

*Article*

## **Customer relationship management in a tertiary level hospital**

Afsana Bilkis<sup>1</sup>, Khorshed Ali Miah<sup>2</sup>, Arifa Sultana<sup>3</sup>, Mst. Shahida Parvin<sup>4</sup>, China Rani Mittra<sup>5</sup> and Ashees Kumar Saha<sup>6</sup>

<sup>1</sup>Senior Staff Nurse, Khulna Medical College Hospital, Khulna, Bangladesh

<sup>2</sup>Associate Professor, (NIPSOM), Mohakhali, Dhaka-1212, Bangladesh

<sup>3</sup>Senior Staff Nurse, National Institute of Cardiovascular Diseases (NICVD), Dhaka, Bangladesh

<sup>4</sup>Senior Staff Nurse, Dhaka Medical College Hospital, Dhaka, Bangladesh

<sup>5</sup>Senior Staff Nurse, Upazilla Health Complex, Abhaynagar, Jashore, Bangladesh

<sup>6</sup>Senior Staff Nurse, Upazilla Health Complex, Bhagha, Rajshahi, Bangladesh

\*Corresponding author: Afsana Bilkis, Senior Staff Nurse, Khulna Medical College Hospital, Khulna, Bangladesh. Phone: +8801712223335; E-mail: afsanabilkismph@gmail.com

Received: 07 September 2020/Accepted: 26 September 2020/ Published: 30 September 2020

**Abstract:** This cross-sectional study was conducted at OPD of Khulna Medical College Hospital (KMCH). This study aimed to assess the status of Customer Relationship Management (CRM) in a tertiary level hospital in Khulna city from 1<sup>st</sup> January to 31<sup>st</sup> December 2016. Total 200 samples were included purposively. Among them 150 respondents were health care receivers and 50 participants were health care providers and interviewed with a pre-tested semi-structured questionnaire and a checklist was used to collect information regarding administrative facility, physical facility and utility services. Data were analyzed by using Statistical Package for Social Science version (SPSS) 22 and appropriate statistical tests were performed. Most (62.3%) of the service receivers were satisfied about the doctors dealing in OPD. It was found that majority of service provider (82%) had not knowledge about CRM and its objectives. Majority (82%) of the service receiver came to hospital willingly and (47.3%) of service receivers were spent less than one hours for getting total treatment. Most (40%) of service providers said that there were a lack of service provider, modern equipment and medication in the OPD and they recommended that enhanced manpower, modern equipment and adequate supply of medication. About half 49.3% of the service receivers suggested in manpower should be increased. Therefore, attempts could be taken to implement customer relationship management as a process for improving hospitals performance and improving communication between service providers and service receiver in hospitals.

**Keywords:** customer relationship management; customers; consumer; client; satisfaction; outpatient department

### **1. Introduction**

Customer Relationship Management (CRM) is a business approach that integrates people, processes and technology to maximize the relations of an organization with all types of customers. The true value of CRM is to transform strategic operational processes and business functions in order to retain customers and increase customer loyalty. According to Koh and Tan (2005), Customer Relationship Management is a core strategy in managing interactions between commercial organizations and their customers. It is no less important in a healthcare context. Because patients are the key customers of hospitals and other healthcare settings". The term Patient Relationship Management (PRM) is used for systems in the organizations. With PRM, healthcare organization focus is set on determining and meeting patient needs (Siau, 2003).

Hospital is a highly complex socio-economic scientific organization which provides comprehensive health care to the society and acts as a referral centre. Hospital problems are multifarious. Sixty percent of hospital budget was spent on wage and salaries of the staffs (Salaudhin, 1998). When people were helped and their working

environments were understood, the quality of work improves (Barton *et al.*, 1980). Management system in health care delivery was handicapped by various problems in the country.

These problems should properly be identified and necessary measures should be taken in consistence with the requirement. It is easier to evaluate the patient's satisfaction towards the service than to evaluate the quality of medical services that they receive. Therefore, a probe into patient satisfaction can provide an important tool to improve the quality of service. Patient satisfaction is a multi-dimensional healthcare issue affected by many factors. Healthcare quality affects patient satisfaction and results in positive influence on patient behavior such as confidence in hospital care.

