

## Patient satisfaction and treatment outcomes of primary care practice in Ghana

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**Conflict of interest:** None declared

### SUMMARY

**Background:** General evidence suggests a strong association between patient satisfaction and treatment outcomes, but data specific to the general Ghanaian population is lacking.

**Purpose:** To use nationally representative data to examine the effects of primary care practices on patient satisfaction and how satisfaction influences treatment outcomes.

**Methods:** The study utilized WAVE 1 data from a nationally representative survey ( $n = 2,967$ ) of patients who received outpatient medical care in Ghana. The data were collected by the World Health Organization between 2007 and 2010 and were analyzed using Kruskal Wallis test, binomial logistic regression, and correlations. Predictors for patients' experiences were waiting time, respectfulness, clear communication, privacy, decision-making, choice, and cleanliness.

**Results:** Overall, the patients reported positive experiences with all aspects of their primary care services. Thirty-three percent were very satisfied and 57% were satisfied with their last outpatient visit. Adjusted for sociodemographic and other variables, patient satisfaction with primary care was predominantly determined through privacy, decision-making, communication, and respectfulness. The model explained 54.6% (Nagelkerke  $R^2$ ) of the variance in satisfaction and correctly classified 85.2% of cases. Patient satisfaction and treatment outcomes were significantly related,  $r(2959) = .54, p < .001$ .

**Conclusion:** In a nationally representative sample, quality of patient experiences was associated with high satisfaction, which in turn was positively associated with improved treatment outcomes.

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**Keywords:** Patient satisfaction, treatment outcomes, primary care

### INTRODUCTION

For many years, primary care practice has provided patients initial access to the health care system and an outlet for all health care needs.<sup>1</sup> With primary care practice, clinicians work collaboratively with individuals to promote wellbeing and provide medical care to those who need immediate health care. Primary care practice, therefore, is unique insofar as it allows individuals to receive preventive, curative, and chronic disease services. Patient rating of medical care experience at primary care practices is influenced by interactions with providers and resources at the time of obtaining health care. Improved patient satisfaction leads to better patient experiences<sup>2</sup> and correlates with better treatment outcomes.<sup>3-7</sup> For instance, in a study to determine if colorectal cancer patients' satisfaction with service quality was associated with health outcomes (survival rate), Gupta and colleagues<sup>8</sup> found that positive perceptions of the quality of their medical service predicted survival after cancer treatment.

Plewnia and colleagues<sup>9</sup> have also demonstrated that patient-centeredness is associated with satisfaction, which then impacts positive treatment outcomes. 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."<sup>10</sup>

Despite the importance of patient satisfaction in measuring treatment outcomes, there is lack of such studies in developing countries, specifically in Ghana. Patient satisfaction studies that have been conducted in Ghana, so far, are either location-specific,<sup>11-13</sup> facility-specific,<sup>14-17</sup> or specialty-specific;<sup>18</sup> and results of these studies are limited in their generalizability to the entire country. A primary care experience study done in three districts of Ghana covering three ecological zones (coastal, forest and savannah), Penny and colleagues

found 89% of 716 patients were either very satisfied or satisfied with their primary care.<sup>12</sup>

Consultation, friendliness of staff, and waiting time were found as predictors of patient satisfaction. In a similar study, Atinga et al.<sup>10</sup> found cleanliness and waiting time as patient experience factors that predict satisfaction.

Given the gap in the literature on patient satisfaction with primary care in Ghana and inconsistency in patient experience factors that predict satisfaction, the current study used nationally representative data to assess patient satisfaction with primary care and its impact on treatment outcomes.

This study evaluated seven key characteristics commonly associated with patient experience of primary care: waiting time, respectfulness, clear communication, privacy, decision-making, choice, and cleanliness. The goals of this study were to: (1) describe patient experiences with primary care, (2) examine the association between primary care practices and patient satisfaction, (3) examine the impact of patient satisfaction on treatment outcomes.

