Client Satisfaction with Urban Family Physician and Referral System in the South of Iran: A Repeated Cross-Sectional Study

Abstract

Background: Patient satisfaction is an integral component of service quality and obtaining feedback from patients about the quality of primary health care is the best way to extend more patient-centered goals to health care delivery. This study was conducted to measure the level of client satisfaction with Urban Family Physician and Referral System (UFPARS) program.

Methods: This repeated cross-sectional study was done in Fars province, South of Iran, at two sections. Totally, 5901 patients in two sections (6 and 24 months after the UFPARS startup) were selected using multi-stage random sampling. The participants answered a self-administrated questionnaire. We measured the client satisfaction using 5-point Likert-scaled score and combined the questions; for each component of UFPARS, 6 satisfaction dimensions were made. We compared the participants' level of satisfaction in two parts, using t-test.

Results: Reliability was acceptable, and equal to 85% or more in all domains. In all components of UFPARS, the mean client satisfaction score was higher than 3 out of 5. The lowest client satisfaction scores were seen in the outpatient services. In three components of UFPARS including enrolment, family medicine and para-clinics, the mean satisfaction scores significantly decreased (P<0.001) between the two sections. But other components showed no significant change.

Conclusion: The level of satisfaction with UFPARS in Fars province was shown to be relatively medium to high. Low client satisfaction between the two sections could be a bad sign and we recommend that the problems should be tackled gradually. Although family physician program in Iran has some limitations, implementing this plan step by step can lead to a medical reform in Iran. We can develop better programs based on the comments from service recipients, and prompt the project and some program processes.


Keywords: Client satisfaction, Family physician, Referral system, Iran
health investments must be allocated to PHC to improve health outcome. Family Physician Plan is a starting point of health system reforms to achieve faster and easier service to patients.

Although in recent years, the government and policymakers of Islamic Republic of Iran tried hard to develop primary health care; some indices of health care such as infant mortality rate could be improved, with increasing urbanization, and consequences of its unhealthy lifestyle, non-communicable diseases become major public health challenges in Iran. On the other hand, general practitioners in Iran have a central role in basic health care, but they have not enough scientific credentials from the patients’ point of view. For these reasons, Ministry of Health and Medical Education tried to train and empower general practitioners instead of family physician specialists to overcome these problems. In 2004, Family Physician Plan was established in Iran in towns with population of less than 20,000 and rural areas to implement PHC services for the entire population, promote public health, reduce the risk of diseases, increase public accessibility to health services, reduce out of pocket health care expenditure, implement basic health insurance on the basis of FP and improve the referral system. After rural areas, in some parts of Iran, Urban Family Physician and Referral System (UFPARS) was launched as a pilot in 2011 to see if it is successful, it will also be utilized in other parts of Iran following revisions.

Like every public health service, UFPARS should be accountable to society. The outcome of the health care system can be evaluated in various ways such as its impact on health, economy, and satisfaction dimensions, and so on. Client’s satisfaction is defined as the level at which the user’s expectations of the services are met. Measuring client satisfaction is the most effective index in all steps of designing, performing and evaluating all health care programs.

The concept of satisfaction is very complicated and have complicated systems. It is influenced by cultural, sociodemographic, cognitive and effective components. Patient satisfaction is used for comparing different health care programs, evaluating the quality of care and identifying the aspects of a service which needs to be changed, and identifying the disenrollment consumers.

Although one study assessed the cost-efficiency of the implementation of family physician in rural areas in Fars province, client satisfaction is an important issue in health care and could affect compliance with medical advice, service utilization, and the physician-patient relationship. In previous studies done in Fars province, it was shown that implementation of family physician plan can increase the health care costs.

In the United States, despite sending more money per capita on medical care than any other country in the world, no effective system has been developed to improve public health and prevent diseases. In this place, family medicine tries to provide better health care services and lower costs for patients and communities.

Patients’ safety and satisfaction is a cornerstone of Iranian health care system; however, there is not much reliable data available on these in Iranian health system. The new plan which is called “Health Sector Evolution”, tends to decrease out-of-pocket payments, improve the quality of hospital care, increase the patients’ satisfaction, reform financing, extend the insurance coverage in health care, and increase the number of natural delivery (child birth) in the country. The level of satisfaction with family physician was relatively favorable in Iran, but with increasing expectations of people, maintaining this status is necessary.