Patient satisfaction and healthcare service quality can be increased by using a multi-disciplinary approach that combines patient inputs as well as expert judgment (Naidu, 2009). Value is not just the price of the service delivered or discounts offered. In fact, the patient's perceptions of values are based on a number of factors that include quality-of-service, ease-of-delivery without- hassles, speed, responsiveness, flexibility and service excellence. Hospital administration should endeavor to improve hospital productivity and reduce cost while improving or maintaining service quality at the same level.

Bangladesh has made significant improvement in health sector, which make it an example for other developing countries even though being a resource poor country. Over the last decades key health indicators such as life expectancy and coverage of immunization have improved notably, whilst infant mortality, maternal mortality and fertility rates have dropped significantly (Osaman, 2008). An effectively performing health system is essential in improving the population's health status, providing safeguard against health-related financial threat and enhancing the health sector's responsiveness to customer's needs. A health system consists of all organizations, people and actions, whose primary intent is to promote, restore or maintain health.

Bangladesh has made remarkable progress in some indicators of health such as controlling infant, maternal and under-five mortality. It had achieved a credible record of sustaining 90% plus vaccine coverage in routine EPI with NIDS (national immunizations days) since 1995 (WHO, 2008). Customer relationship management (CRM), which has over riding significance for any business, is no less significant for hospital services. Hospitals are the most important element in any healthcare delivery system. A hospital plays a major role in maintaining and restoring the health of the people.

Outpatient departments (OPDs) provide medical services to the ambulatory patients. Majority of the patients receive services from the OPD. So maximum importance must be given to serve the people with highest possible quality services in order to fulfill their needs and reduce their sufferings. The patient who comes to the tertiary level hospital with a great hope and aspiration expects that proper and appropriate care would be provided in the OPD because the hospital is bearing highly skilled professionals and sophisticated medical instruments. The patients are more specific in their demand and expectation with regard to their ailments. Better services cannot be ensured until and unless various problems of recipients and service providers are known beforehand.

Health care services play a fundamental role in public welfare. A patient relationship management (PRM) system, more commonly known as customer relationship management (CRM), can thus be justifiably adopted by a public hospital, and may be important to leverage patient satisfaction.

Out-patient services and CRM: Hospital management is incomplete without caring for the outpatient services. An out-patient service is one of the most important departments, which determine the hospital image, provide diagnostic, curative, preventive and rehabilitative services.

## **2. Materials and Methods**

The present research had been undertaken with the objective to assess the "Customer relationship management in a tertiary level Hospital". For achieving the objective mentioned above, this study has been carried out systematically and followed the methodology mentioned below:

### **2.1. Ethical consideration**

Prior to the commencement of this study ethical approval of the research protocol from the Institutional Review Board (IRB) of National Institute of Preventive and Social Medicine (NIPSOM) was taken.

### **2.2. Study design**

The study was a descriptive type of cross sectional study.

### **2.3. Study setting**

The study was conducted at the Khulna Medical college hospital in Bangladesh.

#### 2.4. Study period

The study was conducted for the one year during the period of January, 2016 to December, 2016.

#### 2.5. Study population

Health care receiver who attended the OPD services of Khulna Medical College Hospital and Health care providers who worked in that hospital.

#### 2.6. Sampling technique

Purposive sampling was used for data collection.

#### 2.7. Sample size

Sample size was calculated through following formula.

$$n = Z^2pq/d^2$$

From the above formula the estimated sample size was 384.

#### 2.8. Inclusion criteria

##### Inclusion criteria for service receiver-

- Taking treatment facility in Medical college hospital
- Willing to participate in the study

##### Inclusion criteria for service provider-

- Permanent employee of the institution irrespective of age, gender and religion
- Having work experience in the study place for more than six months

#### 2.9. Research tools

Semi-structured interviewer administered questionnaire was developed to collect the data. The questionnaire was prepared by using the selected variables according to objectives. Completed questionnaires were checked by the supervisors before collecting the data and questionnaire were planned designed according to the objectives to get information of the different variables. The questionnaire was prepared in English then translates in bangle. The questionnaire was pretested in the 500 bedded general hospital Mukda. It was conducted in Bangla language after the questions were pretested and necessary modifications were made. This result not included in final thesis

For collection of data, both questionnaire and checklist were used. Separate questionnaire was used for health care providers and health care receivers.

Checklist was used to collect information regarding administrative facility, physical facility and utility services.

