

# Caregivers' Satisfaction of Healthcare Delivery at Paediatric Clinics of Universiti Kebangsaan Malaysia Medical Centre in 2009

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## SUMMARY

Patient's satisfaction has become increasingly important as patients evaluate healthcare services for both medical cost and quality. The purpose of this study was to measure the prevalence and the factors influencing caregivers' satisfaction. A cross sectional study of 262 respondents using universal sampling method was conducted at the paediatric clinics of Universiti Kebangsaan Malaysia Medical Centre (UKMMC). Overall, 90.5% were satisfied with the services provided. Satisfaction rates based on various healthcare delivery domains were: 95.0% for communication skills, 88.5% for interpersonal aspect, 83.6% for technical quality, 82.1% for financial aspect, 72.9% for time spent with doctors and 64.9% for ease of contact. This study shows that the caregivers (an unpaid person who helps a person cope with disease) were highly satisfied with the communicational aspect delivered by the clinic. However, there is still room for improvement on ease of contact domain and waiting time in order to produce high quality service.

## KEY WORDS:

Caregivers' satisfaction, Paediatrics, Out-patient clinics, Healthcare system

## INTRODUCTION

Patients' satisfaction is a representative method to capture their perspectives of their experiences with a healthcare providers or services that involve with their healthcare plan<sup>2</sup>. Patients' satisfaction has become increasingly important as they judge physicians on both cost and quality<sup>3</sup>. Their perceptions are beneficial in bench marking, policy making, resources allocation, shaping physician behavior<sup>4</sup>, measurement of changes and identifying patients' dissatisfaction<sup>5</sup>. Patients' satisfaction surveys not only provide feedback to the performance and facilitate quality improvement; they also act as a stage for healthcare consumers to express their concerns<sup>6</sup>.

The quality of healthcare services is improved following reviews of patients' satisfaction surveys, redesign and implementation of policies by healthcare providers<sup>7</sup>. However, results of satisfaction surveys remain underused by healthcare providers in hospital despite a great interest in it<sup>8</sup>. Demand from consumers for higher quality healthcare services has been increasing with the high economic growth<sup>9</sup>.

According to the WHO GPE Discussion Paper series: No. 32, there are seven domains to assess patients' satisfaction; namely general satisfaction, technical quality, interpersonal aspects, communication, financial aspects, time spent with doctor and the ease of contact or availability<sup>10</sup>. Previous studies have shown the importance of these domains in influencing the patients' satisfaction. The doctors' ability to achieve a correct diagnosis and craft an effective treatment plan are no doubt important, hence higher technical quality leads to higher satisfaction<sup>11</sup>. Communication issues and interpersonal aspects are important measurements for parents' satisfaction towards children mental health services<sup>12</sup>. Doctor-patient relationship is also closely related to patient satisfaction<sup>13</sup>. Time spent with doctors' play a role in patient satisfaction whereby satisfaction rate improves as visit length increases<sup>14</sup>.

Apart from these healthcare delivery domains, patients' characteristics, which include age, gender, socioeconomic status may vary the hierarchy of different elements in healthcare delivery systems<sup>15</sup>. Older patients tend to be more satisfied<sup>16,17</sup>. The role of socioeconomic status in affecting patients' satisfaction remains vague<sup>17</sup>. The aim of this study was to obtain the prevalence and factors influencing satisfaction among caregivers in the paediatrics clinic at Universiti Kebangsaan Malaysia Medical Centre (UKMMC).

## MATERIALS AND METHODS

This is a cross sectional study at paediatrics clinics, University Kebangsaan Malaysia Medical Centre and data was collected from February 2009 to May 2009 using universal sampling method (all caregivers were asked). The inclusion criteria were Malaysian citizens, caregivers who gave their consent and caregivers who at least had one previous appointment. A caregiver is defined as an unpaid person (eg. parent) who helps a person with physical care coping with disease<sup>1</sup>. The exclusion criteria were caregivers who refused to participate. Caregivers assessed the healthcare service delivered by the clinic based on their experiences.