Because we do not have precise information on client satisfaction of family physicians, we conducted a study on client satisfaction with UFPARS in Fars province, south of Iran, in two parts, six months and 2 years after its implementation.

Materials and Methods

Designing Questionnaire

The Delphi method relying on a panel of experts was used to design the first draft of the questionnaire. The questionnaire was validated in a pilot study, we used confirmatory factorial analysis to eliminate some irrelevant questions and determine convergent and discriminant validity. On the other hand, the composite reliability of the questions was evaluated by AMOS software, version 7. At the end, content validity of the questionnaire was confirmed by the panel of experts. Reliability was acceptable, and equal to 85% or more in all domains. A five-point Likert-scale of satisfaction spectrum (very low, low, without opinion, high and very high) was used. For measuring the patient’s satisfaction, we assessed the cost of each component as well as 6 main dimensions of client satisfaction including:

- Waiting time for service delivery by the service provider
- Respect, kindness and intimacy
- Privacy and confidentiality
- Appropriate environment including (light, temperature, cleanliness, and seating)
- Service provider’s attention to hear the problem of the patient, diagnose, recommend and provide necessary training during service delivery
The outcome of the treatment and care

Therefore, we combined these dimensions and reported them in 6 important components of UFPARS including: 1- satisfaction with the registration and enrollment process, 2- satisfaction with family physician performance, 3- satisfaction with Para-clinic services (laboratory, radiology and etc.), 4- satisfaction with pharmacist’s performance, 5- satisfaction with specialist physician and referral to them, and 6- satisfaction with the outpatient care services during closing time of family physician services.

Data Collection

This was a repeated cross-sectional study conducted in 2 parts of 6 and 24 months after startup of UFPARS (2014 and 2016) in Fars province, south of Iran. The sample size in the first and second parts was 2132 and 4300 participants, respectively. Multi-stage random sampling was done; at first Fars province was divided into 4 regions and among each region 4 cities, as clusters, were randomly selected. Within each city, among all public health centers, 2 or 3 centers were randomly selected as the start point of household sampling. For data collection, participants were visited by door-to-door interviews. In this household survey, participants were selected by Kish grid or Kish selection table which is a method for selecting the members within a household to be interviewed. Before asking questions, verbal informed consent was obtained from each participant. Meanwhile, there were no ethical issues and conflict of interest. The questionnaires were trained by an expert staff in a workshop and during the phase of the pilot study. Inclusion criteria were residence in Fars province and coverage by any insurance institute in UFPARS. Exclusion criteria were lack of willingness to participate in this study.

Data Analysis

We simply performed descriptive statistics with two assumptions: 1. Participants were selected through random sampling method in both cross-sectional studies 2. We assumed that there was no any period effect and mass education intervention; therefore, in these periods all conditions were stable and did not change by external factors. Thus, by giving weight to the questions, and combining them, we made the 6 dimensions as defined above. The lowest and highest patient satisfaction score were 1 to 5. Finally, using t-test, we evaluated and compared the mean participant satisfaction in two parts by SPSS IBM for windows, version 20.

Results

Descriptive Statistics

More than 48% of the participants were male and the mean age of the participants was 40.8±14.9 and 36.2±12.2 years in the two parts, respectively. Most of the participants (68%) were married. (Table 1)

Average family size was 3.82±1.47 and the most frequent household number was 4 (31%). The most basic health insurance was social security (55%). The most important reason for withdrawal from participating in the first section was lack of insurance coverage (31%) or being under the coverage of insurance companies which were not covered by UFPARS (29%) (Figure 1). The most important reason that induced people to participate in UFPARS was reduced health care cost (30%). The most important place for patient registration in UFPARS was private sector (42%) and public sector (41%), respectively. Most people had become familiar with UFPARS on TV and Radio (50%).

