

ophthalmologists should never say 'nothing can be done' to a visually disabled child as a lot can be offered through rehabilitative services even if the curative services reached their limits. Teachers/volunteers enriched with this new knowledge could further strengthen the care through a multidisciplinary approach. Lack of advocacy is perhaps the main constraint in such initiatives. A program approach to integrate rehabilitation into eye health care in Oman could be a model for other countries to follow. Commitment of the health staff, teachers, parents and well-wishers will make this goal achievable. Oman is perhaps the first country in the Eastern Mediterranean Region of the WHO and in the Gulf Council Cooperation to commence programme approach for rehabilitation of children with low vision disability.

Received 17th August 2004. Accepted for publication in final form 15th February 2005.

From Eye and Ear Health Care (Khandekar), and Health Affairs (Mohammed), Ministry of Health, Oman. Address correspondence and reprint requests to: Dr. Rajiv Khandekar, Eye and Ear Health Care, Ministry of Health (HQ), PO Box 393, P.O. 113, Muscat, Oman. Tel. +968 607524. Fax. +968 601832. E-mail: rajshpp@omantel.net.om

## References

1. Khandekar R, Abdulhelmi S. Magnitude and determinants of refractive error in Omani school children – A review of three years cross sectional information. (Oman refractive error study) *Saudi Med J* 2004; 25: 447-452.
2. Keeffe J. Assessment of Low Vision in Developing Countries; Book 1 and 2. WHO/ PBL/95-48.
3. Hyvärinen L. Classification of visual impairment and disability. *Bull Soc Belge Ophthalmol* 1985; 215: 1-16.
4. Hyvärinen L. Consideration in evaluation and treatment of the child with low vision. *Am J Occup Ther* 1995; 49: 891-897.
5. Hyvärinen L. Assessment of Low Vision for Educational Purposes and Early Intervention, Part I. Precision Vision. La Salle; 1999. Available at URL: <http://www.lea-test.fi/en/assesseme/cracow.html>

Consumer satisfaction with primary health care services in Hail City, Saudi Arabia

Abdelshakour M. Abdalla, MPH,  
Abdalla A. Saeed, MFPH, Mohieldin Magzoub, PhD,  
Evert Reerink, PhD.

Primary health care centers form the corner stone of the free health system in the Kingdom of Saudi Arabia. This programme began in 1984, and assessing how it is functioning should be a continuous process to correct deficiencies. Assessment tools included a few studies on consumer satisfaction conducted in Primary Health

Care Centers (PHCCs) in several regions in the country.<sup>1-3</sup> None have been conducted in Hail City and hence we have performed this study to assess satisfaction quantitatively and to assess its correlates. Such satisfactions studies have several aims including identifying how consumers perceive health services.

This was a facility-based, cross-sectional study conducted during the whole month of August 1999 in the primary health care centers in the Hail region. The study sample consisted of every tenth consumer visiting 4 centers randomly selected on a geographical basis. The 80 consumers selected from each center were informed of the objectives of the study and that their participation was voluntary, being assured that data collected would be used only for the stated research. Data were collected using an anonymous self-administered, pilot tested modified version of a patient satisfaction questionnaire and a consultation satisfaction questionnaire. Satisfaction was rated on a Likert scale ranging from 1 (highly unsatisfied) to 5 (highly satisfied). The questionnaire was pilot tested, and minor modification in the sequence or wording of some questions was introduced. The internal consistency of the overall satisfaction score, and the satisfaction scores with the different services provided examined by using Cronbach alpha, which was over 0.8500 for all services studied. Analysis of variance was performed using Kruskal-Wallis non-parametric test to study the satisfaction scores of the different service components according to the sociodemographic and geographic variables studied.

Results showed that most respondents were aged under 35 (174) married (181) with intermediate/secondary schools education (161) government sector employees (119), with a monthly income of under 6000 (1 US\$ = 3.75 SR) Saudi Riyals (238). Almost 278 of the respondents had a family file (record) in the centers. Two hundred and forty-nine of the patients lived near the centers, 40, far and 8 very far. The overall mean satisfaction was 3.68 (SD 0.49). Higher satisfaction scores were reported from subjects who are over 44 years of age, females, divorced, with secondary school education, who are students or unskilled laborers, with an income of 1500-3000 Saudi Riyals, who have a family record in the PHC center. These differences, however, were not statistically significant. However, distance traveled from home to the PHCC and having a family file in the PHCC showed significant differences in the satisfaction scores. The shorter the distance from the respondent's residence to the PHCC, and the fact of having a file in the PHCC, the higher the satisfaction scores.