Sample size was calculated based on Lwanga *et al* 1991<sup>18</sup>, for a Confident Interval of 95%, and prevalence of satisfaction from a previous study of 60.5%<sup>19</sup>. The calculated minimum sample size was 368 caregivers.

This article was accepted: 15 June 2011

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Data was collected by a guided self-administered questionnaire, using the modified Ware's Patient Satisfaction Questionnaire (Ware PSQ) in both English and Bahasa Malaysia. The Bahasa Malaysia version was translated using a certified translator and back to back translation has been carried out. The questionnaire consists of seven domains (50 questions); overall satisfaction domain (6 questions) and the six healthcare domains (technical quality; 10 questions, interpersonal aspect; 7 questions, communication; 5 questions, financial aspect; 8 questions, time spent with a doctor; 2 questions and ease of contact; 12 questions). Socio demographic data (age, gender, race, level of education, income, relationship of caregivers and patient) was also collected.

Data was analyzed using the Chi-square test, Student t-test, Mann-Whitney U test and Pearson's correlation test with Statistical Package for Social Science (SPSS) program version 13.

**RESULTS**

The total number of respondents in this study was 262 caregivers with a response rate of 99.3%. Out of 262 respondents, 237 (90.5%) respondents were satisfied with services provided whereas 25 (9.5%) respondents were dissatisfied. The socio demographic data of respondents is summarized in Table I.

The level of general satisfaction recorded among caregivers when measured by different paediatric specialty clinics was 100% for the spinal bifida clinic, diabetes and obesity clinic, genetic clinic and dietary clinic. This was followed by neurology clinic (95.5%), endocrine clinic (94.7%), surgery clinic (92.5%), oncology clinic (91.7%), cardiology clinic (90.9%), psychiatry clinic (88.2%), respiratory clinic (87.5%), general paediatric clinic (86.7%), special care neonates clinic (85.7%) and nephrology clinic (83.3%).

Table II demonstrates that communication domain had highest mean score (19.85+2.33), followed by time spent with doctor (7.41+1.37), interpersonal aspect (24.5+2.98), financial domain (27.98+4.11), technical quality (34.22+3.91) and ease of contact (38.58+6.06). However the overall satisfaction is 17.80+2.76.

Table III shows the analysis for variables of socio-demographic factor and mean of general satisfaction. The result indicates significant association between mean of general satisfaction with low educational level, low income and elderly caregivers with p value < 0.05. There were no significant associations between gender, race and relationship of caregiver with patient (p value > 0.05).

There was higher mean overall satisfaction for caregivers with lower educational level compared to caregivers with higher educational level with p <0.05. The median of income was lower among caregivers who were satisfied (RM2500 with IQR RM3700) compared to the caregivers who did not satisfied (RM3500 with IQR RM3000) with p = 0.001. Significant association between level of overall satisfaction and family income of caregivers were also noted. However, there was no significant relationship between age, gender, race, and relationship of caregiver with patient (p value >0.05).

The correlation of overall satisfaction with healthcare delivery domains are shown in Table IV. All domains are directly proportional to overall satisfaction. The correlation was moderate in ease of contact, technical quality and interpersonal domains (r 0.402-0.479). Correlation was weak in the other domains.

58 caregivers gave additional comments and 15 of them were complimentary. However, the majority gave comments they were dissatisfied with ease of contact domain (29 comments), followed by facilities (6 comments), communication (3 comments), interpersonal aspects (3 comments), and miscellaneous things (2 comments).

**Table I: Frequency distribution of sociodemographic of caregivers**

Variables	Frequency	%
<b>Gender</b>		
Male	80	30.5
Female	182	69.5
<b>Age (Years)</b>	39.0*	8.045**
<b>Race*</b>		
Malay	182	69.5
Chinese	52	19.8
Indian	24	9.2
Others	4	1.5
<b>Educational Level**</b>		
No formal education	4	1.5
Primary school	12	4.6
Secondary school	139	53.1
Higher education	107	40.8
<b>Income (RM)</b>	3000.00***	3000.00****
<b>Relationship with Patient</b>		
Biological parent	258	98.5
Non-biological parent	4	1.5

