

PATIENT-CENTERED CARE; THE PHYSICIAN'S PERSPECTIVE AND ITS IMPACT ON QUALITY HEALTHCARE DELIVERY

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Abstract: Despite the recent research interest in examining the impact of patient-centered care (PCC) on quality healthcare delivery, various studies fall short in explaining physicians' perceptions of PCC and its effects on their quality healthcare delivery. Hence, this study aims to examine physicians' perception of PCC and its impact on quality healthcare delivery in Ghana. A survey data from 366 physicians in major hospitals in the Eastern and Ashanti regions of Ghana were sampled and further analyzed using hierarchical linear regression analysis. The findings of this study show that, out of the five components of PCC examined, physical comfort and patient preference influence physicians' reliability, responsiveness, empathy, and assurance. Again, information and education significantly influenced physicians' assurance. These results suggest that some aspects of PCC (physical comfort, patient preference, and information and education) influence physicians to deliver quality healthcare. These findings inform health institutions on the need to prioritize patient-centered care as it has been seen to contribute effectively to quality healthcare delivery. Hence, the need to reorient physicians' minds on the concept of PCC and its importance to the health sector.

Keywords: Patient-Centered Care, Quality healthcare delivery, Ghana, Physicians.

1. INTRODUCTION

Quality healthcare service delivery is deemed vital due to the nature of healthcare service delivery. Quality service delivery significantly impacts mortality, morbidity, and life expectancy. It has been realized that to deliver quality healthcare services, patients' concerns must be of priority (Amporfro et al., 2021). Patient-Centered Care (PCC), a concept introduced in 1970 to address this issue, gained much attention after the institute of medicine identified it as a critical dimension and practical approach to quality healthcare delivery (Nkrumah & Abekah-Nkrumah, 2019). According to Wolfe (2001), the institute of medicine defines patient-centered care as "providing care that is respectful of, and responsive to, individual patient preferences, needs and values, and ensuring that patient values guide all clinical decisions." This approach necessitates a true collaboration between healthcare providers and their patients, such that patients' needs and expectations influence healthcare decisions and measurement of outcomes. PCC is expressed in the statement "nothing about me, without

me” (Delbanco et al., 2001). Thus, the concept prioritizes the involvement of patients in treatment decision-making. As per WHO’s “Global Strategy on Integrated People-Centered Health Services”, People need to make an informed decision about their health; hence the requisite resources, opportunities, and skills must be provided (WHO (2015). PCC, a western concept, has been recognized as an approach to achieving the World Health Organization's 90-90-90 goals (WHO, 2016). Research findings from high-income countries show that PCC strengthens the collaboration between patients and their healthcare practitioners, as well as increases patient’s adherence to treatment plans (Roumie et al., 2011; Thompson & McCabe, 2012), increases patient satisfaction (Cox et al., 2022) and improves health outcomes such as quality healthcare delivery. According to Bertakis and Azari (2011), there are three research interests related to PCC: the effects of PCC on the quality of care, the relationship between PCC and patient satisfaction, and the relationship between PCC and employee job satisfaction. For research on PCC and quality of care; the significant role of PCC on quality healthcare has been identified to be improving process indicators and impact indicators such as patient adherence to treatment, better integration of promotive and preventive care, lower costs, patient satisfaction, quality of life, and survival, as cited by (Abboah-Offei et al., 2020). Despite the enormous evidence and the increasing acceptance by global policymakers, there appears to be little empirical evidence on the impacts of PCC on quality healthcare delivery that the hospitals espouse (Modigh et al., 2021). In Ghana, rigorous empirical evidence on PCC and its influence on quality healthcare delivery are scarce. Existing peer-reviewed studies are mainly on the associated factors of the implementation of PCC in Ghana. They are primarily skewed towards specific health problems like maternal health (Afulani et al., 2019) and chronic infectious diseases such as HIV (Abboah-Offei et al., 2020), hypertension (Buawangpong et al., 2020), or infertility (Cox et al., 2022).