#### 2.10. Statistical analysis

After completion of data collection, to maintain consistency, the data were checked and edited manually and verified before tabulation. Data were coded, entered and analyzed in a computer. The statistical analysis was conducted using SPSS version 22.

### 3. Results and Discussion

This cross-sectional study was conducted in a tertiary level hospital named Khulna Medical College Hospital, Khulna. The study was carried out among 150 health care receivers and 50 participants were health care providers of this hospital.

The demographic characteristics of the respondents are shown in Table 1.

**Table 1. Demographic characteristics of service receiver (n=150) and service provider (n=50).**

<b>Information of the service receivers:</b>		
<b>Age group</b>	<b>Frequency</b>	<b>Percent</b>
Below 10 Years	11	7.3
11-20 Years	17	11.3
21 - 30 Years	35	23.3
31-40 Years	32	21.3
41- 50 Years	23	15.3
51-60 Years	16	10.7
Above 60 Years	16	10.7
<b>Sex</b>	<b>Frequency</b>	<b>Percent</b>
Male	80	53
Female	70	47
<b>Level of education</b>	<b>Frequency</b>	<b>Percent</b>
Primary level	35	23.3
Junior school level	36	24
Secondary level	37	24.7
Above Secondary degree	42	28
<b>Occupation</b>		
Employee	31	20.7
Student	26	17.3
Housewife	47	31.3
Rickshaw puller	21	14
Others	25	16.7
<b>Family income</b>		
Below 10000	43	28.67
10001-20000	61	40.67
20001-30000	26	17.33
30001-40000	11	7.33
Above 40000	9	6
<b>Information of the Service providers:</b>		
<b>Age group</b>	<b>Frequency</b>	<b>Percent</b>
Up to 25 Years	8	16.0
31 -35 Years	6	12.0
36 - 40 Years	13	26.0
41-45 Years	6	12.0
46- 50 Years	7	14.0
51-55 years	7	14.0
More than 55 Years	3	6.0
<b>Sex</b>	<b>Frequency</b>	<b>Percent</b>
Male	29	58
Female	21	42
<b>Level of education</b>	<b>Frequency</b>	<b>Percent</b>
Up to SSC	24	48.0
HSC	6	12.0
Graduation	6	12.0
Post-Graduation	14	28.0
<b>Occupation</b>		
Doctor	10	20
Nurse	8	16
Pharmacist	4	8
Office attendant	13	26
Receptionist	3	6
Ward boy	10	20
Others	2	4

Table 1 showed that the highest value was 21-30 years which was 23.3% of the total value. The lowest value was below 10 years which 7.3% of the total value and Mean age  $\pm$ SD=36.15  $\pm$ 16.46. Most of the service receivers were male which value 53 % and rest of the service receivers was 47% female. The frequency of no formal education was 14 among the 150 receiver which was 9.3 % of the total value. The frequency of primary level was 35 (23.3%) of the total value. Junior school level was 36 (24%). Secondary level was 37 representing 24.7% of the total value. Only 28% of the receiver completed the above Secondary degree. A sizeable number of the receivers 14% were rickshaw puller, followed by 20.7% who were employed in various trades, majority 31.3% of whom was professional house wife. Most of the receiver 17.3% was student. Another 16.7% receiver said that they were others profession. Monthly family income of the service receivers, the highest value was 10001-20000 taka which was 61 (40.67%) receivers among 150 Receivers.

Service provides by age, the highest value was 36-40 years which was 26% of the total value. The lowest value was more than 55 years which 6% of the total value and Mean age  $\pm$  SD= 41.02 $\pm$ 9.11. From the 50 respondents, 29 representing 58% were males and 21 respondents representing 42% were females with educational level from Junior School Certificate and SSC, 12% obtaining Higher Secondary Certificate, with 12% obtaining the graduation and 28% complete the post-graduation degree. Within the respondents 20% were Doctor, followed by 16% were Nurse. Majority 26% of whom were professional Office attendant. Another 6% were receptionist, 8 % were pharmacist, 20% were ward boy and 4 % were others profession.