\* mean  
 \*\*standard deviation  
 \*\*\*median  
 \*\*\*\*Inter-quartile range  
 + Will be collapse into Malay and Non-malay groups in bivariate analysis  
 ++Will be collapse into low educational level and high educational level in bivariate analysis

Table II: Mean score according to healthcare delivery domains

Healthcare delivery domain (total of questions)	mean	Standard deviation	median	Inter-quate range
Communication (5)	19.85	2.33	20.00	2.00
Interpersonal aspect (7)	24.50	2.98	24.00	3.00
Technical quality (10)	34.22	3.91	34.00	5.00
Financial (8)	27.98	4.11	28.00	5.00
Time spent with doctor(2)	7.41	1.37	8.00	2.00
Ease of contact (12)	38.58	6.06	39.00	8.00
Overall satisfaction (6)	17.80	2.76	18.00	3.00

Table III: Level of general satisfaction by sociodemographic of caregivers

Variables	Level of general satisfaction		p value
	mean	s.d	
<b>Gender*</b>			
Male	171.96	16.38	0.288
Female	169.63	16.28	
<b>Age **</b>	r = 0.216		<0.0005
<b>Race*</b>			
Malay	170.75	14.79	0.588
Non-Malay	169.42	19.42	
<b>Educational level*</b>			
Low	173.32	16.23	<0.0005
High	166.04	15.52	
<b>Income (RM)***</b>	r = -0.129		0.037
<b>Relationship with patient*</b>			
Biological parent	170.25	16.37	0.467
Non-biological parent	176.25	12.06	

\* - t test  
 \*\* - pearson correlation  
 \*\*\* - spearman correlation  
 s.d - standard deviation

Table IV: Correlation of overall satisfaction with healthcare delivery domains

Healthcare delivery domains	Pearson r value	P value	Correlation
Ease of contact	0.479	<0.0005	Moderate
Technical quality	0.421	<0.0005	Moderate
Interpersonal aspect	0.402	<0.0005	Moderate
Communication	0.330	<0.0005	Weak
Financial	0.207	0.001	Weak
Time spent with doctor	0.286	<0.0005	Weak

**DISCUSSION**

The objective of this study was to determine factors that contribute to caregivers’ satisfaction in paediatric clinics. It was found in a previous study that females have less general satisfaction compared to male caregivers because they have higher expectation of health care services<sup>20</sup>. Despite having this fact, our studies show no significant association between gender and general satisfaction. However, it is still debatable whereby one of the studies found that males tend to be more satisfied than females towards the healthcare services<sup>21</sup>.

This study also shows that age of caregivers had no significant association with their general satisfaction towards health care services and this is similar with a previous study<sup>22</sup>. The same result can be concluded when compared between Malay and non Malay though satisfactory level among Malay was high. One of the possible explanations for this finding was because the number of non Malay caregivers was less compared to Malay caregivers and so it cannot represent the ethnicity as a whole<sup>23</sup>.

Caregivers with higher education were less satisfied with the service provided by the pediatric clinics<sup>17</sup>. Caregivers with higher education may have higher expectations on healthcare services<sup>24</sup>, so when these preconceived expectations were not met, they are not satisfied. Meanwhile, family income had no significant association with general satisfaction<sup>23</sup>. This study took place in urban area, hence there is not much difference in term of expectation towards the healthcare service even they have different income<sup>23</sup>. The difference in economic development in the countries of each study might contribute to these inconsistent findings.

Results from our study shows that all the respondents who have general satisfaction were satisfied with all domains. There was a significant association between general satisfaction and technical quality domain<sup>25,26</sup>, interpersonal domain<sup>12</sup>, communication domain<sup>26</sup>, time spent with the doctor domain<sup>26</sup>, ease of contact domain<sup>27</sup> and financial domain. As the healthcare delivery domains were the modifiable variables, improving the quality in these domains

will secure a higher satisfaction level and create a positive transference from the caregivers.

Based on the previous study, communication was a strong and important factor to determine the satisfaction among the patient<sup>28</sup>. The same result was obtained from this study whereby the caregivers were most satisfied with the communication domain compared to other domains. The most probable reason for this finding was that the doctors in a teaching hospital was more informative and sensitive towards the caregivers concerns, since careful listening to patient's complaint is an important characteristic of an ideal physician<sup>29</sup>.

