QUALITY ATTRIBUTES OF PRIMARY HEALTH CARE SERVICES

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Abstract: Quality in primary health care is gaining a predominant role. Both public and private providers of primary health care services increasingly focus on quality issues, which allows them to gain a competitive advantage. In the article, fifty attributes determining the quality of services identified in literature are considered and evaluated in the context of primary health care services. Both technical attributes relating to the medical process itself and functional attributes resulting from patient experience as a client are studied. An analysis aiming to rank the importance of attributes was made on the basis of surveys carried out among 98 primary health care PHC managers. The research allowed for the identification of the most and the least important primary health care service attributes determining quality from the perspective of PHC managers. Functional attributes relating to patients` experience of care are being noticed as important and desired by patients. The findings resulting from this study can be practically applied at primary health care entities in order to maximise the satisfaction of patients through proper adjustment of business models.

Keywords: services quality, quality attributes, heath care quality, primary health care quality.

1. Introduction

The reform of health care services in Poland in 1997 initiated the process of transforming health care facilities into legal entities (Wyszkowska, 2017). Currently, over twenty years after this reform, the market of entities providing health care services is dichotomously divided into public and private sectors. The type of services offered in both sectors is the same, and the same doctors work in public and private health care entities. There is a shortage of general practitioners on the health services market; therefore, patients still face numerous difficulties in accessing health care services (Kujawska, 2017). Among attributes differentiating private and public health care services, one can distinguish the quality, which is manifested, inter alia, by waiting time for an appointment. In private health care, the waiting time for an appointment is shorter (Hnatyszyn-Dzikowska, 2017), which is associated with a better perception of the quality of private health care services from the patient's point of view.

The construct of quality in health care services focuses on the quality perceived by patients and is widely analysed, as defining quality parameters can be beneficial to meet patients' expectations (Wolniak, 2010). Moreover, patient satisfaction is becoming an important factor revealing perceived health care service quality (Plentara et al., 2015). Health care service quality is pursued by medical entities in order to achieve prestige, a desired image and win market shares, which is reflected in patient rotation. It is crucial then to measure patients' perception of quality (Barska, 2010). There is insufficient literature on research works analysing the quality of PHC services from the stakeholders' perspective, including sector experts. The purpose of this study was to identify and comprehensively assess the quality attributes of primary health care services solely from the perspective of people with practical managerial experience. The obtained results supplement the current state of knowledge from the point of view of practitioners. The presented results are based on a critical literature review and surveys conducted among managers of entities providing PHC services and possessing significant practical experience in the health care area management.

2. Characteristics and measurement of the quality of health care services

Ground-breaking research on quality of services began with the identification of attributes defining them (Lotko et al., 2017). In the most commonly used Parasuraman's service quality measurement model (Parasuraman, Zeithaml and Berry, 1985), services quality was defined as the difference between the service quality expected and that perceived. In subsequent years, the complexity of the concept of quality was distinguished, determining its two categories: technical and functional (Gronroos, 1984; Parasuraman et al., 1985; Lewis and Mitchel, 1990). This division was repeatedly used both in the research and practice (Asubonteng, McClearly and Swan, 1996; Babakus and Mangold, 1992; Parasuraman et al., 1985).

An analogous approach was applied to health care quality studies, dividing them into two sections: technical (objective) and functional (subjective), as shown in Figure 1. Technical quality is related to medical process of diagnostic and treatment procedures: the qualifications of medical personnel, the technologies applied and medical equipment. Functional quality is related to the patients` experience connected with medical service. In the process of medical services, functional quality is more often perceived, formulated and felt by patients (Shabbir, Malik and Janjua, 2017). Figure 1 presents the process of forming technical and functional quality in the medical service process.
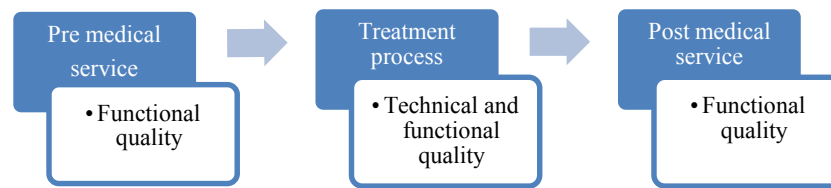
Figure 1. Patient perception of medical service quality. Source: own elaboration based on Stoma, 2012.

Patients' growing awareness and expectations determine the need for continuous improvement of services provided by health care entities (Małecka and Marcinkowski, 2007). According to Rashid and Kamaruzaman, patients do not have specialist knowledge allowing them to substantively evaluate the treatment; hence, patients' opinions are subjective and based on non-medical elements (Rashid and Kamaruzaman, 2009). Difficulties in assessing the service itself make patients more and more eager to pay attention to attributes directly related to the broadly understood comfort of provided service, such as: cleanliness, availability of doctors and services, offer competitiveness, staff friendliness, communication and privacy. Patients' experience transfers to satisfaction with the medical service.

