Are patients and healthcare providers satisfied with health sector reform implemented in family health centres?

M A Gadallah, M F Allam, A M A Ahmed, E M El-Shabrawy

ABSTRACT

Background Patients’ and healthcare providers’ satisfaction with service provided by any healthcare programmes is critical to developing measures of quality of care. Patients’ and healthcare providers’ satisfaction is associated with continuity especially for high clinical users. Healthcare providers’ satisfaction is also an important element on how to improve the quality of service provided. In general, patient satisfaction is associated with continuity especially for high clinical users.

Objectives To assess the clients’ satisfaction towards the overall health services provided by health centres affiliated to HSRP and to evaluate the satisfaction of healthcare providers, physicians, nurses and social workers.

Methodology Four reformed PHC units were compared with four non-reformed units in the Alexandria governorate regarding patients’ and providers’ satisfactions. Assessment of the satisfaction was done using survey questionnaire and focus group discussion. The provider survey questionnaire was carried out on all providers working in the selected units. Focus group discussion was done in one reformed health unit and another non-reformed unit.

Results The current study showed that providers in the reformed PHCs were more satisfied than providers in non-reformed PHCs regarding availability of equipments, job satisfaction and income satisfaction. No significant differences were noticed between both groups regarding social relations with either colleagues or directors. The patient satisfaction was higher in accredited family health units compared to non-accredited units in all aspects: cleanliness, doctors and nurses, waiting area and waiting time. During the focus group discussion, patients in the accredited PHCs expressed their satisfaction regarding the cleanness, privacy, attitude of doctors and nurses as well the waiting area and waiting time.

Conclusion Implemented HSRP in PHC units has had positive implications regarding patients’ and providers’ satisfactions in most areas studied.

Patients’ ratings of their healthcare experience have become increasingly important as indicators of the quality of care. In addition, client or consumer expectation is considered to influence their satisfaction with the service provided. Patients’ views are being given more and more importance in policy-making. Understanding populations’ perceptions of quality of care is critical to developing measures to increase the utilisation of primary health care (PHC) services. In a study about the perceived quality of PHC services in Burkina Faso, the authors concluded that improving drug availability and financial accessibility to health services were the two main priorities for health policy action.
The non-reformed PHC units/centres were selected to be similar in socioeconomic characteristics to the reformed PHC units/centres but not yet introduced in the implementation of HSRP (control units/centres).

The reformed health centres are characterised by the following:
1. Renovated building or totally new building.
2. All healthcare providers get a short-term training (3 months) in family medicine practice.
3. Better facilities for lab investigations.
5. Must be accredited from the Department of Health Care Quality of the MOHP.

Egypt started a pilot project in Alexandria for health sector reform. It is the first governorate in Egypt that started the implementation of health reform. Some family health centres are reformed but not accredited; therefore, these are not included in our study.

Duration and time
The duration of the study was 14 months from 16 April 2005 to 15 June 2006.

Research methodology
Sample size
Regarding patient satisfaction, the estimated sample size was 400 patients (200 in reformed units/centres and 200 in non-reformed units/centres). Sample size calculation was based on the following assumptions: overall satisfaction rate, 80–90%; α error, 0.005, β error 0.2. The actual sample size taken 380 patients.

Regarding the provider satisfaction, all healthcare providers in the selected units were enrolled in the study.

Tools of the research
1. Interview questionnaire for healthcare providers: the questionnaire included personal data, satisfaction related to work, social relations, income, etc. Satisfaction rating was done using the Likert scale. The Likert scale was composed of 5 points but was not validated.
2. Interview questionnaire for patients: the questionnaire included personal data, satisfaction regarding accessibility, waiting time, cleanliness, cost of services, etc. Interviewers were a mix from one of the authors (AMAA) and two individuals from the family health department of Alex University (not from the MOHP). We did not ask the patients about their names for confidentiality and to allow them to mention their evaluations freely.
3. Focus group discussion: two focus group discussions were carried out in a non-reformed unit (El-Amrawy unit) and another in a non-reformed unit (Sedie Bishr Health Office/Montaza curative centre). Three sessions were done in each unit; one for the patients, one for the physicians and one for nurses. Focus group was recorded and then analysed by listening to the recorder and gathering the information into categories.

Statistical analysis
Comparisons between reformed and non-reformed units/centres were done using the Student t test for continuous variables and Pearson’s χ² test for categorical variables. Data entry and statistical analysis were done using SPSS V.11.0. Level of significance was set at a p value of ≤0.05.