Caregivers were least satisfied with ease of contact domain especially for items referring to operating hours and waiting time. Long waiting time was associated with decreased patient satisfaction<sup>27</sup>, and the availability of doctors during office hours also affected patients' satisfaction<sup>25</sup>. The fact that teaching hospitals were dealing with more complicated health problems than those in non-teaching hospitals contributes to the increase of waiting hours and this creates issue among caregivers who live far from the hospital<sup>30</sup>.

A quarter of the comments were complimentary comments which support the high general satisfaction among the caregivers. However, most negative comments by the caregivers were related to long waiting time and doctors not being punctual. Caregivers also demand more specialists on duty so that they have greater contact with specialists.

Other than that, they also requested staff to be more friendly. Caregivers also hope to be informed earlier should there be any cancellation of appointment or delay in clinic operating time. Again, this shows the significance of communication and interpersonal aspects affecting the caregivers' satisfaction.

Caregivers also complained about pharmacists. They claimed that pharmacist refused to provide adequate supply of medicine prescribed without giving a valid explanations. As UKMMC is a national referral centre, many patients travelled from a long distance and it is inconvenient for caregivers as they have to come back and forth frequently to get the medicine. Pharmacists should explain clearly to caregivers if the drugs were prohibited to be prescribed in large amount. There was also a suggestion to provide a mini library for children.

Our research has its own limitations. In order to get more respondents, our main constraint was time as the caregivers have to catch up with several appointments involving different disciplines in a short period of time, for example in haematological and surgical cases. Therefore there were incomplete questionnaires where some caregivers were unable to finish answering all questions.

## CONCLUSION

The majority of the caregivers were satisfied with the healthcare services delivered in the paediatrics clinics, UKMMC. Satisfaction levels were high in all healthcare

delivery domains. The educational level and all healthcare delivery domains had significant association with the level of general satisfaction. Even though caregivers were satisfied with all healthcare delivery domains, there are still room for improvements on ease of contact domain and waiting time. Efforts should also be made in reducing the waiting time and to improve on punctuality. The staff should inform the caregivers for any delay or cancellation of appointment so that caregivers can manage their time efficiently. Alternatively, the clinic may provide an interesting waiting area by switching on the television or audio video equipments, or to have a reading corner for both caregivers and children so that they can have some activities that can be done while waiting for their turn.

## ACKNOWLEDGMENTS

We would like to express our appreciation to Associate Professor Dr. Bilkish Abdul Aziz, Head of Paediatrics Department UKMMC, staffs of paediatric clinic UKMMC, all patients and caregivers involved in the study.