In the case of PHC services, which covers the patient with a wide range of services, it is important to adopt an equally wide measurement image. Based on a review of literature, fifty quality attributes have been identified that broadly illustrate the processes of providing health care service. These are presented in Table 1.

Table 1.
Services quality attributes

No.	Year	Attributes	Authors
1	2004	Acceptance	Chui, Lin
2	1984	Adaptation	Kano, Seraku, Takahashi, Tsuji
3	1982	Availability	Grönroos
4	2008	Certainty	Bugdol
5	1985	Communication with the client	Parasuraman, Zeithaml, Berry
6	1982	Company prestige	Lethinen, Lethinen
7	2004	Compatibility	Chui, Lin
8	1994	Competences	Berkley, Gupta
9	1984	Competitiveness	Kano, Seraku, Takahashi, Tsuji
10	1984	Comprehensiveness	Kano, Seraku, Takahashi, Tsuji
11	1988	Confidentiality	Haywod-Farmer
12	1988	Control of the service process progress	Haywod-Farmer
13	1995	Convenience	Johnson
14	1985	Courtesy	Parasuraman, Zeithaml, Berry
15	1985	Credibility	Parasuraman, Zeithaml, Berry
16	1988	Currentness	Haywod-Farmer
17	1985	Customer care	Parasuraman, Zeithaml, Berry
18	1984	Diversity	Kano, Seraku, Takahashi, Tsuji
19	1982	Empathy	Grönroos
20	1982	Experience	Grönroos
21	1990	Faultlessness	Armistead, Clark

Cont. table 1.

22	1988	Flexibility	Haywod-Farmer
23	2004	Friendliness	Chui, Lin
24	1995	Functionality	Johnson
25	1985	High staff culture	Parasuraman, Zeithaml, Berry
26	1996	Honesty	Dabholkar
27	1985	Individual client approach	Parasuraman, Zeithaml, Berry
28	1988	Innovation	Haywod-Farmer
29	1988	Kindness	Haywod-Farmer
30	1985	Modern equipment	Parasuraman, Zeithaml, Berry
31	1994	Organisational culture	Rust, Oliver
32	2001	Politeness	Brady, Cronin
33	1985	Promptness	Parasuraman, Zeithaml, Berry
34	2000	Punctuality	Rogoziński
35	1985	Reality	Parasuraman, Zeithaml, Berry
36	1982	Reliability	Grönroos
37	1995	Responding to changes	Johnson
38	1982	Room décor	Grönroos
39	1985	Safety	Parasuraman, Zeithaml, Berry
40	1982	Satisfaction	Grönroos
41	1985	Speed of execution	Parasuraman, Zeithaml, Berry
42	1982	Staff appearance	Grönroos
43	1985	Staff qualifications	Parasuraman, Zeithaml, Berry
44	2000	Standardisation	Rogoziński
45	1996	Support	Dabholkar
46	1988	Tactfulness	Haywod-Farmer
47	1985	Attractiveness of the materials used	Parasuraman, Zeithaml, Berry
48	1996	Company's ideology	Dabholkar
49	1985	Trust	Parasuraman, Zeithaml, Berry
50	1985	Understanding the client	Parasuraman, Zeithaml, Berry

Source: own study based on Rogoziński, 2009; Huang, 2017; Hawrysz, 2014; Stoma, 2012; Bielawa, 2011; Batko, 2009; Ojasalo, 2010; Yarimoglu, 2014.

3. Research methodology

In the article, a sequential procedure was applied, consisting of the following five stages:

a. Fifty attributes used to evaluate quality of services were identified based on a literature review.

b. A questionnaire was prepared based on the fifty attributes identified. The significance of each attribute was rated on the Likert scale, ranging from 1 to 7. This is a bipolar interval scale measuring attitudes and beliefs. The Likert scale is applied as one of the most fundamental psychometric tools in social science research (Joshi, Kale, Chandel, Pal, 2015).

3. A research sample was selected consisting of entities providing services in the PHC sector. The selected entities were both small and large, as well as entities providing only PHC services along with those providing a full range of medical services, both private and public entities.

4. Surveys on managerial level practitioners working in primary health care entities were carried out in the period from January to March 2018, and 98 correctly filled questionnaires were obtained.