Research on the institutional-level impact of PCC on quality healthcare delivery by healthcare institutions in Ghana appears to be missing. Most healthcare institutions in Ghana publicly display phrases on patient-centeredness as part of their mission and value statements (Nkrumah & Abekah-Nkrumah, 2019). Even though this is meant to convey the idea that patient-centeredness is ingrained in Ghanaian hospitals' culture and it is a universally accepted principle and standard for providing healthcare. Only a few health service delivery centers practice it by implementing what is written into action (Curry, 2020). Again, healthcare professionals’ perceptions about PCC and whether these perceptions are determined by context (which appears to affect the relationship between PCC and outcomes) are not well known (Dys et al., 2022). However, an understanding of these perceptions is essential to improve the quality of care, as they are known to predict care quality and healthcare professionals play an integral role in delivering PCC (Grøndahl et al., 2018). This study, therefore seeks to employ a step toward addressing this knowledge gap by contributing to available literature and ‘set the scene’ by engaging in a broad exploration of how PCC influence quality healthcare delivery in Ghanaian hospitals.

2. CONCEPTUAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

2.1 Patient-centered care

Patient-centered care (PCC), a concept that started in the early 1950s, blossomed enormously in the health care research arena in the late 1990s (Catalyst, 2017). It is a responsive approach to healthcare that considers people's preferences and need (Tomaselli et al., 2020). Thus, involving patients in the decision-making on a treatment plan (Kuipers et al., 2019). In this respect, PCC is defined as “understanding the patient as a unique human being” (Balint, 1969). The Institute of Medicine (IOM) recommends improving patient-centered care to achieve quality health care (IOM, 2001). The IOM, therefore, endorsed six dimensions of patient-centered care, which state that care must be: (i) Patients preference, (ii) Physical comfort, (iii) Emotional support, (iv) coordination of care, (v) family and friends (vi) information and education. Building on these dimensions, some scholars conceptualize patient-centered care as respect and dignity for the patient, emotional support for the patient, interpersonal care, and patient-physician information sharing (Atinga et al., 2016). In this study, patient-centered care is conceptualized as one with five dimensions:

1. Patients preference: “Providing care in a respectful atmosphere with dignity and respect”.
2. Physical comfort: “Ensuring health workers provide appropriate pain relief to patients and attend to physical symptoms and needs”.
3. Coordination of care: “Timely transfer of up-to-date patient information to health care professionals, and efficient transition of patients between health care settings”.
4. Emotional support: “Addressing patients’ emotional and spiritual concerns, including anxiety due to uncertainty, fear, financial impact, or effect on family”.
5. Information and education: “Providing clear, accurate, and understandable information about all aspects of care according to the patient’s preference”.

2.2 Quality healthcare delivery

Quality is a critical factor in healthcare service delivery. It is more than a phrase and entails the transition in healthcare service delivery to reflect value (Zaid et al., 2020). Healthcare service quality is defined as ‘the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge (Gupta & Kaplan, 2020). The IOM (2001) defines healthcare quality as “the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge. The SERVQUAL model developed by Parasuraman et al. (1985) has gained prominence in the service quality literature as it has been tested across a wide range of service contexts and found to be generally reliable. The dimensions include Reliability, Assurance, Responsiveness, Empathy, and Tangibility. These items are used to assess quality service from the patient’s perspective. However, in this study, quality healthcare delivery will be assessed from physician’s perspective, therefore quality healthcare delivery is conceptualized as one with four dimensions:

1. Reliability: ‘Ability to perform treatment dependably and accurately.’
2. Responsiveness: ‘Willingness to help patients and provide prompt service.’
3. Assurance: ‘Knowledge and courtesy of physicians and their ability to inspire trust and confidence.’
4. Empathy: ‘Providing individualized attention to patients’

Despite the vast implication of quality healthcare on mortality and morbidity, healthcare facilities struggle to provide quality care. A review of the current literature on the quality of health care services indicated that previous studies concentrated on factors such as health financing (Avila, 2021) and leadership style (Adzobu, 2015). Other studies propose factors such as organizational culture and policies, and their impact on quality service delivery (Kuye & Akinwale, 2020). Research shows that hospital culture influences employees' behaviour (Montgomery et al., 2011). Hence, this study proposed patient-centered care can influence physicians' quality healthcare delivery.