Table 1 shows the mean satisfaction as assessed by respondents for services offered by physician,

Consumers satisfaction with PHC services

Table 1 - Mean satisfaction scores according to studied patient's characteristics (p value)

Variable	Physician	Child care	Pharmacy	Receptionist	Reception	Dental	Radiology	Laboratory
<b>Age (yrs)</b>	(0.14)	(0.30)	(0.09)	(0.49)	(0.05)	(0.55)	(0.44)	(0.07)
16 -24	4.40	4.40	4.18	3.55	3.95	3.45	3.07	2.95
25 - 34	4.38	4.25	4.16	3.47	3.96	3.27	3.04	2.61
35 - 44	4.40	4.29	4.96	3.23	3.64	3.39	2.92	2.49
45 +	4.56	4.46	4.28	3.52	3.93	3.52	3.28	2.67
<b>Gender</b>	(0.93)	(0.05)	(0.22)	(0.53)	(0.10)	(0.18)	(0.10)	(0.23)
Male	4.42	4.26	4.10	3.49	3.81	3.33	2.96	2.60
Females	4.43	4.23	4.20	3.42	3.96	3.47	3.21	2.75
<b>Marital Status</b>	(0.18)	(0.57)	(0.88)	(0.10)	(0.01)	(0.67)	(0.01)	(0.34)
Married	4.43	3.38	4.15	3.38	3.77	3.38	3.06	2.59
Single	4.33	4.23	4.08	3.62	4.12	3.31	2.86	2.77
Widowed	4.50	4.38	4.13	3.50	3.62	3.63	2.77	2.50
Divorced	4.64	4.24	4.24	3.52	3.88	3.56	2.88	2.88
<b>Education</b>	(0.39)	(0.45)	(0.78)	(0.21)	(0.17)	(0.32)	(0.69)	(0.63)
Illiterate	4.33	4.25	4.15	3.25	4.78	3.18	2.95	2.53
Primary	4.41	4.43	4.17	3.48	4.05	3.48	3.03	2.62
Intermediate	4.38	4.28	4.10	3.39	3.77	3.29	2.95	2.71
Secondary	4.54	4.37	4.19	3.61	3.88	3.49	3.19	2.77
University +	4.50	4.27	4.10	3.59	4.00	3.54	3.24	2.50
<b>Income (SR)</b>	(0.08)	(0.00)	(0.15)	(0.29)	(0.07)	(0.16)	(0.87)	(0.22)
< 1500	4.28	4.19	4.03	3.45	3.73	3.27	3.11	2.76
1500 - 2999	4.46	4.34	4.26	3.49	4.06	3.42	3.03	2.75
3000 - 5999	4.48	4.56	4.11	3.48	3.92	3.18	3.09	2.50
6000 – 8999	4.52	4.43	4.25	3.49	3.80	3.61	2.92	2.55
9000 +	4.17	3.77	3.85	3.08	3.69	3.00	3.23	3.08
<b>Occupation</b>	(0.11)	(0.80)	(0.66)	(0.00)	(0.04)	(0.24)	(0.11)	(0.33)
Employee	4.40	4.34	4.09	3.40	3.85	3.45	3.06	2.7
Business	4.34	4.27	4.11	3.32	3.75	3.27	3.02	2.56
Laborer	4.56	4.33	4.22	4.11	4.00	3.33	3.89	3.11
Unemployed	4.43	4.36	4.18	3.60	4.18	3.66	3.20	2.66
Student	4.72	4.48	3.85	3.74	3.85	3.44	2.63	2.70
<b>Have File</b>	(0.30)	(0.15)	(0.63)	(0.81)	(0.59)	(0.22)	(0.00)	(0.00)
Yes	4.43	4.31	4.14	3.46	3.88	3.41	3.12	2.72
No	4.22	4.50	4.14	3.41	3.82	3.09	2.32	1.95
<b>Distance</b>	(0.00)	(0.21)	(0.28)	(0.58)	(0.37)	(0.09)	(0.38)	(0.96)
Very far	4.00	4.00	3.63	3.39	3.63	3.63	2.50	2.75
Far	4.15	4.20	4.03	3.35	3.80	3.08	3.09	2.68
Near	4.48	4.36	4.12	3.48	3.90	3.43	3.08	2.65
<b>Mean score (SD)</b>	4.42 (0.64)	4.33 (0.75)	4.14 (0.72)	3.46 (0.84)	3.88 (0.81)	3.38 (1.03)	3.06 (1.22)	2.67 (1.04)
SD - standard deviation								

laboratory, pharmacy, dental clinic, x-rays, waiting room, receptionist and well baby clinic. The highest satisfaction score was for physician (4.42) and the lowest for laboratory services (2.67). Analysis of variance showed that patients who have a family file in the PHCC, who live nearer to the PHCC, working as laborers, with monthly income less than 9000 SR, tend to have significantly higher satisfaction scores with some of these services. Other variables were not significantly associated with satisfaction scores. The different service items were broken into individual components, and the lowest satisfaction was for availability of laboratory investigations (2.07). Communication scored the lowest score for physicians, well baby clinic and receptionist services. Dental emergency, female reception area, availability of drugs and laboratory tests were the items receiving the lowest satisfaction scores for these services. Income, occupation and the distance from respondent's residence to the PHCC were significantly associated with satisfaction scores of some of these services. Patients who are working in private business, those with a monthly income of 9000 Riyals and those living far away from the PHCC gave significantly lower satisfaction scores.

