

## RESEARCH ARTICLE

# Client Characteristics and Satisfaction with the Quality of Primary Health Care Centers Services in Babylon Governorate, Iraq

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## ABSTRACT

**Background:** Health care service quality plays a crucial role in patient satisfaction and is also one of the most significant quality improvement steps.

**Objectives:**

1. To assess client's satisfaction towards the efficiency of primary health care centers services in Babylon Governorate.
2. To the assessment of client's satisfaction with the infrastructure of primary health care centers.
3. To find out the association between total satisfaction score and language expression emoji for clients.

**Subjects and Method:** This is a descriptive, cross-sectional study conducted at 23 randomly selected (multistage sampling technique) primary health care centers in Babylon governorate. Data were collected during the period extended (December 2020 to March 2021) using a questionnaire to assess the client's satisfaction with the service and use of the direct method of interview (face to face), which lasts for 20–25 minutes. The descriptive statistical data analysis approach (SPSS-27) includes frequencies, percentages, mean of scores, range (minimum-maximum values) approach that includes Chi-square test.

**Result:** The current study was conducted on 460 clients with age groups ranging from 18–63 years, and the highest percentage (47%) were from the 20–29 years age group with an age group  $32.8 \pm 11.2$ . While highest percentage 30.2% from a level of education clients primary school graduation, but (40.9%) housewife's occupation. With regard to the social situation, the majority of the sample are married and represent 355 (77.2%) of the entire sample. The overall satisfaction to health care services delivered was unsatisfied at percent were 49.6%.

**Conclusions:** According to the present findings, the study concluded that the client's satisfaction score reveals 175 (38.0%) who reviews primary health care centers in Babylon Governorate were satisfied to some extent regarding the efficiency of primary health care centers services and unsatisfied regarding infrastructure.

**Recommendation:** Further studies that can be conducted to involve a national level to assess the health care services and to compare the health care services provided at rural and urban primary health care centers and there was a remarkable concern for the improvement of structural features (such as the state of toilet facilities, drug availability, availability of working fans, and availability of seats in the waiting room).

**Keywords:** Babylon Governorate, Client Satisfaction, Efficiency of Health Services.

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## INTRODUCTION

Quality services gives sustainable competitive advantage –as a critical factor in patient satisfaction.<sup>1</sup> And the health care service quality plays a crucial role in patient satisfaction also as one of the most significant quality improvement steps.<sup>2</sup>

Clients satisfaction was found to be associated with efficiency and duration of care as well as the empathy and communication with the health care providers.<sup>3</sup> Therefore, it is an important aspect of assessing the quality of patient care received at health care facilities globally.<sup>4</sup> Satisfied clients

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are more likely than unsatisfied ones to continue using health care services, maintain their relationships with specific health care providers, and comply with care regimens and advice.<sup>5</sup> A satisfied patient perceives high quality, and the antecedents of loyalty are service quality.<sup>6</sup>

Generally, considered as the extent to which the patients feel that their needs and expectations are being met by the services provided, and the conclusion focused on the importance of waiting time between registration and consultation for the patient as having an impact on the overall patient satisfaction.<sup>7</sup>

**OBJECTIVES OF STUDY**

1. To assess client’s satisfaction towards the efficiency of primary healthcare centers services in Babylon Governorate.
2. Find out the association between client satisfaction score and language expression of emoji.
3. Assessment of client’s satisfaction with the infrastructure of primary health care centers.

**MATERIALS AND METHODS**

*Study design:* This is a Cross-Sectional Study with analytical methods. We carried out in primary health care centers in Babylon governorate.

*Duration of the Study:* The data collection extended from 13<sup>th</sup> December 2020 and ending to 30<sup>th</sup> March 2021.

*Place of Study:* The study was conducted in primary health care centers, which provided primary health care services in Babylon governorate.

*Study Sample:* It included 460 participants (male and female) who attended to PHC Centers in Babylon governorate.

**Data Collection**

By direct face-to-face interview personally with the respondents utilized the health care services provided by the health care service provider with their questions about items of the questionnaire, through use of Arabic detailed questionnaire form, depending on the questionnaire Iraq Ministry of Health, Department of Public Health and developed by the researcher which depends on an extensive review of the relevant literature of previous similar studies and modified after reviewing by supervisors and the expert’s panel. Included details on demographic characteristics of respondents, socio-economic characteristics, Type health care utilization, and satisfaction-related questions towards the primary health care services.

**Statistical Analysis**

Data was tabulated on Microsoft Office Excel 2016 and analyzed by using the available statistical package of SPSS-27 (Statistical Packages for Social Sciences-version 27). Data were presented in simple measures of frequency, percentage, mean, standard deviation, and range (minimum-maximum values). The significance of different percentages (qualitative data) was tested using Pearson Chi-square test with Yate’s correction or Fisher Exact test whenever applicable Statistical significance was considered whenever the p-value was equal or less than (0. 05).