2.3 Relationship between PCC and Quality healthcare delivery

Despite the benefits of PCC in relation to patients' satisfaction levels, concerns have been raised about how this approach affects health care practices (Santana et al., 2019). There is growing recognition that patient-centered care is associated with quality of care. The Institute of Medicine listed patient-centered care as one of the six aims for improvement in quality healthcare delivery. This provides evidence that PCC tends to improve quality healthcare delivery. This shows PCC goes beyond the patient as physicians offer healthcare services.

Moreover, the patient with the healthcare provider/s is seen as a partner in care and co-creators of the healthcare plan. To make this partnership effective, health providers' perceptions of this concept must be ascertained (Wolf et al., 2019). Thus, both parties must understand these elements and integrate them into service delivery (Fatima et al., 2019). However, most research examines these factors from the patient’s perspective to the neglect of health providers. This study, therefore, examined physicians' perspectives on patient-centered care and its impact on their quality healthcare delivery. Thus, physicians' perception of PCC will enhance their quality healthcare delivery. Based on this perspective, the following hypothesis is proposed;

H1: Physicians' perception of patients' preference will influence their quality healthcare delivery

H1a. Physicians' perception of Patients preference will influence their service assurance.

H1b. Physicians' perception of Patients preference will influence their service reliability.

H1c. Physicians' perception of Patients preference will influence their service responsiveness.

H1d. Physicians' perception of Patients preference will influence their empathy.

H2: Physicians' perception of information and education will influence their quality healthcare delivery

H2a. Physicians' perception of information and education will influence their service assurance.

H2b. Physicians' perception of information and education will influence their service reliability.

H2c. Physicians' perception of information and education will influence their service responsiveness.

H2d. Physicians' perception of information and education will influence their empathy.

H3: Physicians' perception of coordination and care will influence their quality healthcare delivery

H3a. Physicians' perception of coordination and care will influence their service assurance.

H3b. Physicians' perception of coordination and care will influence their service reliability.

H3c. Physicians' perception of coordination and care will influence service responsiveness.

H3d. Physicians' perception of coordination and care will influence their empathy.

H4: Physicians' perception of emotional support will influence their quality healthcare delivery

H4a. Physicians' perception of emotional support will influence their service assurance.

H4b. Physicians' perception of emotional support will influence their service reliability.

H4c. Physicians' perception of emotional support will influence their service responsiveness.

H4d. Physicians' perception of emotional support will influence their empathy.

H5: Physicians' perception of physical comfort will influence their quality healthcare delivery

H5a. Physicians' perception of physical comfort will influence their service assurance.

H5b. Physicians' perception of physical comfort will influence their service reliability.

H5c. Physicians' perception of physical comfort will influence their service responsiveness.

H5d. Physicians' perception of physical comfort will influence their empathy.