## METHODS

### Data Description

The current study utilized data from Wave 1 of the World Health Organization's (WHO) Study on Global AGEing and Adult Health (SAGE) survey conducted in Ghana. The SAGE Wave 1 was a six-country project (involving Ghana, China, India, Mexico, the Russia Federation, and South Africa) carried out by WHO between 2007 and 2010. It was a nationally representative sample of adults aged 50 years and older in these countries. For comparative purposes, data were also collected from individuals 18 to 49 years old. Participants were consented prior to the data collection. For this study, data from both age cohorts were included in the analyses.

### Sampling Design, Implementation, and Size

The sampling method used for the SAGE Wave 1 was adopted from 2003 WHO Survey.<sup>19</sup> A stratified, multistage cluster design was used to select respondents who were interviewed face-to-face at their homes. First, the primary sample units (PSU) were stratified by administrative regions (Ashanti, Brong Ahafo, Central, Eastern, Greater Accra, Northern, Upper East, Upper West, Volta, and Western regions) and location (urban/rural), resulting in 20 strata. A more detailed description of the sampling method is explained in a study by Boateng and colleagues.<sup>20</sup> Based on the sampling method, 5,573 individuals were surveyed in Ghana, but only the data from the 2,967 respondents who

reported to have received outpatient medical care during the last 12 months were included in this study's analyses.

### Measures

**Patient experiences measurement.** Respondents were asked to rate their outpatient care experiences on a five-point Likert scale ranging from 1="very good" to 5="very bad." Analysis of these variables produced a reliable internal consistency (Cronbach alpha = 76.6; N = 2119). The question asked, based on your last visit to a health care provider, how would you rate the following:

1. **Waiting time:** The amount of time you waited before being attended to?
2. **Respectfulness:** Your experience of being treated respectfully?
3. **Clear communication:** How clearly health providers explained things to you?
4. **Decision-making:** Your experience of being involved in making decisions for your treatment?
5. **Privacy:** The way the health services ensured that you could talk privately to providers?
6. **Choice:** The ease with which you could see a health care provider you were happy with?
7. **Cleanliness:** The cleanliness in the health facility?

### Overall satisfaction measurement

The outcome variable for the study was overall satisfaction with the outpatient medical visit, which was a single-item measure. The respondents were asked the following question: "Overall, how satisfied were you with the care you received during your last visit?" Respondents rated this question on a five-point Likert response options ranging from 1="very satisfied" to 5="very dissatisfied."

### Treatment outcome measurement

The health outcome was measured by a single-item question in which patients were asked: "What was the outcome of your visit to the health care provider? Did your condition...?" Respondents rated this question on a five-point Likert response options ranging from 1="get much better" to 5="get much worse."

Socio-demographic data of the participants were also analysed.

### Characteristics of respondents

As shown in Table 1, the average age of the respondents was 61.2 years (SD = 14.46), there were more women (51.8%) than men in the sample; 54% were from ethnic background of Akan; 75.7% were Christians; and over 55% were married. Because employment status was of interest, it should be noted that nearly 98% of the respondents were currently working.

### Data analysis

Standard descriptive statistics were to examine the number of respondents who received outpatient medical care, their experiences and satisfaction with the care, and to construct a demographic profile of respondents.

First, a Kruskal Wallis test was conducted to assess association between patient experiences and overall satisfaction with primary care practices. Overall patient satisfaction was dichotomized into satisfied (combination of “very satisfied” and “satisfied”) and dissatisfied (combination of “neither satisfied nor dissatisfied,” “dissatisfied,” and “very dissatisfied”), and a multivariate logistic regression was used to examine the odds of satisfaction with care at various levels of experiences with primary care practices. Correlation coefficients were conducted to determine if patients’ overall satisfaction was associated with treatment outcomes. Fisher’s exact tests were conducted to determine the relation between patient satisfaction, educational status, and gender (male vs female).