### Table 1 The mean percentage of patients’ satisfaction in reformed and non-reformed PHC units/centres towards waiting area

<table>
<thead>
<tr>
<th></th>
<th>Reformed (mean ±SD)</th>
<th>Non-reformed (mean ±SD)</th>
<th>Student t test</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>The place of waiting area</td>
<td>96.0 (10.5)</td>
<td>63.3 (25.5)</td>
<td>16.197</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Comfortability of chairs</td>
<td>97.1 (6.6)</td>
<td>56.1 (28.6)</td>
<td>20.248</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Sufficient number of chairs</td>
<td>96.7 (6.7)</td>
<td>46.1 (26.9)</td>
<td>24.951</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

PHC, primary health care.

### RESULTS

**Patients’ satisfaction**

We interviewed 380 patients of whom 60 were men and 320 were women. Sex distribution was nearly similar in both reformed and non-reformed units/centres (women 85.3% vs 83.2%) with no statistical significant difference.

The education status of patients attending the reformed and non-reformed units/centres varied from illiterate (15.8% vs 17.4%), primary to secondary (71% vs 80.5%) and university degree (15.2% vs 2.1%).

Tables 1–3 show that patients receiving the health service in the reformed PHC units/centres are more satisfied than patients receiving the health service in the non-reformed PHC units/centres regarding the waiting areas, healthcare providers, different aspects of healthcare provided, together with the skills of doctors and nurses, with statistically significant difference.

Most of outpatient attendees in reformed PHC units/centres (99.9%) reported that they would advise their relatives and friends to attend the PHC units/centres compared with the lower percentage of outpatient attendees in non-reformed PHC units/centres (81.6%), with statistically significant difference (p<0.001).

Approximately two-thirds (60.3%) of outpatient attendees in reformed PHC units/centres thought that the health services were better this year than the previous year compared with one-third (51.6%) of outpatient attendees in non-reformed PHC units/centres, with statistically significant difference (p<0.001).

Most of outpatient attendees in reformed PHC units/centres were satisfied with price of ticket (91.8%), price of drugs (91.1%) and price of laboratory analysis (91.0%).

**Providers’ satisfaction**

The current study showed that healthcare providers in the reformed PHC units/centres were more satisfied than healthcare providers in non-reformed units/centres regarding equipments

### Table 2 The mean percentage of patients’ satisfaction in reformed and non-reformed PHC units/centres towards healthcare providers (physicians and nurses)

<table>
<thead>
<tr>
<th></th>
<th>Reformed (mean ±SD)</th>
<th>Non-reformed (mean ±SD)</th>
<th>Student t test</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Towards physicians</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consultation time</td>
<td>96.7 (7.2)</td>
<td>82.6 (29.1)</td>
<td>6.464</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Proper hearing</td>
<td>97.6 (5.2)</td>
<td>84.6 (18.9)</td>
<td>9.060</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Proper explanation of the treatment</td>
<td>97.9 (5.9)</td>
<td>85.9 (46.4)</td>
<td>3.515</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Proper care</td>
<td>97.2 (6.0)</td>
<td>89.6 (13.6)</td>
<td>7.096</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Privacy during consultation</td>
<td>97.7 (7.2)</td>
<td>80.5 (20.1)</td>
<td>11.122</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Towards nurses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proper care</td>
<td>93.1 (10.0)</td>
<td>81.2 (15.9)</td>
<td>8.688</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Proper communication</td>
<td>93.2 (10.7)</td>
<td>80.7 (15.2)</td>
<td>9.238</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

PHC, primary health care.
available, workload, job satisfaction and income satisfaction. Meanwhile, person-to-person and person-to-boss relations were not different between healthcare providers in the reformed and non-reformed PHC units/centres (table 4). In addition, healthcare providers in the reformed and non-reformed PHC units/centres reported facing problems in their work without any significant problems (table 5).

The most relevant finding of the focus group discussions revealed that relations between colleagues and with the directors were satisfactory in the reformed and non-reformed PHC units/centres.

**DISCUSSION**

The concept of patients’ or customers’ satisfaction received ultimate importance in recent years because of the emerging competitiveness among the healthcare services and the pressure from payers. Accordingly, it is prudent to measure patients’ satisfaction when addressing evaluation of a new health system such as accreditation. 9

The current study showed that patients’ satisfaction was higher in reformed PHC units/centres compared to non-reformed PHC units/centres in all aspects: cleanliness, doctors and nurses, waiting area and waiting time. The overall satisfaction from the service rendered in the reformed PHC units/centres was significantly higher than that in the non-reformed PHC units/centres.

During the focus group discussion, patients in the reformed PHC units/centres expressed their satisfaction regarding the cleanliness, privacy, attitude of doctors and nurses as well as the waiting area and waiting time. Patients in the non-reformed PHC units/centres expressed contradictory opinions regarding the above-mentioned items, which were clearly clarified during the interview with the patients.