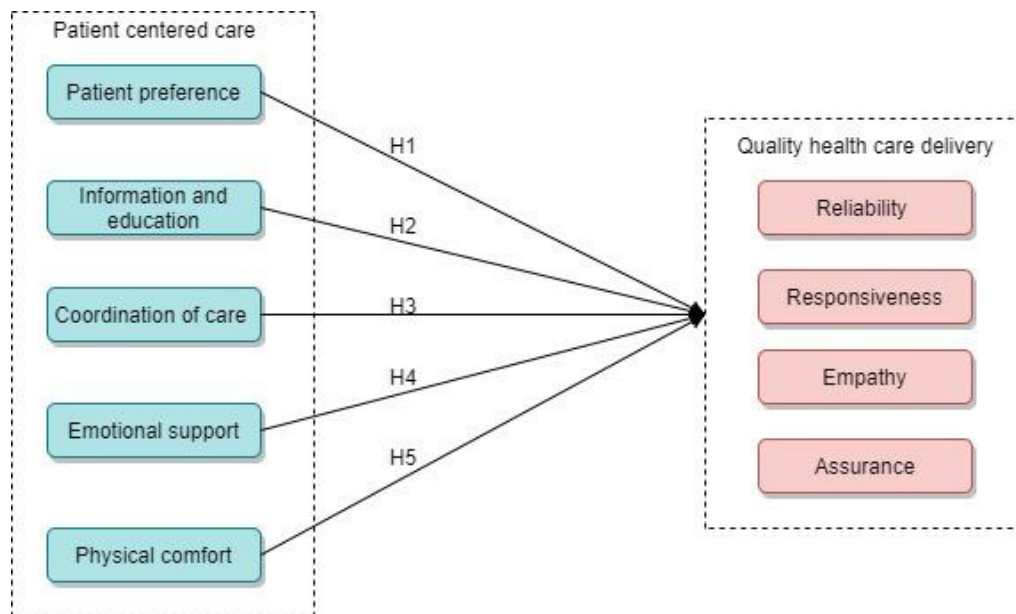


Fig. 1 Conceptual framework

3. METHODOLOGY

3.1 Participants and sampling procedure

The study was conducted in Ghana's health sector, specifically in major hospitals in the Eastern and Ashanti regions of Ghana. The specific choice of the regions was because these regions have large hospitals dominated with many physicians. Through stratified and simple random sampling procedures, 366 physicians were selected. The inclusion criteria consisted of all physicians working in the selected hospitals with over two years' experience. The questionnaire was scored on a five-point Likert scale as Strongly Agree (5), Agree (4), Not sure (3), Disagree (2), and Strongly Disagree (1). The study addressed all ethical considerations, including but not limited to informed consent, anonymity, and confidentiality. Quantitative data was used for the data collection to better understand physicians' perceptions of PCC and its influence on their quality healthcare delivery. Before distributing the questionnaire, the researchers explained the purpose of the survey in detail to the respondents.

3.2 Measurement scale

The dimensions of patient-centered care in this study include: patient preference, physical comfort, emotional support, care coordination, and information and education. Questions measuring these variables were developed from the literature. The dimensions of quality healthcare delivery in this study include empathy, reliability, responsiveness, and assurance. Questions measuring these variables were developed by Parasuraman et al. (1985).

Table 1. Examples of questions asked under each dimension

Dimension	Sample questions
Patient Preference	Patients' preferences must be taken into consideration.
Coordination of care	Patients know who is coordinating their care
Emotional support	Healthcare professionals must pay attention to patients' anxiety about their situations.
Information and education	Patients should be well informed about all aspects of their care.
Physical comfort	Patients must have privacy during treatment
Reliability	The processes in which health workers work must be clear and concise
Assurance	Health workers must be cordial and approachable
Responsiveness	Health workers must attend to patient's problems in good time
Empathy	Health workers must ensure patients are put first on their priority list

3.3 Control variables

Ojekalu et al. (2019) found that gender and education of the health workers significantly influence the perception of service quality. This study therefore controlled for age, gender, marital status, and work experience.

3.4 Common method bias

The questionnaires were distributed and retrieved in two phases to reduce common method bias. First, PCC dimensions questions were distributed to over 1000 physicians in the selected hospitals. Out of 1000, 800 were recovered. Two months later, the quality healthcare delivery questions were sent to the 800 physicians who were available then. Out of the 800 questions sent, 500 were retrieved. After sorting out the questionnaires, 366 were considered valid for the data analysis. Furthermore, physicians were asked to rank the items in order of priority (1-5), where 5= more important and 1= less important.

3.5 Data analysis

To ensure that the scales were appropriate for the selected sample, a pilot study was conducted on a sample size of 50. The results of reliability (Cronbach alpha > 0.86) and exploratory factor analysis (factor loadings > 0.90) were found to be adequate, and all the scales were used for final data collection, as in existing studies.

To analyze the data quantitatively, confirmatory factor analysis (CFA) was used to assess the variables' validity, reliability, and unidimensionality using AMOS version 23. Next, the model fit was examined using AMOS version 23. Finally, the path analysis was examined for significance using hierarchical linear regression analysis in SPSS version 26.