**RESULTS**

**1- Socio-Demographic Characteristic of Participants**

Table 1 reveals that 27.4% of the study sample are within the second age group (20–29) years old. Regarding gender, the majority of the study sample (64.8%) were female, and the remaining is male. Concerning their residence (55.7%) urban

**Table 1:** Distribution of clients sample according to socio-demographic characteristics (N=460).

| Variables                 | Category                         | N = 460           | %                   |
|---------------------------|----------------------------------|-------------------|---------------------|
| Age (Years)               | <20 years                        | 13                | 2.8                 |
|                           | 20–29                            | 218               | 47.4                |
|                           | 30–39                            | 119               | 25.9                |
|                           | 40–49                            | 57                | 12.4                |
|                           | 50–59                            | 39                | 8.5                 |
|                           | ≥ 60 years                       | 14                | 3.0                 |
|                           | Total                            | 460               | 100                 |
|                           |                                  | Mean ± SD (Range) | 32.8 ± 11.1 (18–68) |
| Gender                    | Male                             | 162               | 35.2                |
|                           | Female                           | 298               | 64.8                |
|                           | Total                            | 460               | 100                 |
| Residence                 | Rural                            | 204               | 44.3                |
|                           | Urban                            | 256               | 55.7                |
|                           | Total                            | 460               | 100                 |
| Marital Status            | Single                           | 82                | 17.8                |
|                           | Married                          | 355               | 77.2                |
|                           | Divorced/ Separated              | 16                | 3.5                 |
|                           | Widowed                          | 7                 | 1.5                 |
|                           | Total                            | 460               | 100                 |
| Educational level         | Illiterate                       | 22                | 4.8                 |
|                           | Read & write                     | 31                | 6.7                 |
|                           | Primary                          | 139               | 30.2                |
|                           | Intermediate                     | 70                | 15.2                |
|                           | Secondary                        | 62                | 13.5                |
|                           | College/Institute                | 120               | 26.1                |
|                           | Higher education                 | 16                | 3.5                 |
|                           | Total                            | 460               | 100                 |
| Occupational Status       | Unemployed                       | 37                | 8.0                 |
|                           | Governmental employee            | 123               | 26.7                |
|                           | Self-employed (free job)         | 53                | 11.5                |
|                           | Housewife                        | 188               | 40.9                |
|                           | Retired                          | 9                 | 2.0                 |
|                           | Not working                      | 28                | 6.1                 |
|                           | Student                          | 22                | 4.8                 |
|                           | Total                            | 460               | 100                 |
|                           | Economic Status (Monthly Income) | Insufficient      | 220                 |
| Sufficient to Some Extent |                                  | 120               | 26.1                |
| Sufficient                |                                  | 120               | 26.1                |
| Total                     |                                  | 460               | 100                 |

and education level, the study results indicate that (30.2%) of the study sample are primary school. In addition to the study sample occupation, the results indicate that (40.9%) are a housewife. Concerning socio-economic status, the study indicates that (47.8%) are insufficient monthly income.

**2- Satisfaction with the Efficiency of Primary Health Care Services domain**

**3- Association between overall client’s satisfaction score and emoji expressions:**

Is it time to start using emojis in biomedical literature? Integrating emoji into the scientific literature would be advantageous in several obvious areas, such as modulating the emotional tone of communications. In editorials and letters to editors, they may serve a great purpose by introducing inflection and subtext in a manner not previously possible.<sup>8</sup>

Table 3 regards the association between total satisfaction score and emoji; in this study, findings show a significant association between the client’s satisfaction with health care services and their language of expressions (emoji) at a p-value

of more than 0.05 (p = 0.0001). Where highly percentage (75.6%) were satisfied in total satisfaction score were satisfied in language expression of emoji. Also 62.3% were unsatisfied in total satisfaction score were unsatisfied emoji.