Patient Satisfaction

The most satisfactory services user belonged to pharmacies (90%); on the other hand, the least one belonged to the referral system to specialists (35%). The most and least satisfactory services were pharmacy (90%) and referral system to specialists (35%). As shown in Table 2, in almost all questions of 6 dimensions of the patients’ satisfaction were high or very high (Table 2). In the two sections, the mean patient satisfaction was higher than 3, expect for the
Table 2: Questions on each Dimension of the clients satisfaction (%) in 6 components of UFPARS*

<table>
<thead>
<tr>
<th>Components</th>
<th>Questions</th>
<th>Very low</th>
<th>Low</th>
<th>No opinion</th>
<th>High</th>
<th>Very high</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrolment</td>
<td>Satisfaction of planning for selecting the location for registration and access to their UFPARS</td>
<td>16</td>
<td>19</td>
<td>11</td>
<td>38</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Satisfaction of guidance of personnel involved in registration for UFPARS</td>
<td>10</td>
<td>13</td>
<td>11</td>
<td>46</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Satisfaction of the completion of registry forms, easy understanding the concept of registry form</td>
<td>11</td>
<td>16</td>
<td>15</td>
<td>41</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with selecting family physician</td>
<td>16</td>
<td>19</td>
<td>5</td>
<td>47</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with respectful behavior of family physician personnel</td>
<td>8</td>
<td>15</td>
<td>8</td>
<td>53</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with place of receiving services for family physician</td>
<td>9</td>
<td>16</td>
<td>9</td>
<td>50</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with waiting time for receiving family physician care</td>
<td>15</td>
<td>16</td>
<td>5</td>
<td>49</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with careful treatment and hearing patients problems and intimacy with family physician</td>
<td>9</td>
<td>15</td>
<td>4</td>
<td>52</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with family physician attention, time he or she spend for visit, examination and giving history</td>
<td>10</td>
<td>19</td>
<td>5</td>
<td>47</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with keeping privacy by family physician</td>
<td>8</td>
<td>10</td>
<td>8</td>
<td>53</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with family physician diagnosis diseases, giving advice and the quality of training</td>
<td>11</td>
<td>20</td>
<td>8</td>
<td>46</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Overall satisfaction with family physician (taking into account all dimensions)</td>
<td>2</td>
<td>8</td>
<td>21</td>
<td>46</td>
<td>23</td>
</tr>
<tr>
<td>Para-clinic Issues</td>
<td>Satisfaction with the admission process and waiting time for Para-clinic Issues</td>
<td>12</td>
<td>18</td>
<td>11</td>
<td>49</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with respectful behavior of Para-clinic Issues personnel</td>
<td>5</td>
<td>12</td>
<td>9</td>
<td>62</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with place of receiving services for Para-clinic Issues</td>
<td>5</td>
<td>15</td>
<td>11</td>
<td>58</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with keeping privacy by Para-clinic Issues</td>
<td>5</td>
<td>11</td>
<td>9</td>
<td>62</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with cost pay for receiving Para-clinic Issues services</td>
<td>22</td>
<td>20</td>
<td>8</td>
<td>11</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with Para-clinic Issues facility</td>
<td>11</td>
<td>19</td>
<td>9</td>
<td>49</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Overall satisfaction with Para-clinic Issues (taking into account all dimensions)</td>
<td>2</td>
<td>7</td>
<td>24</td>
<td>53</td>
<td>14</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>Satisfaction with waiting time for receiving Drugs</td>
<td>13</td>
<td>24</td>
<td>11</td>
<td>44</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with respectful behavior of pharmacy personnel</td>
<td>6</td>
<td>14</td>
<td>11</td>
<td>57</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with pharmacist or pharmacy staff advice and explain about drugs</td>
<td>17</td>
<td>23</td>
<td>9</td>
<td>42</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with the availability of prescribed physician in pharmacies</td>
<td>11</td>
<td>20</td>
<td>9</td>
<td>47</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with the cost of drugs</td>
<td>33</td>
<td>28</td>
<td>8</td>
<td>25</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Overall satisfaction with pharmacy (taking into account all dimensions)</td>
<td>2</td>
<td>11</td>
<td>34</td>
<td>43</td>
<td>9</td>
</tr>
<tr>
<td>Specialist physician</td>
<td>Satisfaction with selecting Specialist physician</td>
<td>8</td>
<td>13</td>
<td>7</td>
<td>51</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with waiting time for receiving Specialist physician care</td>
<td>19</td>
<td>20</td>
<td>6</td>
<td>42</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with careful treatment and hearing patients problems and intimacy with Specialist M.</td>
<td>9</td>
<td>15</td>
<td>8</td>
<td>51</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with place of receiving services for Specialist physician</td>
<td>12</td>
<td>16</td>
<td>10</td>
<td>47</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with keeping privacy by Specialist physician</td>
<td>8</td>
<td>12</td>
<td>12</td>
<td>54</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with cost of Specialist physician services</td>
<td>20</td>
<td>15</td>
<td>9</td>
<td>41</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Overall satisfaction with Specialist physician (taking into account all dimensions)</td>
<td>1</td>
<td>8</td>
<td>25</td>
<td>48</td>
<td>18</td>
</tr>
<tr>
<td>Outpatient care services</td>
<td>Satisfaction with waiting time for receiving outpatient care services</td>
<td>29</td>
<td>24</td>
<td>6</td>
<td>32</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with careful treatment and hearing patients problems and intimacy with outpatient care services</td>
<td>20</td>
<td>21</td>
<td>10</td>
<td>38</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with place of receiving services for outpatient care services</td>
<td>18</td>
<td>21</td>
<td>10</td>
<td>41</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with keeping privacy by outpatient care services</td>
<td>15</td>
<td>18</td>
<td>12</td>
<td>44</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with cost of outpatient care services</td>
<td>36</td>
<td>23</td>
<td>8</td>
<td>26</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Overall satisfaction with Outpatient care services (taking into account all dimensions)</td>
<td>9</td>
<td>19</td>
<td>27</td>
<td>35</td>
<td>10</td>
</tr>
</tbody>
</table>