4. RESULTS

4.1 Demographics of respondents

Out of the 366 responses, 163 (28%) were males and 419 (72%) were females. The majority of the respondents were between the ages of 18 and 50 years (94.8%), with only a few (5.1%), being over 50 years, indicating that, most frontline HCW's belong to the youthful population. In the case of marital status, 448 (77%) were married, 134 (23%) were not married. With regards to profession type 150 (25%) were nurses, 119 (20%) doctors, 149 (25%) were technicians (including laboratory, anesthesiologist, orderlies, etc), whereas 164 (28%) were physician assistants. The majority of the respondents had 1-20 years of experience, and were in the public hospital (60%). The study examined the respondents' characteristics, including their level of experience, gender, marital status, and age. These control variables provided the demographic descriptions of the study sample. In terms of gender, females were slightly more than males. The average age of the respondents is 36.47, while the average years of experience of the respondents is 9.69.

4.2 Measurement model

CFA was used to assessed the validity, and reliability of the variables. From Table 3, all the items loaded significantly on their respective construct. Again, the Cronbach alpha (α) for all the variables in the study were greater than the recommended threshold > 0.70 . Additionally, average variance extracted (AVE) values were greater than > 0.50 , and the composite reliability values were also greater than 0.50 . Thus, internal consistency, discriminant validity, and convergent validity of the scales were satisfactory.

Again, we examined the SRMR, CFI, and RMSEA to assess the model fitness as recommended by Ringle et al. (2020). The results (RMSEA = 0.036, Chi square (X^2) = 976.561 X^2 /df = 1.466, SRMR = 0.04, and CFI = 0.959) demonstrated that the data is a good model fit.

Table 2. Results for factor loadings, Cronbach Alpha, AVE, and Composite Reliability

		Estimate	alpha	AVE	CR
PP	PP1	0.844	0.847	0.675	0.912
	PP2	0.843			
	PP3	0.823			
	PP4	0.819			
	PP5	0.779			
CC	CC1	0.817	0.812	0.661	0.907
	CC2	0.78			
	CC3	0.839			
	CC4	0.837			
	CC5	0.792			
IE	IE1	0.686	0.72	0.543	0.876
	IE2	0.618			
	IE3	0.732			
	IE4	0.704			
	IE5	0.757			
	IE6	0.894			
PC	PC1	0.906	0.72	0.544	0.824
	PC2	0.65			
	PC3	0.67			
	PC4	0.697			
ES	ES1	0.803	0.79	0.661	0.854
	ES2	0.764			
	ES3	0.868			
REL	REL1	0.714	0.764	0.526	0.815
	REL2	0.652			
	REL3	0.813			
	REL4	0.714			
RES	RES1	0.643	0.794	0.524	0.814
	RES2	0.783			
	RES3	0.726			
	RES4	0.737			
ASS	ASS1	0.82	0.887	0.498	0.797
	ASS2	0.694			
	ASS3	0.615			
	ASS4	0.677			
EMP	EMP1	0.904	0.904	0.753	0.924
	EMP2	0.862			
	EMP3	0.808			
	EMP4	0.894			

NB: PP= (Patients Preference), CC (Coordination of care), IE (Information and Education), EMP (Empathy), ASS (Assurance), PC (Physical comfort), RES (Responsiveness), REL (Reliability), ES (Emotional Support).

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$

Further, the unidimensionality which measures the square root values of AVE (bolded values on the diagonal path of Table 3) was greater than inter-construct correlations. This indicated a unique measure.

Table 3. Discriminant Validity of the construct

	PP	CC	IE	EMP	ASS	PC	RES	REL	ES
PP	0.822								
CC	0.579***	0.813							
IE	0.215***	0.258***	0.737						
EMP	0.241***	0.255***	0.156**	0.868					
ASS	0.253***	0.322***	0.251***	0.186**	0.705				
PC	0.194**	0.386***	0.243***	0.235***	0.316***	0.738			
RES	0.239***	0.267***	0.172**	0.118†	0.338***	0.266***	0.724		
REL	0.288***	0.307***	0.188**	0.288***	0.131*	0.351***	0.170**	0.725	
ES	0.564***	0.721***	0.274***	0.237***	0.320***	0.386***	0.206**	0.326***	0.813

NB: PP= (Patients Preference), CC (Coordination of care), IE (Information and Education), EMP (Empathy), ASS (Assurance), PC (Physical comfort), RES (Responsiveness), REL (Reliability), ES (Emotional Support).