**4- Clients Satisfaction regarded the Infrastructure of PHC centers domain:**

**DISCUSSION**

**1- Socio-demographic Characteristic of Participants**

The study results indicate that the majority of the study sample, 47.4% were within the first age group (20–29) years old, at mean ± SD of their ages was 32.8 ± 11.1(18–68) and More than two-third (64.8%) out a total number of the study sample is female and the remaining is male. The present study is concurrent with a study done by Almutairi in Saudi Arabia, show the majority of the participants, 56% were in the age range (18–30) years old and 57% of study sample were female.<sup>9</sup> In another study of Almoajel and others (2014) who have studied patient’s satisfaction with primary health care in Jubail City,

**Table (2):** Distribution of study sample according to satisfaction with the efficiency of primary healthcare services domain:

| Client Satisfaction with the Efficiency of Primary Health Care Services items |  | Client Response    |      |                          |      |           |      |
|---|--|--------------------|------|--------------------------|------|-----------|------|
|   |  | Unsatisfied        |      | Satisfied to Some extent |      | Satisfied |      |
|   |  | Freq.              | %    | Freq.                    | %    | Freq.     | %    |
| 1   | Satisfied with the quality of health care services provided in the health center.                              | 178                | 38.7 | 132                      | 28.7 | 150       | 32.6 |
| 2   | Feel confident during the treatment in health center   | 169                | 36.7 | 150                      | 32.6 | 141       | 30.7 |
| 3   | During your visit, how were dealing by the doctor?   | 91                 | 19.8 | 94                       | 20.4 | 275       | 59.8 |
| 4   | During your visit, how were dealing by the other staff (health and service staff)?                             | 82                 | 17.8 | 113                      | 24.6 | 265       | 57.6 |
| 5   | Satisfied with the communication, coordination skills between the health staff in the health center            | 114                | 24.8 | 96                       | 20.9 | 250       | 54.3 |
| 6   | Satisfied with the attentive of the medical and health staff in health problem                                 | 202                | 43.9 | 125                      | 27.2 | 133       | 28.9 |
| 7   | Overall, Satisfied with the time that have spent in the health center for receiving the health care you needed | 226                | 49.1 | 116                      | 25.2 | 118       | 25.7 |
| 8   | Satisfied with the costs for the examination and treatment   | 73                 | 15.9 | 43                       | 9.3  | 344       | 74.8 |
| 9   | Satisfied about your confidence with efficiency the medical and health staff in the health center              | 131                | 28.5 | 123                      | 26.7 | 206       | 44.8 |
| 10  | Healthy Staff explains your health problem in an understandable manner   | 169                | 36.7 | 117                      | 25.4 | 174       | 37.8 |
| Clients Satisfaction Score Mean ± S.D (Range)                                 |  | 21.4 ± 5.1 (10-30) |      |                          |      |           |      |

**Table 3:** Association between total client’s satisfaction score and emoji regarding the assessment of health care services

| The language of expressions (Emoji) | Total Satisfaction Score |      |                          |      |           |      | P value      |
|-------------------------------------|--------------------------|------|--------------------------|------|-----------|------|--------------|
|                                     | Unsatisfied              |      | To some extent satisfied |      | Satisfied |      |              |
|                                     | Freq.                    | %    | Freq.                    | %    | Freq.     | %    |              |
| Unsatisfied                         | 142                      | 62.3 | 57                       | 30.5 | 2         | 4.4  | 0.0001*<br>S |
| Satisfied to some extent            | 60                       | 26.3 | 73                       | 39.0 | 9         | 20.0 |              |
| Satisfied                           | 26                       | 11.4 | 57                       | 30.5 | 34        | 75.6 |              |

\*Significant difference between percentages using Pearson Chi-square test (χ<sup>2</sup>-test) at 0.05 level.

**Table 4:** Distribution of study sample according to clients satisfaction regarded the infrastructure of PHCC domain

|  | <i>Infrastructure of PHCC items</i>   | <i>Client Response</i> |          |                                 |          |                  |          |
|--|---|------------------------|----------|---------------------------------|----------|------------------|----------|
|  |   | <i>Unsatisfied</i>     |          | <i>Satisfied to some extent</i> |          | <i>Satisfied</i> |          |
|  |   | <i>Freq.</i>           | <i>%</i> | <i>Freq.</i>                    | <i>%</i> | <i>Freq.</i>     | <i>%</i> |
| 1  | How Would him\her assess the external building of primary health care center                        | 226                    | 49.1     | 106                             | 23.0     | 128              | 27.8     |
| 2  | How Would him\her assess the internal building of primary health care center                        | 205                    | 44.6     | 145                             | 31.5     | 110              | 23.9     |
| 3  | How Would him\her assess the cleanliness of the primary health care center                          | 186                    | 40.4     | 172                             | 37.4     | 102              | 22.2     |
| 4  | Clear signs and directions to indicate where to go in the services area and easy to follow.         | 160                    | 34.8     | 121                             | 26.3     | 179              | 38.9     |
| 5  | How Would you assess your convenience for accessibility with primary health care center location    | 193                    | 42.0     | 114                             | 24.8     | 153              | 33.3     |
| 6  | How Would you assess the lighting in the health center  | 187                    | 40.7     | 145                             | 31.5     | 128              | 27.8     |
| 7  | How Would you assess the waiting area, Sitting Chairs for patients and relatives                    | 201                    | 43.7     | 149                             | 32.4     | 110              | 23.9     |
| 8  | Furniture of PHC center   | 242                    | 52.6     | 135                             | 29.3     | 83               | 18.0     |
| 9  | Diagnostic tools and devices are available (sufficient for meet clients' needs)                     | 216                    | 47.0     | 156                             | 33.9     | 88               | 19.1     |
| 10   | Ventilation is good inside PHC center   | 190                    | 41.3     | 141                             | 30.7     | 129              | 28.0     |
| 11   | Satisfied regarding the presence of awareness materials (posters, folders, health education videos) | 183                    | 39.8     | 150                             | 32.6     | 127              | 27.6     |
| 12   | Availability of clean and healthy toilets in health center  | 232                    | 50.4     | 161                             | 35.0     | 67               | 14.6     |
| 13   | Presence of organized garden in health center   | 250                    | 54.3     | 151                             | 32.8     | 59               | 12.8     |
| Infrastructure of PHCC Score<br>Mean $\pm$ S.D (Range) |   | 23.4 $\pm$ 6.4 (13-39) |          |                                 |          |                  |          |