**Table 2. Distribution of the service receivers according to whether come willingly in the hospital, demand for consulting with doctors, easy find to the OPD, quickly name registration and total time required for getting treatment (n=150).**

<b>Come willing in the hospital</b>	<b>Frequency</b>	<b>Percent</b>
Yes	123	82.0
No	27	18.0
Total	150	100.0
<b>demand for consulting with doctors</b>	<b>Frequency</b>	<b>Percent</b>
Yes	104	69.3
No	46	30.7
Total	150	100.0
<b>Easy find to OPD</b>	<b>Frequency</b>	<b>Percent</b>
Yes	137	91.3
No	13	8.7
Total	150	100.0
<b>Quickly name registration</b>	<b>Frequency</b>	<b>Percent</b>
Yes	104	69.3
No	46	30.7
Total	150	100.0
<b>Total time required for getting treatment</b>	<b>Frequency</b>	<b>Percent</b>
Less than 1 hour	71	47.3
Between 1-2 hours	47	31.3
Between 2-3 hours	14	9.3
More than 3 hours	18	12.6

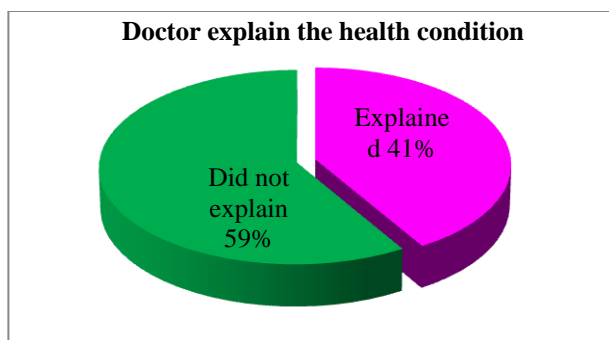
Table 2 shows that there were 82% of the respondent came to the hospital OPD willingly for the treatment of their illness and only 18% of the service receiver came to there by the advice of others. Among them 104 receivers get the doctor according to their demand and 46 patients didn't get the doctor according to their demand. 91.3% of service receivers said that they easy to find the OPD, 8.7% of the receivers said that they did not find the OPD easily and 69.3% of the receivers quickly registered their name and there were 30.7% of the service receivers did not quickly registered their name from the tick counter of OPD.

During data collection 71 (47.3%) service receivers reported that they spent time less than 1 hour at the hospital for getting total health service, the 47 (31.3%) receivers said they spent times between 1-2 hours at the hospital for getting total health services. The 9.3% service receivers who spent times between 2-3 hours for getting total health services, rest of 18 (12.6%) receivers said that they spent times more than 3 hours for getting total health services.

**Table 3. Distribution of service receivers by their opinion regarding the doctor listen health problems carefully and given advice (n=150).**

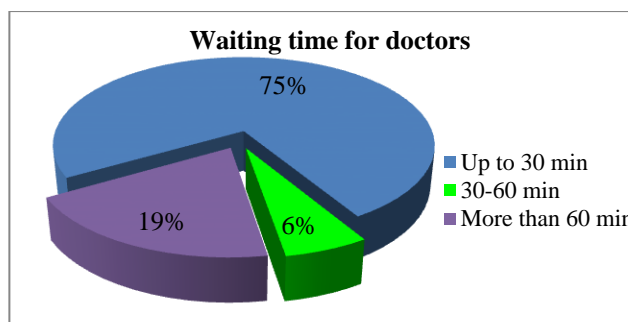
Doctor listen the problem carefully		Frequency	Percent
Yes		126	84.0
No		24	16.0
Total		150	100.0
Doctor given advice			
Variables	Comments	Frequency	Percent
No advice, only giving prescription	Yes	108	72.0
	No	42	28.0
Give advice only	Yes	19	12.7
	No	131	87.3
Ask to collect drugs	Yes	45	30.0
	No	105	70.0
Advice for operation	Yes	17	11.3
	No	133	88.7
Advice for investigation	Yes	60	40.0
	No	90	60.0

Table 3 shows that there were 84% of the service receiver said that the doctor listen their problem carefully and there were 16 % of the service receiver said that the doctor don't listen their problem carefully and different patient get different advice from the doctors. 108 patients take only prescription among 150, 19 patients give advice only among 150, 45 patients ask to collected drugs among 150, 17 patients take advice for operation among 150 and 60 patients take advice for investigation among 150.



**Figure 1. Distribution of service receivers by their opinion regarding the doctor explains their health condition. (n=150).**

Figure 1 shows that there were 41% service receiver said that the doctor explain their health problem and 59% of the service receiver said that the doctor don't explain their health problem during the service receive.