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$ (2-tailed)

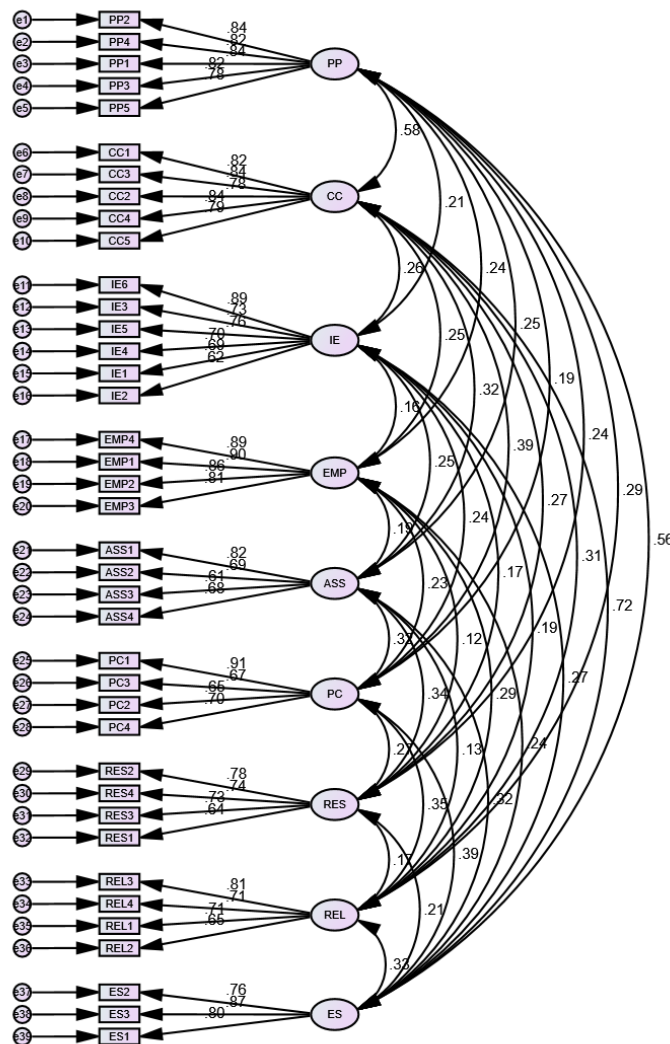


Fig. 2 CFA results

4.3 Hypothesis Testing

4.3.1 Test of PCC on quality healthcare delivery

To carry out the main effect model, thus the effect of PCC on quality healthcare delivery, this paper used a hierarchical linear regression model in SPSS to analyse the hypothesis. The specific operations were as follows: Model (1) tested control variables on the various dependent variables, and Model (2) tested the effect of various independent variables and control variables on the various dependent variables.

The first operation carried out was the test of the five dimensions of PCC on assurance. The results in Model 2 of Table 4 shows that, IE ($\beta = 0.140^*$, $p < 0.05$), and PC ($\beta = 0.149^{**}$, $p < 0.01$), had a significant impact on assurance. However, CC, PP, and ES did not significantly impact assurance.

Table 4. Test of PCC on Assurance

Variable	Model 1	Model 2
	β_1	β_1
(Constant)	4.441*** (5.219)	3.062*** (3.672)
Gender	-.355 (-1.435)	-.478* (-2.046)
Age	.000 (0.012)	.001 (0.086)
Marriage	-.511 (-1.957)	-.605* (-2.461)
Years of experience	-.011 (-0.620)	-.014 (-0.836)
IE		0.140* (2.401)
PC		0.149** (2.771)
CC		0.101 (1.724)
PP		0.050 (0.922)
ES		0.080 (1.243)
R ²	0.013	0.142
R ² -change	0.013	0.128
F	1.234	6.539***

NB: PP= (Patients Preference), CC (Coordination of care), IE (Information and Education), EMP (Empathy), ASS (Assurance), PC (Physical comfort), RES (Responsiveness), REL (Reliability), ES (Emotional Support).