## REFERENCES

- Hileman J, Lackey N, Hassanein R. Identifying the needs of home caregivers of patients with cancer. *Oncology Nursing Forum*. 1992; 19(5): 771-77.
- Harris LE, Swindle RW, Mungai SM, Weinberger M, Tierney WM. Measuring patient satisfaction for quality improvement. *Med Care*. 1999; 37: 1207-13.
- Thomas AM. Patient Satisfaction: Measuring the art of Medicine. *JAMA*. 1998; 280(24): 21-27.
- Delbanco TL. Quality of care through the patient's eyes. *BMJ*. 1996; 313: 832-35.
- Stratmann WC, Zastowny TR, Bayer LR, Adams EH, Black GS, Fry PA. Patient satisfaction surveys and multicollinearity. *Qual Manage Health Care*. 1994; 2(2): 1-12.
- Cleary PD. The increasing importance of patient surveys. *BMJ*. 1999; 319: 720-23.
- Rogers G, Smith DP. Reporting comparative results from hospital patient surveys. *Int J Qual Health Care*. 1999; 11(3): 251-59.
- Boyer L, Francois P, Dautre E, Weil G, Labarere J. Perception and use of the results of patient satisfaction surveys by care providers in a French teaching hospital. *Int J Qual Health Care*. 2006; 18(5): 359-64.
- WHO. WHO Country Cooperation Strategy Malaysia 2006-2008. WHO Representative Office in Malaysia 2009.
- WHO. A framework for measuring responsiveness. GPE Discussion Paper series: No. 32. Geneva: World Health Organization 2008.
- Otani K, Kurz RS, Harris LE. Managing primary care using patient satisfaction measures. *Journal of Healthcare Management*. 2005; 50(5): 311-24.
- Huang LH, Woolverton M, Hepburn K. Outcomes in a system of care. Georgetown University, National Technical Assistance Center for Children's Mental Health. Washington, D.C. 2002.
- Buller MK, Buller DB. Physicians' communication styles and patient satisfaction. *Journal of Health and Social Behaviour*. 1987; 28: 375-88.
- Gross DA, Zyzanski SJ, Borawski EA, Cebul RD, Stange KC. Patient satisfaction with time spent with their physician. *J Fam Pract*. 1998; 47: 133-37.
- Baker R. Pragmatic model of patient satisfaction in general practice: progress towards a theory. *Qual Health Care*. 1997; 6: 201-04.
- Hayes E. Nurse practitioners and managed care: Patient satisfaction and intention to adhere to nurse practitioner plan of care. *J Am Acad Nurse Pract*. 2007; 19(8): 418-26.
- Sitzia J, Wood N. Patient satisfaction: a review of issues and concepts. *Soc Sci Med*. 1997; 45(12): 1829-43.
- Lwanga SK, Lemeshow S. Sample size determination in health studies: A Practical Manual. World Health Organization Geneva 1991.
- Suriyati AA. Laporan Tesis Sarjana. Kajian Kepuasan Pelanggan di Klinik-klinik Dengan dan Tanpa Status Pensijilan ISO 9000 Di Negeri Sembilan. 2007. UKM

20. Weismann CS, Rich DE, Rogers J, Crawford KG, Grayson CE, Henderson JT. Gender and patient satisfaction with primary care: tuning in to women in quality measurement. *J Womens Health Gend Based Med.* 2000; 9(6): 657-65.
21. Nguyen Thi PL, Briancon S, Empereur F, *et al.* Factors determining inpatient satisfaction with care. *Soc Sci Med.* 2002; 54: 493-504.
22. Linda CZ, Ellen MA, Frans JO, Mieke HG, Hanneke CJM. Satisfaction with the outpatient encounter. *J Gen Inter Med.* 2004; 19(11): 1088-95.
23. Pitaloka SD, Rizal AM. Patients' satisfaction in antenatal clinic Hospital Universiti Kebangsaan Malaysia. *Journal of Community Health.* 2005; 12(1): 1-10.
24. Hall JA, Dornan MC. Patient sociodemographic characteristics as predictors of satisfaction with medical care: a meta-analysis. *Soc Sci Med.* 1990; 30(7): 811-18.
25. Sisk JE, Gorman SA, Reisinger AL, Glied SA, Dumouchel WH, Hynes MM. Evaluation of Medicaid managed care: satisfaction, access, and use. *JAMA.* 1996; 276: 50-5.
26. Thiedke CC. What do we really know about patient satisfaction? *Family Practice Management* 2007;14(1):33-6.
27. Feddock CA, Hoellein AR, Griffith III CH, Wilson GF, Bowerman JL, Becker NS, Caudill TS. Can physicians improve patient satisfaction with long waiting times? *Evaluation and The Health Professions.* 2005; 28(1): 40-52.
28. Al-Doghaiter AH, Abdelrhman BM, Wahid Saeed AA. Patients' satisfaction with physicians' services in primary healthcare centres in Kuwait City, Kuwait. *Journal of the Royal Society for The Promotion of Health.* 2000; 120(3): 170-74.
29. Al Dousari H, Al Mutawa A, Al Mithen N. Patient Satisfaction According to Type of Primary Healthcare Practitioner in the Capital Health Region, Kuwait. *Kuwait Medical Journal.* 2008; 40(1): 31-38.
30. Cynthia TB, Barbara M. Organizational Effects on Patient Satisfaction in Hospital Medical-Surgical Units. *The Journal of Nursing Administration.* 2009; 39(5): 220-27.