5. An analysis of the received surveys was carried out, and the resulting conclusions were formulated.

4. Discussion on the received surveys

Attributes influencing the quality of both technical and functional services have been highly rated by those experts surveyed managing PHC. This confirms that the service quality attributes concerning a wide range of services also apply to a narrower scope, i.e. to primary health care. The statistical description of the examined quality attributes of PHC services is presented in Table 2. They have been sorted from the highest average rating to the lowest. Among five attributes with the highest average rating value, as many as four of them concern functional quality. Functional quality was rated slightly higher than technical quality by PHC representatives, which indicates that, in their opinion, patients care about the high level of service and not only on receiving medical advice. These results are consistent with the results presented by Małecka and Marcinkowski (2007), who point out the growing role of patient satisfaction resulting from the level of service and experience in the treatment process. All attributes were very highly rated on average (more than 5 points out of 7). Their median values are also high, and for 41 attributes, they are 6 or 7, while for the remaining 9 attributes, they equal 5. Each tested attribute received the maximum rating of 7 from at least one respondent. The relevance of some quality attributes in the opinions of health care practitioners was significantly divided, with 11 variables received a score of 0 from at least one respondent. Despite this, differences in views of PHC representatives, were not statistically significant, as the low values of standard deviation show.

Table 2.
Descriptive statistics of the quality attributes of PHC services.

Attributes	Avg.	Med.	Min.	Max.	Std dev.	Variable factor	Skew-ness	Kurtosis	First quartile	Third quartile
Communication	6.68	7	5	7	0.56	0.08	-1.52	1.35	6	7
Safety	6.62	7	4	7	0.71	0.11	-1.9	3.11	6	7
Customer care	6.6	7	5	7	0.61	0.09	-1.23	0.43	6	7
Experience	6.57	7	4	7	0.74	0.11	-1.7	2.11	6	7
Staff qualifications	6.57	7	4	7	0.74	0.11	-1.7	2.11	6	7
Understanding the client	6.55	7	5	7	0.69	0.1	-1.22	0.15	6	7
Availability	6.53	7	4	7	0.75	0.11	-1.53	1.66	6	7
Competences	6.53	7	4	7	0.75	0.11	-1.53	1.66	6	7
Credibility	6.53	7	5	7	0.69	0.11	-1.13	-0.01	6	7

Cont. table 2.

Trust	6.49	7	4	7	0.8	0.12	-1.61	2.01	6	7
Individual client approach	6.47	7	5	7	0.65	0.1	-0.82	-0.4	6	7
Satisfaction	6.45	7	5	7	0.75	0.12	-0.93	-0.58	6	7
Kindness	6.45	7	4	7	0.85	0.13	-1.63	1.97	6	7
Confidentiality	6.43	7	3	7	1.02	0.16	-1.93	3.33	6	7
Courtesy	6.32	7	3	7	1.04	0.17	-1.48	1.28	6	7
Honesty	6.28	7	4	7	0.9	0.14	-1.11	0.38	6	7
High culture of staff	6.28	7	4	7	0.97	0.15	-1.01	-0.27	6	7
Reliability	6.23	6	5	7	0.73	0.12	-0.38	-1.02	6	7
Tactfulness	6.21	7	4	7	1.02	0.16	-1.06	-0.12	6	7
Faultlessness	6.19	7	4	7	1.06	0.17	-1.06	-0.19	6	7
Certainty	6.15	7	3	7	1.12	0.18	-1.14	0.51	5	7
Punctuality	6.11	6	0	7	1.18	0.19	-2.99	13.02	6	7
Support	6.06	6	2	7	1.17	0.19	-1.45	2.05	5.5	7
Empathy	6.04	6	4	7	0.93	0.15	-0.57	-0.66	5	7
Organisational culture	6.02	6	4	7	0.92	0.15	-0.55	-0.63	5	7
Promptness	6.02	6	0	7	1.22	0.2	-2.63	10.43	5.5	7
Responding to changes	5.96	6	3	7	1.02	0.17	-0.66	-0.17	5	7
Compatibility	5.85	6	2	7	1.14	0.2	-1.3	1.71	5.5	7
Politeness	5.81	6	0	7	1.53	0.26	-1.97	4.39	5	7
Control of the service process progress	5.81	6	0	7	1.57	0.27	-2.24	5.76	5	7
Comprehensiveness	5.81	6	3	7	1.08	0.19	-0.57	-0.51	5	7
Modern equipment	5.77	6	3	7	1.11	0.19	-0.69	-0.16	5	7
Standardisation	5.77	6	3	7	1.22	0.21	-0.71	-0.41	5	7
Company prestige	5.74	6	0	7	1.47	0.26	-1.43	3.04	5	7
Functionality	5.72	6	0	7	1.64	0.29	-1.95	4.11	5	7
Friendliness	5.72	6	0	7	1.35	0.24	-1.7	4.92	5	7
Innovation	5.64	6	3	7	1.05	0.19	-0.26	-0.66	5	6.5
Flexibility	5.6	6	0	7	1.41	0.25	-1.42	3.38	5	7
Speed of execution	5.6	6	3	7	1.19	0.21	-0.5	-0.56	5	7
Reality	5.57	6	0	7	1.43	0.26	-1.4	3.04	5	7
Staff appearance	5.51	6	3	7	1.04	0.19	-0.44	-0.21	5	6
Convenience	5.51	5	3	7	1.08	0.2	-0.29	-0.45	5	6
Competitiveness	5.32	5	0	7	1.45	0.27	-1.23	2.51	5	6
Acceptance	5.28	5	3	7	1.1	0.21	-0.37	-0.65	4.5	6
Currentness	5.28	5	3	7	0.97	0.18	-0.14	-0.67	5	6
Attractiveness of the materials used	5.26	5	0	7	1.34	0.26	-1.13	3.15	4.5	6
Room décor	5.21	5	3	7	1.14	0.22	-0.07	-0.78	4	6
Diversity	5.19	5	3	7	1.33	0.26	-0.19	-1.15	4	6
Adaptation	5.06	5	3	7	1.05	0.21	-0.13	-0.75	4	6
Company's ideology	5.04	5	1	7	1.43	0.28	-0.44	-0.15	4	6