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$ (2-tailed)

The second operation carried out was the test of the five dimensions of PCC on reliability. The results in Model 2 of Table 5 shows that, PC ($\beta = 0.216$, $p < 0.001$), PP ($\beta = 0.131$, $p < 0.05$), had a significant impact on Reliability. However, IE, CC, and ES did not significantly impact reliability.

Table 5. Effect of PCC on Reliability

Variable	Model 1	Model 2
	Beta	p
(Constant)	2.809*** (3.372)	1.338 (1.653)
Gender	.495* (2.047)	.373 (1.645)
Age	-.023 (-1.714)	-.020 (-1.593)
Marriage	.393 (1.536)	.289 (1.209)

Years of experience	0.020 (1.175)	.017 (1.025)
IE		.091 (1.025)
PC		0.216*** (4.137)
CC		.043 (0.758)
PP		0.131** (2.503)
ES		.048 (0.438)
R ²	0.013	0.165
R ² -change	0.024	0.144
F	2.210	7.826***

NB: PP= (Patients Preference), CC (Coordination of care), IE (Information and Education), EMP (Empathy), ASS (Assurance), PC (Physical comfort), RES (Responsiveness), REL (Reliability), ES (Emotional Support).

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$ (2-tailed)

The third operation carried out was the test of the five dimensions of PCC on responsiveness. The results in Model 2 of Table 6 shows that, PC ($\beta = 0.185$, $p < 0.01$), PP ($\beta = 0.124$, $p < 0.05$), had a significant impact on Reliability. However, IE, CC, and ES did not significantly impact reliability.

Table 6. Effect of PCC on Responsiveness

Variable	Model 1	Model 2
	Beta	p
(Constant)	2.474** (2.721)	1.222 (1.346)
Gender	.106 (0.402)	-.006 (-0.025)
Age	.006 (0.450)	.008 (0.551)
Marriage	.166 (0.596)	.087 (0.326)
Years of experience	-.008 (-0.422)	-.011 (-0.577)
IE		.110 (1.724)
PC		0.185** (3.155)
CC		.092 (1.443)
PP		0.124* (2.116)
ES		-.045 (-0.640)
R ²	.002	.002
R ² -change	.098	.096
F	.146	4.297***

NB: PP= (Patients Preference), CC (Coordination of care), IE (Information and Education), EMP (Empathy), ASS (Assurance), PC (Physical comfort), RES (Responsiveness), REL (Reliability), ES (Emotional Support).

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$ (2-tailed)

The final operation tested the five dimensions of PCC on empathy. The results in Model 2 of Table 7 shows that, PC ($\beta = 0.158$, $p < 0.05$), PP ($\beta = 0.128$, $p < 0.05$), had a significant impact on empathy. However, IE, CC, and ES did not significantly impact empathy.

Table 7. Effect of PCC on Empathy

Variable	Model 1	Model 2
	Beta	p
(Constant)	1.762* (1.720)	.303 (0..296)
Gender	.643* (2.159)	.525 (1.830)
Age	-.018 (-1.137)	-.016 (-1.013)
Marriage	.559 (1.779)	.463 (1.531)
Years of experience	.026 (1.238)	.022 (1.085)
IE		.118 (1.636)
PC		0.158* (2.394)
CC		.086 (1.192)
PP		.128* (1.940)
ES		.036 (0.652)
R ²	0.020	.112
R ² -change	0.020	.091
F	1.882	4.967***

NB: PP= (Patients Preference), CC (Coordination of care), IE (Information and Education), EMP (Empathy), ASS (Assurance), PC (Physical comfort), RES (Responsiveness), REL (Reliability), ES (Emotional Support).