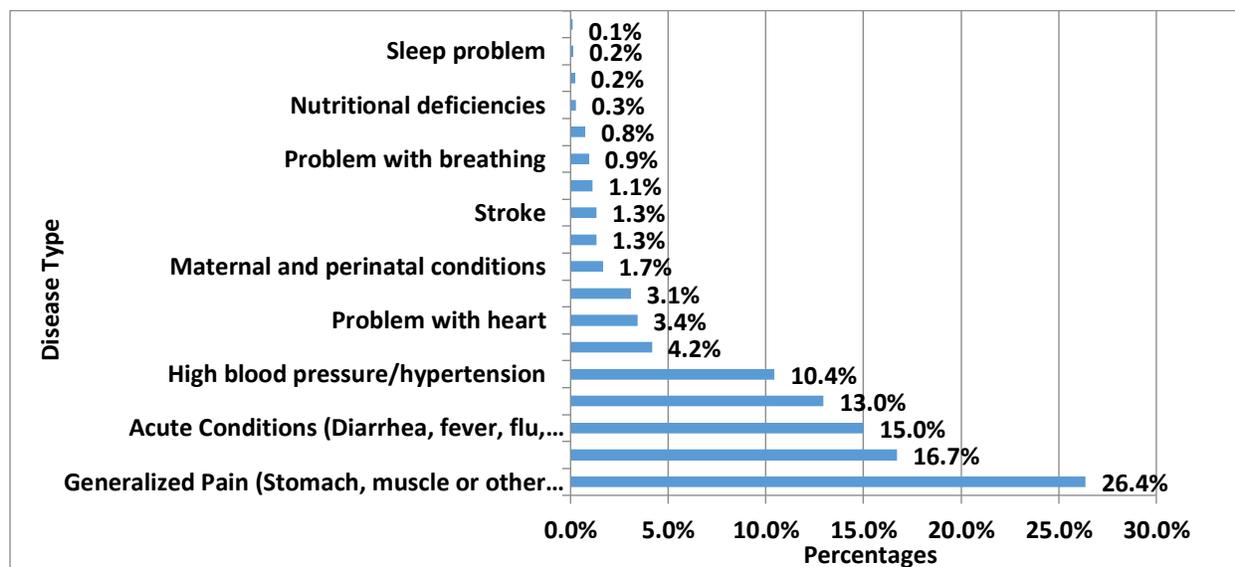
**RESULTS**

Of the 2,967 individual data included in the analyses, 1513 (51%) received care for new conditions, 1098 (37%) for chronic conditions, 297 (10%) for both new and chronic conditions, and 59 (2%) for routine checkup. As shown in Figure 1, 26% of respondents visited outpatient clinics for generalized pains, 17% communicable diseases, 15% acute conditions, 13% joint pains, 13% stroke, 10.4% high blood pressure/hypertension, 4.2% problem with heart, 3.4% problem with heart, 3.1% maternal and perinatal conditions, 1.7% stroke, 1.3% stroke, 1.1% stroke, 0.9% problem with breathing, 0.8% problem with breathing, 0.3% nutritional deficiencies, 0.2% nutritional deficiencies, 0.2% nutritional deficiencies, and 0.1% sleep problem.

tests were conducted to determine the relation between patient satisfaction, educational status, and gender (male vs female). There were no statistically significant relationships between the variables.

Overall, the patients reported positive experiences with all aspects of their primary care services ( $M = 2.30, SD = .94$ ; Table 2). Kruskal Wallis test showed statistically significant differences among the patient experience factors on the overall satisfaction with primary care (Table 3).

Additionally, a logistic regression was performed to establish the effect of waiting time, respectfulness, clear communication, privacy, decision-making, choice, and cleanliness on overall satisfaction with primary care in Ghana. As shown in Table 4, the logic regression model was statistically significant,  $\chi^2(8) = 16.906, p = .031$ . The model explained 54.6% (Nagelkerke R2) of the variance in patient satisfaction and correctly classified 85.2% of cases. Patients who reported that their privacy was protected during their outpatient visit were 1.34 times more likely to be satisfied with their overall care. Involvement in medical decision-making, clear communication, and respectfulness were also associated with increased likelihood of overall satisfaction. Patients’ overall satisfaction with outpatient care and treatment outcomes were significantly related,  $r(2959) = .54, p < .00$ .



