondary school level upwards also utilized child
192 emergency services of the Tamale Teaching hospital extensively. This corroborates the
193 findings of [6] which suggest that there is a significant relationship between education level
194 and healthcare utilization, with people of higher levels of education sharing higher levels of
195 healthcare utilization. Thus, highly educated persons in societies are conscious of their
196 health and therefore make higher investments in their health. An approximated figure of 81%
197 of patients were between 0-4 years, this result is a clear indication that age is a significant
198 determinant in the utilization of child healthcare a observed in previous studies [7].

199 The majority (48.10%) of clients were in the Neonatal Intensive Care Unit. This could be due
200 to the fact that other health facilities in the Northern Region do not have enough specialized
201 Doctors and Nurses in care for Neonates as well as the availability of Neonatal intensive
202 care units. The study further revealed that, the majority (90.9%) of the respondents were
203 satisfied with child healthcare services and that, their children's health needs were catered
204 for in the facility.

205 Also, the researchers sought to identify among the health service quality dimensions which
206 dimension is most important to the clients and a Relative Important Index (RII) was used to
207 rate these dimensions and the results indicated that, the three most ranked important
208 satisfactory factor to the client's tangibility, empathy, communication, accessibility and
209 affordability (Table 3). This objective was designed to examine the most rated important
210 satisfactory factor to the patients. The patients revealed that physical facilities in relation to
211 equipment and logistics ensure patients' welfare hence relatively important quality
212 healthcare in the hospital. This finding is noted earlier in studies by [8] that tangibility in
213 terms of the physical environment, cleanliness, seating and modern clinical equipment has a
214 larger effect on the perception of quality healthcare of hospital in Jordan and Turkey.
215 Patients rated empathy as an important satisfactory factor, thus patients are sensitive to how
216 staff treat them and care for their ill health at TTH. Communication is a key determinant of
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220 quality healthcare, since patients are able to engage with staff and effectively discuss
221 personal health matters that affect their health. Through this approach medical staff are able
222 to educate patients on how to make good choices affecting their health. The study indicated
223 that, patients rated accessibility and affordability as the third most ranked satisfactory factor.
224 Accessibility and affordability to patients in the Tamale Teaching Hospital had to do with their
225 ability to easily locate health care services such (pharmacy and laboratory) services and also
226 the cost involved to cover health care of their patients.

227 In determining the patronage of child health care services at Tamale Teaching Hospital, it
228 was indicated that, there was high patronage by the clients and the following where the
229 reasons:

230 *"Parents bring their critically ill children to our facility that contributes to the numbers and then, we are*
231 *also a referral centre for the peripheral hospitals within tamale and northern region and thirdly, we receive*
232 *patients from upper east and west and the newly created regions in the north, all refer patients to TTH*
233 *and also, we see patient coming from home". (Male caregiver, Medical officer, June 2021)*

234 The results are confirmed by [9] who indicated that, healthcare services that are referral
235 centre will have high patronage because they have the specialist. Measuring client's
236 satisfaction has various purposes. Some of the most prominent reasons include evaluation
237 of health care services from patient's point of view, the identification of problem areas and
238 the generation of ideas towards resolving these problems.

239 The study indicated that, inadequate finance was the major factor influencing child
240 healthcare delivery in TTH as indicated by the majority (37%) of clients. Also, responses
241 from healthcare providers confirmed the clients' assertion of factors influencing service
242 satisfaction as one said;

243 *"We attend to all kinds of people from different social classes, there are those how to find it less difficult to*
244 *pay, others who take a lot of time to raise money and others no matter what you do, cannot find money*
245 *but some of our services are covered by NHIS and we also have a social welfare in the hospital who*
246 *normally come to the aid of such individuals". (Male caregiver, medical officer).*

247 The study also indicated that, creating a playing room for kids will be a major innovative
248 strategy to improve the quality of child health services in TTH as indicated by majority (39%)
249 of clients. Other researches shows that, new services, new ways of working, and new
250 technologies are common in health-care companies [10]. The desired benefits from the
251 client's perspective are either better health or less suffering due to illness. Another study by
252 [11] showed that, the use of telehealth can improve quality healthcare delivery in health
253 facilities as it will reduce long queues and waiting time of clients in health services.

254

255 **4. CONCLUSION**

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257 Most clients are satisfied with the quality of child healthcare they receive from the child
258 health department of the Tamale Teaching Hospital. Inadequate finance is the major factor
259 influencing child healthcare delivery in TTH. Child healthcare service patronage in TTH is
260 generally high due to the fact that the hospital is the main referral hospital in the northern
261 sector of Ghana with specialized Doctors and Nurses trained in child health and the most
262 equipped in the Northern parts of Ghana. The researchers recommend that the management
263 of the hospital should prioritize medical and surgical conditions in the hospital by providing
264 equipment and logistics as well as encouraging health professionals to take up post-
265 graduate training in paediatrics in the management of medical and surgical conditions.

266

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273 the selected health facility where the research was conducted.

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275 **COMPETING INTERESTS**

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277 Authors have declared that no competing interests exist.

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280 **AUTHORS' CONTRIBUTIONS**

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282 Author AP designed the study, performed the statistical analysis, wrote the protocol, and
283 wrote the first draft of the manuscript. Author DC supervised the study. Author SN wrote the
284 final draft of the manuscript and did formal analysis and Author FAW managed the literature
285 searches. All authors read and approved the final manuscript.

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287 **ETHICAL APPROVAL**

288 Ethical clearance was obtained from the Committee on Human Research, Publication and
289 Ethics at the Kwame University of Science and Technology with reference number CHRPE/
290 AP/293/ 21. Also, copy of the research proposal, a cover letter, instruments and an
291 introductory letter from my department was sent to TTH. A certificate of authorization to
292 conduct the study was secured with reference number TTH/R&D/SR/034.

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