Source: own study.

All the examined attributes obtained high average and median scores, which means that patients are becoming more and more aware and demanding in terms of service quality. The standard deviation for all attributes is around 1, which proves that the opinions of experts are similar. The lowest values of standard deviation are about 0.6 for the following attributes: communication, customer care, individual client approach and credibility. This means that

managers in primary health care evaluate these attributes similarly. All these attributes are included in functional quality and relate to patients` experience. The largest standard deviation, with a score above 1, was obtained for the following attributes: functionality, control of the process progress, politeness, company prestige and reality. The opinions of managers were the most heterogeneous, though still similar. All attributes have a negative skewness, which means that there are opinions much lower than the average. Compliance in the perception of attributes by primary health care managers can also be seen on the basis of quartiles. The significance of all attributes was assessed as high, what indicate high values of the first quartile. Around 90% of the ratings for particular attributes rank 5 or more in the first quartile. The third quartile also underlines the coherent perspective of managers. For 39 attributes, the third quartile is 7, which means that 25% of the respondents assessed their significance by providing the highest possible value.

Due to the increasing role of functional quality, managers have decided to look for a competitive advantage in this area. Bearing in mind that patients receive strictly specialist advice outside of PHC and, as part of PHC, they receive services at the first contact level, it seems reasonable that functional quality is of significant importance. Similar conclusions were presented by Abuosi (2015), indicating the growing expectations of patients in the health care system and the significant role of non-medical factors in the PHC context.

5. Summary

The transformation and commercialisation process of PHC services has contributed to the need of adapting primary health care entities to the principles of the market economy. The quality of services provided has gained importance, and patient satisfaction has taken on a new meaning. Thus, patient satisfaction with the services provided requires in-depth understanding and analysis.

The study described in the article allowed for the ranking of attributes from the most important to the least important in the opinion of PHC managers. The most important attributes are: communication, safety, customer care, experience, staff qualification, understanding the client and availability. Kurtosis's values are large and positive for them, which means that their assessments are more concentrated than in the normal distribution. The attributes with the lowest valued significance are: company's ideology, adaptation, diversity and room décor. Kurtosis shows negative values for these attributes, which means that the opinions of managers about their significance are more widely distributed than in the normal distribution. These attributes were evaluated differently, which can be seen from the minimum and maximum values assigned to these attributes.

The functional quality attributes were rated slightly higher than the technical attributes. Managers in PHC perceive patients as cautious clients, who pay attention to the functional aspects of quality, which results in the greater experience of patients in this area, as presented in the review of literature. Moreover, the assessment of the technical quality is a challenge for patients, as it demands specific knowledge in the field of health protection. The patient, in the opinion of managers in entities providing PHC services, expects to be treated as a client who is important and who should be looked after, ensuring high service standards.

Health care entities operating within PHC should actively implement the process of continuous improvement and customer orientation. According to managers in PHC entities, the service process reflected in the subjective feelings of the patient is the key area that contributes to greater patient satisfaction, which leads to an increasing competitive advantage.

This paper presents the point of view of health care industry practitioners. It is advisable to continue this research and present the patients' point of view, as well as other relevant stakeholders, e.g. the owners of the primary health care entities.

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