**Figure 1** Respondents’ reasons for seeking outpatient care services  
 Note:  $N = 2,662$

**Table 1** Socio-demographic profile of study participants<sup>1</sup>

Demographic of Participants	Measure	Demographic of Participants	Measure
<b>Gender</b>		<b>Marital Status</b>	
Male	1430 (48.2%)	Never married	86 (2.9 %)
Female	1537 (51.8%)	Cohabitation	30 (1.0 %)
<b>Age</b>		Married	1645 (55.4 %)
Mean (SD)	61.22 (14.46)	Separated/divorced	386 (13.0 %)
Range	18-114 years	Widowed	808 (27.2 %)
<b>Age Category*</b>		Other	12 (.4%)
18-24 years	30 (1.0 %)	<b>Locality</b>	
25-34 years	108 (3.6 %)	Urban	1306 (44.0%)
35-44 years	190 (6.4 %)	Rural	1661 (56.0%)
45-54 years	580 (19.6 %)	<b>Ethnic background*</b>	
55-64 years	2799 (6.9 %)	Akan	1577 (54%)
65+	1258 (42.4 %)	Ewe	199 (6.8 %)
<b>Education*</b>		Ga-Adangbe	311 (10.7%)
Less than primary	337 (21.9%)	Gruma	162 (5.5%)
Completed secondary	370 (24.0%)	Grusi	26 (.9%)
HS Diplomat	530 (34.4%)	Guan	33 (1.1%)
College degree	106 (6.9%)	Mande-Busanga	43 (1.5%)
Post-graduate	7 (.5%)	Mole-Dagboni	63 (2.2%)
<b>Religion</b>		Other	505 (17.3%)
Christianity	2246 (75.7%)	Don't know	48 (1.6%)
Islam	408 (13.8%)	<b>Employment</b>	
Primal indigenous	165 (5.6%)	Worked	2923 (98.5%)
None	122 (4.1%)	Never worked	42 (1.4%)
Other	26 (.9%)		

<sup>1</sup>N = 2967  
\*Missing data

**Table 2** Descriptive statistics and Cronbach alpha of patients' experiences with primary care practice<sup>a,b</sup>

Patient Experiences Measurement	Mean	SD	$\alpha$
<b>Wait Time:</b> the amount of time you waited before being attended to?	2.29	0.94	0.78
<b>Autonomy:</b> your experience of being involved in making decisions for your treatment?	2.24	0.89	0.70
<b>Choice:</b> the ease with which you could see a provider you were happy with?	2.23	0.83	0.73
<b>Interpersonal Communication:</b> how clearly providers explained things to you?	2.11	0.81	0.70
<b>Privacy:</b> the way that you could talk privately to providers?	1.96	0.73	0.72
<b>Respectfulness:</b> your experience of being treated respectfully?	1.90	0.70	0.71
<b>Cleanliness:</b> the cleanliness in the health facility?	1.79	0.65	0.77
<b>Overall</b>	2.30	0.94	0.76

<sup>a</sup>N = 2119. <sup>b</sup> Cases with missing value were excluded from the analysis.  
Scores ranged from 1 to 5. Lower scores (closer to 1) indicate very good experiences and higher scores (closer to 5) indicate bad experiences with primary health care services.