The enquired domains of the patients’ satisfaction survey are common domains for most published satisfaction surveys. 5 Accreditation system of PHC care in Egypt addresses certain standards that may impact patients’ satisfaction such as housekeeping standards, communication skills, training and environmental safety. This explains the connection between accreditation and the patients’ satisfaction. However, this relation was not consistent in many researches. Heuer 5 concluded no relation between accreditation score and patients’ satisfaction. Salmon et al 10 also noted no difference in effect of accreditation on patients’ satisfaction between intervention and control groups. Difference between hospital system and PHC is quite evident in its complexity and diversity of services: inpatient, ambulatory, diagnostic and rehabilitative. This may explain the discrepancy between satisfaction results at hospital level and the current study.

The satisfaction shown in this study regarding the privacy in clinical examination represents drastic change compared to the lack of such standards in a previous study where 16–50% of patients complained that they could find themselves being examined in the presence of other patients. 11

The overall satisfaction was 95% in reformed PHC units/centres compared with 72% in the non-reformed PHC units/centres. This agrees with many studies that reported a satisfaction rate >90%. 12 13 However, the low satisfaction in the non-reformed PHC units/centres may be due to deterioration in the services in the non-reformed PHC units/centres or different population and service characteristics in the different studies. The overall satisfaction was also confirmed by the high percentage of patients recommending to the PHC units/centres to their relatives. This percentage was significantly higher in the reformed than in non-reformed PHC units/centres. The patients’ satisfaction regarding the prices of tickets, drugs and laboratory services was satisfactory in the reformed and non-reformed PHC units/centres.

### Table 3 The mean percentage of patients’ satisfaction in reformed and non-reformed PHC units/centres towards different aspects of healthcare provided, together with the skills of doctors and nurses

<table>
<thead>
<tr>
<th></th>
<th>Reformed (mean SD)</th>
<th>Non-reformed (mean SD)</th>
<th>Student t test</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall satisfaction for PHC</td>
<td>94.8 (8.7)</td>
<td>72.7 (13.4)</td>
<td>18.631</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Family planning</td>
<td>97.5 (5.0)</td>
<td>82.2 (14.5)</td>
<td>9.964</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Maternal health</td>
<td>97.3 (7.0)</td>
<td>86.5 (15.3)</td>
<td>6.505</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Health education</td>
<td>97.4 (7.9)</td>
<td>80.5 (15.4)</td>
<td>9.162</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Skill of doctors</td>
<td>97.8 (4.8)</td>
<td>85.6 (15.3)</td>
<td>10.558</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Skill of nurses</td>
<td>93.4 (8.7)</td>
<td>82.7 (16.1)</td>
<td>7.846</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

PHC, Primary Health Care.

### Table 4 Comparison between healthcare providers in reformed PHC units/centres and non-reformed PHC units/centres regarding facility equipment, workload, person-to-person relation, person-to-boss relation, job satisfaction and income satisfaction

<table>
<thead>
<tr>
<th></th>
<th>Very satisfied</th>
<th>Satisfied</th>
<th>Neutral</th>
<th>Unsatisfied</th>
<th>Very unsatisfied</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reformed</td>
<td>14 (16.3%)</td>
<td>51 (59.3%)</td>
<td>12 (14%)</td>
<td>5 (5.8%)</td>
<td>4 (4.7%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Non-reformed</td>
<td>11 (13.1%)</td>
<td>26 (31%)</td>
<td>17 (20%)</td>
<td>15 (17.9%)</td>
<td>15 (17.9%)</td>
<td></td>
</tr>
<tr>
<td>Work load</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reformed</td>
<td>22 (25.6%)</td>
<td>43 (50%)</td>
<td>11 (12.8%)</td>
<td>6 (8.1%)</td>
<td>3 (3.5%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Non-reformed</td>
<td>23 (27.4%)</td>
<td>32 (38.1%)</td>
<td>10 (11.9%)</td>
<td>7 (9.5%)</td>
<td>11 (13.1%)</td>
<td></td>
</tr>
<tr>
<td>Person-to-person relation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reformed</td>
<td>56 (64.4%)</td>
<td>25 (28.7%)</td>
<td>4 (4.6%)</td>
<td>2 (3.2%)</td>
<td>0 (0%)</td>
<td>0.12</td>
</tr>
<tr>
<td>Non-reformed</td>
<td>40 (48.2%)</td>
<td>33 (39.8%)</td>
<td>6 (7.2%)</td>
<td>1 (1.2%)</td>
<td>3 (3.6%)</td>
<td></td>
</tr>
<tr>
<td>Person-to-boss relation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reformed</td>
<td>44 (50.6%)</td>
<td>32 (36.8%)</td>
<td>8 (9.2%)</td>
<td>3 (3.4%)</td>
<td>0 (0%)</td>
<td>0.20</td>
</tr>
<tr>
<td>Non-reformed</td>
<td>32 (40%)</td>
<td>30 (37.5%)</td>
<td>10 (12.5%)</td>
<td>4 (5%)</td>
<td>4 (5%)</td>
<td></td>
</tr>
<tr>
<td>Job satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reformed</td>
<td>39 (45.9%)</td>
<td>39 (45.9%)</td>
<td>6 (7.1%)</td>
<td>0 (0%)</td>
<td>1 (1.2%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Non-reformed</td>
<td>17 (22.7%)</td>
<td>31 (41.3%)</td>
<td>19 (24%)</td>
<td>6 (8%)</td>
<td>3 (4%)</td>
<td></td>
</tr>
<tr>
<td>Income satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reformed</td>
<td>18 (20.9%)</td>
<td>34 (39.5%)</td>
<td>26 (30.2%)</td>
<td>5 (5.8%)</td>
<td>3 (3.5%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Non-reformed</td>
<td>10 (12.8%)</td>
<td>12 (15.4%)</td>
<td>21 (26.9%)</td>
<td>11 (14.1%)</td>
<td>24 (30.8%)</td>
<td></td>
</tr>
</tbody>
</table>