Saudi Arabia. Their findings disagree, indicate that two-third of the study sample is male (73.5%), and the remaining is female.<sup>10</sup> Regarding the socio-economic status, the study results showed that most of the study sample (47%) have low socio-economic status. In a study by Al-Sadaway (2020), the results indicate that the majority (49%) of those reviewing to primary health care centers are insufficient socio-economic status.<sup>11</sup> The study results regarding occupation indicate that more of them are housewives, which showed that 41%. This result disagreed with finding previous studies done in Jahrom (Iran) Zare et al., 2015, which found that the percent of housewives attending for PHC center was 78%.<sup>12</sup> Concerning their education, this study demonstrates that (30%) of clients were primary school graduates; these results were higher than findings of the previous study which found that (16%) of clients were primary school visited PHC center.<sup>13</sup>

## 2- Satisfaction with the Efficiency of Primary Health Care Services Domain

In Table 2, based on the findings among the investigated domains, the current study demonstrated that the overall client satisfaction score about efficiency health care services were satisfied to some extent (38.0%), this result disagrees with another survey that was done by Radhi<sup>13</sup>, which showed

that the client satisfaction regarding health services provided was satisfied (80.5%). It is difficult to interpret these wide differences in range without adequate information about many aspects, such as study methodology and populations sample; health systems characteristics, socio-cultural values, and attitudes, aspects of this domain. A high percentage of clients (49.1%) were unsatisfied with the time spent in the health center receiving the health care services. Which was similar to the result of the study that was done in Al-Nasiriya.<sup>11</sup> Which showed (65%) were unsatisfied about waiting time. Long waiting time due to lack of health care provider in PHC center, this was documented by the study of Kareem & Alalawe, 2020<sup>14</sup> in Babylon province that shows (78.3% and 91.3%) of PHCCs were fair regarding the presence of medical staff and health personnel according to standards respectively. In term of costs of examination and treatment, primary health care is relatively inexpensive; about (74.8%) were satisfied, this result was agreeing with the study done in Al-Ramadi City.<sup>15</sup>

## 3- Clients Satisfaction Regarded the Infrastructure of PHC Centers Domain

As reported by our study, the infrastructure domain was a relatively unsatisfied score at a percentage (62.0%). The Poor Satisfaction with buildings in our study may be because most

of PHC center buildings were old and the rebuilding fairly of the primary health care in Babylon governorate. These results disagree with the results of Yaseen<sup>16</sup>, who find that most clients are satisfied with the general appearance of the PHC center. Regarding furniture, sitting chairs in the waiting area, and cleanness, a high percentage of clients are unsatisfied (52.6, 43.7, and 40.4%). These results disagree with the resulting study done in Sudan by Ahmed, the finding of this study was (64.7, 70.2, and 72.7%), for cleanness, furniture, and seats at PHCC, respectively.<sup>17</sup> There are two possible reasons for this result, the first is the lack of a sufficient number of cleaning and maintenance workers to repair some of the seats consumed and, the second is that most health centers are not equipped with basic furniture due to the lack of financial abundance. These results indicated that (41.3%) of the clients dissatisfied with ventilation inside PHC center. This agreed when compared with the finding of the previous study done in Al-Ramadi City,<sup>15</sup> which showed (38.3%) of clients express poor ventilation.

## CONCLUSION

The most of client's satisfaction score reveals that the majority were 38.0%, who review primary health care centers were satisfied to some extent regarding efficiency primary health care centers services and regarding infrastructure, 62.0% were unsatisfied.

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