*Urban Family Physician and Referral System*
patient’s satisfaction in outpatient services. In three components of UFPARS including enrolment, family physician and para-clinic facilities, mean satisfaction significantly decreased (P<0.001) between the two sections; other dimensions showed no significant difference (Table 3).

**Discussion**

This study is the first attempt to evaluate the impact of the ongoing reforms in the health system, especially UFPARS from the clients’ viewpoints, in Iran. Patient satisfaction, as one of the most important outcomes of health care, with their family physician was very high and comparable to other countries. The level of satisfaction with UFPARS in Iran was shown to be relatively high. Patient satisfaction with family practice care in some European countries is high and our results are comparable to them.23-25

Based on a previous study which was done in Mazandaran province in 2014, overall satisfaction rate was 59.2% and the rate of dissatisfaction among urban residents was 1.5 times higher than the rural residents. This could be due to greater expectation and lack of direct access to their preferred physicians.26

Although in a previous study in Fars province, it was shown that Family Physician Plan has led to more regular service delivery and has increased the patients’ referral to health care services,13 we can conclude that patient satisfaction with health care is relatively moderate due to decreased out of pocket costs and increased satisfaction. The first study was done 6 months after the startup of UFPARS. This investigation is important for different levels of health policy makers. If the urban family physician plan costs a lot, it causes the patients to receive health care services more rapidly and conveniently.

Iran encounters several challenges to further development of its healthcare system. UFPARS can help reduce disparities and health inequities among Iranian population. Many policymakers are interested in knowing the reason although recent health care programs have had important gains, they have not responsive to the comprehensive vision of primary health care.27

We did not have any mass intervention or mass education between the two sections; therefore, we did not need to correct or adjust our results for period effect. A little decrease in patient satisfaction is acceptable, because at the beginning of the UFPARS

![Figure 1: Frequency (%) of reasons for no enrollment in UFPARS in first cross section study](image)

<table>
<thead>
<tr>
<th>Components</th>
<th>Cross-section</th>
<th>N</th>
<th>Mean±SD</th>
<th>Changing</th>
<th>P value††</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrolment</td>
<td>1</td>
<td>1601</td>
<td>3.4±1.1</td>
<td>↓</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>4300</td>
<td>3.1±0.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Physician</td>
<td>1</td>
<td>1227</td>
<td>3.5±1.0</td>
<td>↓</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>4300</td>
<td>3.2±0.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Para-clinic Issues</td>
<td>1</td>
<td>513</td>
<td>3.4±0.9</td>
<td>↓</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2238</td>
<td>3.1±0.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacy</td>
<td>1</td>
<td>1091</td>
<td>3.0±0.9</td>
<td>↔</td>
<td>&gt; 0.05</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>3895</td>
<td>3.0±0.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specialist Medicine</td>
<td>1</td>
<td>433</td>
<td>3.4±0.9</td>
<td>↔</td>
<td>&gt; 0.05</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1176</td>
<td>3.4±0.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outpatient care services</td>
<td>1</td>
<td>673</td>
<td>2.9±1.1</td>
<td>↔</td>
<td>&gt; 0.05</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1185</td>
<td>2.9±0.8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1=6 months after implementation, 2=24 months after implementation; ◊ Eligible and comparable participants; ‡ Total score=5; †† T-test

Table 3: Comparison of client satisfaction 6 and 24 months after UFPARS implementation in the south of Iran
program, people had a better attitude about it, but
gradually they understood its real or unreal problems.