PHC, primary health care.
tests was more than 90%. This alleviates fears regarding the policy of increasing in the ticket prices as well the drug prices implemented by the reformed PHC units/centres.

Measuring providers’ satisfaction has emerged as an important tool for assessing quality of health services as without their “buy in” to what the health services offer; a smooth tract for a good outcome cannot be warranted.14 The dimensions for measuring providers’ satisfaction usually enclose satisfaction regarding work load, equipments, relations with colleagues and directors, income and overall job satisfaction.15 These areas were the main domains for the present survey.

Before reaching conclusions based on the present results, it is necessary to remember that reformed PHC units/centres receive support from the HSRF in the form of equipments, and healthcare providers are motivated by some incentives upon receiving accreditation. This agrees with the findings of better satisfaction among providers in reformed PHC units/centres regarding availability of equipments and income. The same findings were noticed during the focus group discussion. In the accredited El-Amrawy Family Medicine Centre, physicians and nurses expressed their satisfaction regarding the availability of equipment and the income compared to the great dissatisfaction expressed by healthcare providers regarding the same items in Montaza centre as an example of non-reformed PHC unit.

The dissatisfaction among providers in the non-reformed PHC units/centres regarding the income agrees with a former study carried in non-reformed PHC units/centres in Egypt where the income showed the least satisfaction scores.7 Similar pattern of dissatisfaction regarding the income was noticed among physicians in public health services and general practitioners in Western countries.16 17

Although it is often heard that healthcare providers appraise relations with colleagues, it is noted in our study that social bonding was not considered to be a significant expectation. Accordingly, it is recommended that future efforts in this area would not have to be as heavily emphasised. Other items such as fair pay had some of the highest expectation scores, and for this, great dividends in the long run have to be paid to investigate these issues to improve satisfaction.18 These inferences agree with the findings of the current study. Focus group discussion also revealed that relations with colleagues and directors were satisfactory in the reformed and non-reformed PHC units/centres, a finding previously confirmed during the interview with the healthcare providers.

The overall job satisfaction was significantly higher in the reformed PHC units/centres, which may be related to better satisfaction from the income or available equipments or from applying the system or most probably from the combination of these factors.

Looking at our findings with their consistency and coherency strongly suggests the external validity of the study. Although these results pertain solely to the Alexandria governorate, the methodology can be applied in other Egyptian governorates or even in other countries. We think that our results could be generalised to other developing countries or even developed countries. A recent study in Spain has demonstrated that the creation of the clinical management units in PHC improves the indicators of satisfaction of the customers related to the installation of the centre, organisation and services of the centre and the availability of the healthcare providers.19 Also and of no doubt, healthcare providers of developing and developed countries would be more satisfied if given better facilities, specialty-specific training and better supplies of drugs.

In conclusion, implemented health sector reform in the PHC units/centres has positive implications regarding patients’ and healthcare providers’ satisfaction in most areas studied. We recommend generalisation of our results to other Egyptian governorates and similar settings in the countries that are considered developing countries.

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**Competing interests** None.

**Ethics approval** This study was conducted with the approval of the National Training Institute, Ministry of Health and Population, Egypt.

**Patient consent** Obtained.

**Provenance and peer review** Not commissioned; externally peer reviewed.

**REFERENCES**


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