**Figure 2. Distribution of the service receivers regarding to waiting time for doctors after arrival in hospital. (n=150).**

The above Figure 2 shows that the waiting time of the service receivers, there were 74.7% service receivers said that they wait up to 30 minutes for doctor and there were 6% service receivers said that they wait 30-60 minutes for the doctors and 19.3% service receivers said that they wait more than 60 minutes for the doctors.

**Table 4. Distribution of service receivers by their opinion regarding problem faced during receiving services and giving suggestion for improving more. (n=150).**

<b>Types of Opinion</b>	<b>Frequency</b>	<b>Percent</b>	<b>Rank</b>
Dissatisfaction to Physical facilities (Chair Fan)	71	47.3	1
Decrease number of manpower	55	36.7	2
Disturbance by broker	53	35.3	3
Require long time	47	31.3	4
Decrease medicine supply	44	29.3	5
Poor security	40	26.7	6
Unclean and unsatisfactory toilet facilities	33	22.0	7
Interfere of medicine representative	29	19.3	8
Dissatisfaction of investigation	25	16.7	9
No provision of safe drinking water	22	14.7	10
OPD Shifting	21	14.0	11
<b>Types of Suggestion</b>	<b>Frequency</b>	<b>Percent</b>	<b>Rank</b>
To increase manpower	74	49.3	1
To increase modern seating arrangement	61	40.7	2
To improve OPD security by RAB	56	37.3	3
To improve Doctor patient relationship	50	33.3	4
To increase medicine supply	44	29.3	5
To establish modern investigation facilities	39	26.0	6
Improve clean and satisfactory toilet facilities	38	25.3	7
To open separate counter for staff	37	24.7	8
To provide safe Drinking water	30	20.0	9
To add evening shift	28	18.7	10

\*Total value were exceed the sample size due to multiple variable

The above Table 4 shows that the opinion regarding the problem faced during receiving services, there were 47.3% of service receivers gave opinion about the dissatisfaction of physical facility, 36.7% were decrease number of manpower, 35.3% were disturbance by broker, 31.3% were require long time, 29.3% were decrease medicine supply, 26.7% were poor security. 22.0% were unclean and unsatisfactory toilet facilities, 19.3% were interfere of medicine representative, 16.7% were dissatisfaction of investigation, 14.7% were no provision of safe drinking water and rest of 14% service receivers gave opinion about OPD shifting.

Suggestion by the service receiver regarding services in tertiary level hospital for improving services. 49.3% of the service receivers suggested that manpower should be increase which rank was first (1). 40.7% of the service receivers suggested that seating arrangement should be modernized, 37.3% of service receivers suggested that improved the OPD security by involvement of RAB, 33.33% of service receivers suggested that improvement of the doctor patient relationship. Regarding the medicine supply 29.3% of the service receiver suggested that availability of medicine should be needed for better treatment. About the facility of hospital 26% service receivers suggested that establishes modern investigation facilities. Regarding cleanliness and hygiene practice 25.3% of the service receivers suggested that toilet should be clean for improve the satisfaction level. About the counter facility 24.7% of the service receivers suggested that counted should be separated for staff and patient. Drinking water facility 20% of the service receivers suggested that provide safe drinking water. Regarding the shifting 18.7% of the service receiver suggested that add the evening shifting which rank was last (10).

**Table 5. Distribution of service receivers by their opinion regarding dealing of service providers. (n=150).**

Service providers	Opinion regarding dealing of service provider					Total
	Highly satisfied	Satisfied	Uncertain	Dissatisfied	Highly dissatisfied	
Doctor	10 (6.7%)	92 (61.3%)	43 (28.7%)	5 (3.3%)	0 (0%)	150 (100%)
Nurses	1 (0.7%)	54 (36.0%)	80 (53.3%)	14 (9.3%)	1 (0.7%)	150 (100%)
Receptionist	4 (3.3%)	36 (24.0%)	97 (64.7%)	10 (6.7%)	3 (1.9%)	150 (100%)
Pharmacy staffs	3 (2.0%)	46 (30.7%)	94 (62.7%)	7 (4.7%)	0 (0%)	150 (100%)
Office attendants	0 (0%)	34 (22.7%)	97 (64.7%)	17 (11.3%)	2 (1.3%)	150 (100%)