**Table 3** Respondents' satisfaction with primary care practices as measured by their experiences

Experiences Measurement	N	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	$\chi^2$	df	p	$\eta^2$
Waiting time	2927	33.5%	57.1%	6.7%	2.4%	0.2%	104.40	4	0.0001	0.04
Cleanliness	2921	33.6%	57.1%	6.7%	2.4%	0.2%	100.17	4	0.0001	0.03
Decision-making	2152	35.8%	54.9%	6.6%	2.5%	0.1%	94.70	4	0.0001	0.04
Respectfulness	2158	35.7%	55.0%	6.7%	2.5%	0.1%	81.23	4	0.0001	0.04
Privacy	2158	35.7%	55.0%	6.7%	2.5%	0.1%	78.52	4	0.0001	0.04
Clear communication	2155	35.8%	54.9%	6.7%	2.5%	0.1%	72.09	4	0.0001	0.03
Choice	2159	35.7%	55.0%	6.7%	2.5%	0.1%	38.83	4	0.0001	0.02

**Table 4** Logistic regression analysis of patients' experiences predicting overall satisfaction with primary care practice in Ghana, controlling for background variables

Patients' Experiences	$\beta$	S.E.	Wald Statistic	OR	95% CI	
Privacy	0.294	0.101	8.519	1.34*	[1.10,	1.63]
Decision-making	0.289	0.103	7.912	1.34*	[1.09,	1.63]
Interpersonal communication	0.287	0.109	6.898	1.33*	[1.08,	1.65]
Respectfulness	0.212	0.106	3.991	1.24**	[1.00,	1.52]
Choice	0.012	0.091	0.017	1.01	[0.85,	1.21]
Cleanliness	-0.028	0.100	0.079	0.97	[0.80,	1.18]
Waiting time	-0.063	0.073	0.739	0.94	[0.81,	1.08]
Constant	-3.947	0.294	180.539	0.02		
$\chi^2$	16.906 <sup>§</sup>					
df	8					
% of overall satisfaction	85.2					

Note: Controlled for sociodemographic variables, self-reported health, chronic condition, disease type, and facility type, insurance type.

Overall satisfaction was dichotomized to satisfied (combination of "very satisfied" and "satisfied") and dissatisfied (combination of "neither satisfied nor dissatisfied," "dissatisfied" and "very dissatisfied").

Patients' experiences with primary care practice was scored from 1 (for being very good) to 5 (for being very bad), which was the referenced category.

<sup>§</sup>N = 2119

<sup>b</sup>Cases with missing values on any variable were excluded from the analysis

\*p < .05, \*\*p < .01, <sup>§</sup>p = .031

## DISCUSSION

The importance of patient satisfaction in measuring quality of care is widely accepted in the medical community. Many healthcare organizations are using patient ratings of experiences and satisfaction with care to measure health outcomes, and patient care satisfaction and outcomes have become valid indicators of quality of care.<sup>21</sup> The degree of patient satisfaction with medical care has largely been determined by their experiences and perceptions of care. The study results show the importance of patient satisfaction, which is driven by personal experiences and perception of medical care.<sup>22,23</sup> These findings also suggest that patient-provider relationships are better, stronger, and have a more positive impact when based on interpersonal communication and trust.<sup>24</sup> The aforementioned findings are similar to Peparah's, who reported that more empathetic interaction was the key factor associated with patient satisfaction,<sup>15</sup> and are consistent with factors found to contribute to patient satisfaction in a 2004 Harris Poll.<sup>25</sup>

In particular, autonomy of care – defined as patients' ability to participate in their medical decision-making process – was found to have the strongest association with satisfaction. Patients who reported that their provider listened carefully to their health concerns and included them in the treatment decision making process were more likely to be satisfied with their medical care. Patients are empowered when they actively participate in their health care decision making process, and active patient care participation has been shown to predict

patient satisfaction, improve health outcomes, and reduce cost.<sup>26</sup>

In the 2004 Harris poll, autonomy/decision-making was ranked second on the list of key factors that contributed to patient satisfaction.<sup>25</sup>

The aforementioned findings show patients appreciate patient-centered care. At the core of patient-centeredness is patient satisfaction. To ensure patient-centeredness in primary care in Ghana, providers can focus on being respectful and responsive to patient needs, preferences, and values, as well as providing medical care that centers on the patient.<sup>27</sup> Patient-centeredness is associated with improved satisfaction, greater quality of care, and better treatment outcomes.<sup>28-33</sup>