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$ (2-tailed)

5. DISCUSSION

This study explored physicians' perception of patient-centered care approach and its impact on quality healthcare delivery. The results from hierarchical linear regression analysis provided evidence for most of the hypothesized relationships. The study results show that, information and education (IE), and physical comfort (PC) significantly influence assurance. Thereby confirming earlier findings by Atinga, Bawole, & Nang-Beifubah, 2016). The result can be attributed to physicians' ability to provide accurate information to patients during treatment process. Therefore, accurate information and education tends to instill trust in patients. Again, healthcare information and education, as well as the physical comfort component of PCC help build physicians' competencies and knowledge and increase their ability to instill trust and confidence in patients. Healthcare leaders must provide the necessary resources to develop physicians' competencies. However, patient preference, emotional support, and coordination of care component of PCC did not influence physicians' assurance.

Moreover, PCC's physical comfort and patient preference components had a significant positive impact on physicians' responsiveness, reliability, assurance, and empathy. However, emotional support, coordination of care, information and education did not influence physicians' responsiveness, reliability, and empathy. The significant positive results confirm previous studies (Abboah-Offei et al., 2020; Berghout et al., 2015). Reasons for this observation may be attributed to the following. First, physicians' concern for patients' health enables them to be responsive. Thus, they will be readily available to provide prompt services and care to patients.

Second, physicians' emphasis on patient preference and physical comfort influences the physician reliability. Thus, in order to build trust among patients, physicians perform standard treatment accurately and avoid any possible errors. Third, physicians' emphasis on physical comfort and patient preference influences their empathy level toward patients. Thus, they will provide individualized attention and care to patients.

The study outcome implies that healthcare leaders prioritize patient preference, physical comfort, and information and education to guide physicians in their work. Physicians' motivation to deliver quality health services may decline when healthcare leaders do not prioritize PCC. Therefore, healthcare leaders can improve quality healthcare delivery by showing

concern for patient-centered care, and provide training and education on PCC to physicians. This will help develop physicians' competencies, and knowledge on PCC.

In summary, the findings prove that PCC improves quality healthcare delivery in Ghana. This current research is the first attempt to investigate physicians' perception of PCC and how it influences the quality of healthcare delivery. Thus, physicians may tend to be more conscious of PCC when they are well informed and supported.

Implication of the study

Theoretically, this study makes a number of contributions to existing literature. Firstly, this study adds to the existing literature by examining physicians' perception of patient-centered care and how it influences quality healthcare delivery. Again, this is the first study to examine PCC from physicians' perspectives.

Furthermore, this study has several practical implications. The influence of information and education on physicians' assurance shows that hospitals should prioritize training and educating health workers on PCC. This will enhance their knowledge of PCC and increase their ability to deliver quality healthcare to patients.

Again, physical comfort and patient preference impact the four dimensions of quality healthcare delivery. This shows that healthcare leaders may enhance the four components of quality healthcare delivery by providing a conducive environment and improving health workers' knowledge of patient preferences through training and education.

Limitation of the study

First, the analysis of this study relied on self-reported information, and as such, the participants either over-reported or under-reported their perceptions regarding personal variables. Future research could use an observational approach to provide further insights into healthcare workers' perceptions of PCC. Furthermore, the study uniquely examined the impact of PCC on quality healthcare delivery. Future studies could explore other organizational variables, such as leadership style and its effect on quality healthcare delivery.

6. CONCLUSION

Despite the effort to improve patient-centered care and quality healthcare delivery in Ghana, physicians' perception has not been greatly explored. Healthcare workers are the providers of health services; hence their perception of patient-centered care and how it impacts the quality of healthcare delivery must be examined. This research gap compelled us to explore the impact of the five components of PCC (physical comfort, patient preference, coordination of care, emotional support, and information and education) on the four dimensions of quality healthcare delivery (responsiveness, reliability, empathy, and assurance). A survey data from 366 physicians in major hospitals in the Eastern and Ashanti regions of Ghana were sampled and further analyzed using hierarchical linear regression analysis. The findings of this study show that, out of the five components of PCC examined, physical comfort and patient preference influence physicians' reliability, responsiveness, empathy. Again, information and education had an impact on assurance. This study contributed to the literature by examining the effect of PCC on quality healthcare from physicians' perspectives. Practically, this study will inform healthcare leaders which aspect of PCC is usually practiced by physicians and how it impacts their quality healthcare delivery.

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