The table 5 shows opinion regarding dealing of service providers on level of satisfaction in OPD. Most (62.3%) of the service receivers were satisfied about the doctors dealing in OPD while only 3.3% of service receivers were dissatisfied regarding doctors dealing in OPD. About half (53.3%) of the service receivers were uncertain regarding dealing of nurses while only 0.7% of service receivers were highly dissatisfied. On the other hand 24.0% of receivers were satisfied, 64.7% were uncertain while only 1.9% was highly dissatisfied regarding dealing of receptionist. Only 4.7% of service receivers were dissatisfied, 62.7% were uncertain and 30.7% of service receiver were satisfied regarding dealing of pharmacy staffs. Most (64.7%) of service receivers were uncertain while 22.7% were satisfied and 11.3% of service receivers were dissatisfied regarding dealing office attendants in OPD.

**Table 6. Distribution of service providers by their opinion regarding knowledge about their hospital OPD follows one of the objective of CRM and opinion about develop OPD Services (n=50).**

Opinion	Frequency	Percentage
Yes	8	16
No	1	2
Not applicable	41	82
Total	50	100
Opinion about develop OPD services		
Opinion	Frequency	Percent
Enhance manpower	5	10.0
Develop cleaning facilities	4	8.0
Ensure enough emergency medicine availability	1	2.0
Enhance manpower and Modern equipment	20	40.0
Enhance manpower modern equipment and enough medicine availability	20	40.0
Total	50	100.0

To the question “Dose your hospital OPD follow one of the objective of PRM?” as shown in Table 6, there were 50 service providers, 8 representing 16% of the provide have gave their opinion that Hospital OPD actually follow one of the objective (Improving patient service) of PRM and 1 representing 2% of the provider gave their opinion which hospital OPD does not follow any objective of CRM (PRM), and 41 (82%) didn’t have knowledge regarding about CRM objective.

Most (40%) of the service providers gave their opinion to enhance manpower, modern equipment and enough medicine availability, 5% of the providers gave their opinion for the enhance manpower, 4% of the respondents gave their opinion to develop cleaning facility and only 2% of the respondents said that to ensure enough emergency medicine supply.



In this study, all the service providers (n=50) said that there were no suggestion box in the OPD for the patient to give suggestion. Moreover, all the service providers (n=50) suggested that they will give effective training on CRM because maximum service providers (51) have no knowledge about CRM.

#### 4. Conclusions and Recommendations

The present study describes the customer relationship management in a tertiary level hospital' OPD of KMCH. It was found that majority of service provider had not knowledge about CRM and its objectives. Majority of the service receiver came to hospital willingly. Most of service providers said that there were a lack of service provider, modern equipment and medication in the OPD and they recommended that enhanced manpower, modern equipment and adequate supply of medication.

The following recommendations are put forward on behalf of researcher for further improvement of Customer Relationship Management in a Tertiary Level Hospital.

- Training should be given among the service provider regarding CRM
- There is health organization with wide size and scope in such a situation pre-planning should be ensured for a successful implementation of CRM.
- Electronic health record facility should be established.
- Suggestion box should be included in OPD in tertiary level hospital for improvement of services.
- Modernized investigation facility should be included.
- Hospital facility should be improve for customer satisfaction
- Periodical study focusing on CRM in the hospital should be implemented to keep up with the change of the phenomena.

#### Conflict of interest

None to declare

#### References

- Barton E, R Mohon and M Piot, 1980. On being in charge. 1st ed. Geneva World Health Organisation, pp 63.
- Osaman FA, 2008. Health Policy Programmes and System in Bangladesh. Achievements and Challenges. South Asian Survey. pp. 263-288.
- Koh HC and G Tan, 2005. Data mining applications in healthcare. Journal of Healthcare Information Management, 19: 64-72.
- Siau K, 2003. "Health care informatics." IEEE transactions on information technology in biomedicine: a publication of the IEEE Engineering in Medicine and Biology Society, vol. 7, Mar. 2003, pp. 1-7.
- Naidu A, 2009. Factors affecting patient satisfaction and healthcare quality. Int. J. Health Care Qual. Assur., 22: 366-381.
- Salauddin AKM, 1998. Hospital management. 2nd ed. Published by Mrs Hosne Ara; July 1998. pp. 4-27.