In this study, partial and total satisfaction showed
that most of the participants were relatively satisfied.
Although satisfaction decreased in some dimensions
in the second survey, in most dimensions, this little
decrease and significant association could be due to
the large sample size. Satisfaction with respectful
behavior of the personnel, privacy and confidentiality,
space and environment, and other dimensions are high.
Satisfaction with family medicine and specialist’s
medicine was acceptable.

Satisfaction with waiting time for receiving
outpatient care services was low, but the waiting time
for another part was in the medium or high levels. By
comparing our results with those of previous studies,
we know that 20% of the respondents were unsatisfied
with waiting in centers; this finding was similar. Based
on previous findings, long waiting time was a
factor contributing to patients’ dissatisfaction.

Studies showed that if hospital costs of health care
are high, then patient satisfaction is low. In our study,
satisfaction was low due to outpatient services; on
the other hand, the setting for referring the patients
in closing time is not proper. Therefore, we suggest
establishing emergency health care to provide their
services in non-working time.

Evaluation of the policies requires a longer time since
evaluation of this program is not completely
acceptable at this situation; also, some problems will
arise in the late periods of running the program. One
of the most important problems of UFPARS is that
patients should refer to family physician from 8 a.m.
to 12 a.m., but recently this problem has been solved
by changeable working time. This change improves
the patient satisfaction.

This project has been done by Shiraz University
of Medical Sciences and naturally, as with any new
program, it has been faced with some criticisms and
opponents. Satisfaction should be comprehensive,
done by a person or organization which is impartial
and even outside the observer; it should be neither
too early, nor too late; should be done freely so
that there is no bias in selection of questions and
samples (randomly and carefully selected); the
analysis, interpretation, and dissemination of the
results should be done by an impartial and neutral
individual. It has been done by some methodologists
and epidemiologists who are affiliated with Shiraz
University of Medical Sciences. We suggest an
independent group to repeat this project. Most data
were obtained from interviews, collected over time,
in different places and from people at different levels;
therefore, between and within interviewer bias has
probably happened. In other words, it would be better
to run a cohort study on a specified population to
precisely measure satisfaction changes.

One of the strengths of this study was that it
had a future view to show some problems of using
family physician plan in Fars province. Despite some
limitations, we can conclude health care reforms in
Iran, especially family physician, had a positive impact
on health care quality. Given the limited number of
studies on UFPARS in Iran, our findings might be
helpful for other settings as a scenario. Moreover, the
study was performed on the population of patients
who attended family practice during the time study
was done. It is unclear how the participation of non-
users of family practice could alter these finding.

We suggest electronic registering system for the
first visits, referrals, and prescription systems. Also,
we suggest family physicians to spend more time
for their patients. Combining health care services is
most useful for rapid delivery of health care services
with high quality. Providing and approving clinical
guidelines for clarifying family physician tasks and
functions seem to be necessary. Finally, low client
satisfaction between the two sections could be a
bad sign and we recommend such problems should
be resolved gradually. It is essential to focus on
functional quality which can bring enormous benefits
for our system and can make the organization and this
system more pleasant for patients.

Conclusion

Although family physician program in Iran has had
some limitations, implementing this plan step by step
can lead to a reform in Iran. An important issue in every
health program is client satisfaction. In our study, client
satisfaction was relatively low to moderate. The results of
this study can help the UFPARS managers to improve it.
We can develop better programs based on the comments
from service recipients and prompt the project and some
program processes. We know that family physician plan
should be expected to be implemented gradually and not
in a limited time, and successful use of this plan may
take a long time. Therefore, we suggest that managers
of UFPARS consider some domains of satisfaction that
decline the satisfaction level and improve them.

Acknowledgment

The authors wish to express sincere gratitude and
appreciation to Shiraz University of Medical Sciences
(SUMS), for providing the financial support of this
external evaluation. Finally, we would like to thank
family physicians who permitted us to conduct this study
in their clinics.

Conflict of Interest: None declared.
References