The overall computed consumers' satisfaction with all provided services in this study was 3.68 (73.6%). Previous studies in the Kingdom and other countries including Gulf countries have reported satisfaction scores ranging from 51-97%.<sup>1,5</sup> Such wide variation may be genuine, but may be due to differences in the studied populations, methods or sampling procedures used, as well as the different health systems and socio-cultural values and beliefs. Laboratory, x-ray, dental clinic and receptionist services scored relatively low satisfaction scores. Previous studies have reported that problems faced by patients attending centers included insufficient drug supply and inadequate and delayed laboratory, and radiological services.<sup>3</sup> Such poor satisfaction in our study may reflect, but respondents may not be aware that the scope of primary health care services is not identical to that of hospitals. All physicians' services scored high satisfaction scores, with patient listening to consumers' complaints scoring the lowest satisfaction scores among the physician's services and the clinical examination the highest scores. Other studies have reported that most complaints concern poor communication of health professionals rather than their professional competence.<sup>6</sup> Training both students and doctors in communication skills increases open discussion and may produce greater sensitivity to patient satisfaction. Our patients were satisfied with most physician services and this may be related to the policy of easy referral to hospital when needed. Our other findings agree with those of many others, which have shown that satisfaction with PHCC services was not significantly or consistently related

to gender, education and marital status,<sup>1,5</sup> but income and age in our study were significantly associated with some services. Older patients and those with lower income tend to show significantly higher satisfaction scores. Both of these categories are usually less demanding. The association between the distance from the consumer's home to the center with satisfaction scores of services agrees with those of other studies, which found that the longer the distance traveled to the center, the lower the utilization and satisfaction with services offered.<sup>2</sup> Even in countries with a good network of roads and transportation services, where most citizens have private cars such as Saudi Arabia, the traveled distance plays a significantly negative part in the satisfaction with services offered.

In conclusion, to increase consumers' satisfaction of PHCCs services in Hail city, corrective interventions are needed in some service components particularly in laboratory and radiology services and for improving communication skills for all the health team members particularly the receptionists.

**Acknowledgment.** The authors acknowledge the support of the Director of Primary Health Care Department, MOH, Hail City, Kingdom of Saudi Arabia and Adel Hassan, Suleiman Ali, Ibrahim Al-Hassan, Faisal Alzain, and Hagi Eid for data collection and Woldemariam Girma for data support.

Received 20th November 2004. Accepted for publication in final form 22nd March 2005.

From the Department of Preventive Medicine (Abdalla), North West Armed Forces Hospital Programme, Tabuk, College of Applied Medicine (Saeed, Magzoub), King Saud University, Riyadh, Kingdom of Saudi Arabia and from Rosmalen (Reerink), the Netherlands. Address correspondence and reprint requests to Dr. Abdelshakour Mohamed Abdalla Ali, Department of Preventive Medicine, North West Armed Forces Hospital Programme, PO Box 100, Tabuk, Kingdom of Saudi Arabia. Tel. +966 (4) 4411088 ext. 82442. E-mail: Abdallaali63@hotmail.com.

## References

- Al-Qatari G, Haran D. Determinants of users' satisfaction with primary health care settings and services in Saudi Arabia. *Int J Qual Health Care* 1999; 11: 523-531.
- Alaiban K, Al-Omar B, Narine L, Al-Assaf A, Javed F. Survey assessing satisfaction at public and private health care facilities in Riyadh, Saudi Arabia. *Ann Saudi Med* 2003; 23: 417-419.
- Al-Faris E, Khoja T, Falouada M, Saeed A. Patients' satisfaction with accessibility and services offered in Riyadh health centers. *Saudi Med J* 1996; 17: 11-17.
- Bodour S, Ozdemir Y, Kara F. Outpatient satisfaction with health centers in Urban Areas. *Turk J Med Sci* 2002; 32: 409-414.
- Harrison A. Patients' evaluations of their consultations with primary health clinic doctors in the United Arab Emirates. *Fam Pract* 1996; 13: 59-68.
- Stewart M, Brown J, Boon H, Galajda J, Meredith L, Sangster M. Evidence of patient-doctor communication. *Cancer Prev Control* 1999; 3: 25-30.