The current study shows that when patients are treated with dignity and respect; they are more likely to be satisfied with their overall care. Ghanaians' perception of respect or being valued is multi-faceted, including how health care providers and staff attend to patient needs, how providers display overt and covert body language, and provider manner of communication with patients. Patient-provider interaction built on respect while meeting patient and family health care needs is empowering, and can play an essential role in determining overall satisfaction with primary care.<sup>34,35</sup>

Further reinforcing the importance of patient satisfaction was the finding that patient satisfaction with primary care experiences was associated with treatment outcomes. This finding supported the Institute of Medicine's report

suggesting a strong relationship between patients' satisfaction and treatment outcomes.<sup>27</sup>

Thus, these findings suggest that patient satisfaction and treatment outcomes are linked, demonstrating that overall patient satisfaction correlates with treatment outcomes.<sup>8,10</sup>

The most striking finding of the current study was that choice, cleanliness, and waiting time were associated with overall patient satisfaction. But those factors did not predict overall satisfaction after controlling for sociodemographic variables, self-reported health, chronic conditions, disease type, facility type, and insurance status and type. This finding was inconsistent with similar studies done in the northern part of Ghana where cleanliness, waiting time,<sup>11</sup> friendliness of staff, and waiting time<sup>12</sup> were found to predict patient satisfaction. Health care professionals in the three northern regions (Northern, Upper West and Upper East Regions) are relatively unmatched to the number of residents who need medical care.<sup>36</sup>

Given that both studies<sup>11,12</sup> were location-specific, the findings might have been influenced by factors in those areas and should not be generalized to the entire country. Factors such as manual health records could well prolong the amount of time patients have to wait to see care providers. Additionally, other factors such as sociodemographic variables, self-reported health, chronic conditions, disease type, facility type, and insurance status and type could have influenced the findings of those studies.<sup>11,12</sup> The current study controlled for the aforementioned factors.

There are limitations of this study. First, the face-to-face data collection process might have affected the patients' responses to the questions. People generally tend to respond positively to questions when the interviewer is present, and biased responses might have affected the results of the study.<sup>37,38</sup> Second, Ghanaians generally will not speak up because it is considered disrespectful, and responses might not have been the true reflection of the experiences with their care. This might have limited the study findings. Third, the study data were collected in the various languages across the country, and translated back in English.

The translation might have affected the respondent responses, and this might have limited the study findings. Also, the study might have been limited by recall bias. During the data collection process, respondents were asked about their experiences with primary care within the past year, therefore potentially being affected by time-length decay. The findings of the current study were

based on 2010 WHO's SAGE-Ghana survey, limiting comparison of changes that have occurred over time.

Future studies should compare more recent SAGE data with that of 2010 to determine the trend of patient experiences with primary care in Ghana.

## CONCLUSION AND IMPLICATIONS

The findings of this study are a clear indication that there is a connection between patient-provider interaction and patient satisfaction, which correlates strongly with treatment outcomes. Patient satisfaction was found to be of critical importance in primary care practice in Ghana. Patient satisfaction is not only at the core of patient-centered care; it also leads to better experiences and has been shown to generally improve treatment outcomes among patients. Findings from the current study are again unique in comparison to the findings of other studies done in Ghana, and have shown that primary care patients want privacy, autonomy, clear communication, and empathy from providers. Treating patients respectfully, including them in decision-making process, providing clear and correct information, and protecting their privacy all contribute to satisfaction with primary care practice. The relationship between patients' rating of primary care and satisfaction has previously been location-specific, facility-specific, or specialty-specific; and are now documented the first time in Ghana using nationally representative data.

The study has contributed meaningful information regarding patient satisfaction and treatment outcome to the field of quality in primary care. Given that patient satisfaction is achieved through patient-centeredness, stakeholders like the Ghana Ministry of Health, providers, staff, patients, and families should work together to achieve a more person-centered medical process.

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