PATIENT SATISFACTION TOWARD MEDICAL WARD SERVICES IN A TEACHING HOSPITAL (TH) AND A GENERAL HOSPITAL (GH)

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ABSTRACT

A contrived cross-sectional study was conducted among medical inpatients admitted to the medical wards of a Teaching Hospital (TH) and a General Hospital (GH) in the Kota Bharu district to study patient satisfaction toward medical ward services in both hospitals. A validated, self-administered patient satisfaction toward medical ward service (PSMWS) questionnaires were given to 376 eligible medical inpatients. This study showed that demographic characteristics of two groups were similar except median family income higher among TH group (RM925 vs. RM775, p<0.05), median Patient's Out-of-Pocket Expenditure (POE) was higher among TH group (RM35 vs. RM28, p<0.001), mean Length of Stay (LOS) was longer among TH respondents(j.8 vs. 3.3 days, p<0.05). Level ofpatient satisfaction toward medical ward services in HKB was 54 percent while TH was 42 percent (p=0.018). GH medical inpatients were more satisfied with the services of nurses, doctors, other ward staff and financial aspect of medical ward services while TH medical inpatients were more satisfied with the clean and comfort (include medical ward facilities) aspect of medical ward services. It is recommended that hospital administration use satisfaction data to identify and improve specific medical ward service areas in order to gain higher patient satisfaction and better utilization of their medical ward services.

Key words: *Patient satisfaction, teaching hospital, general hospital, medical ward services.*

INTRODUCTION

Pascoe defined patient satisfaction into two-parts, firstly; the 'contrast ' model which stated that whenever the service experience is greater than the patient's expectations, he or she is satisfied. The 'assimilation' model stated that when the patient does not fully understand the service experience (due to inadequacy of clinical knowledge), he or she may adjust their expectations downward if the service experience falls below expectations (Pascoe, 1983). Linder-Pelz defined patient satisfaction as positive evaluations of distinct dimensions of health care based on patient expectations and provider performance.

Patient satisfaction must be understood within a context that contained multiple construct (elements) likely to satisfy the patient (Linder-Pelz S, 1982b).

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The importance of patient satisfaction to the healthcare managers include (i) a measure of the process of care and evaluation of health care services from the patient's point of view which allow health manager identify healthcare services weakness and improve their services to the patients (Sitzia and Wood,1997), (Strasser and Davis, 1991) (ii) increased return of patients to the hospital (Steiber and Krowinski, 1990) (iii) more compliance to their healthcare and maintainance of consistent relationship with their healthcare provider (Wartman,1983). This study was undertaken to study patient satisfaction toward medical ward services in a Teaching Hospital (TH) and a General Hospital (GH) in the Kota Bharu district of Kelantan state. The satisfaction data gathered from this study could be utilized by the local hospital managers to improve their medical ward services to the local medical inpatients.

MATERIALS AND METHODS

This is a contrived cross-sectional study conducted among medical inpatients admitted to the medical wards of a Teaching Hospital (TH) and a General Hospital (GH) in the Kota Bharu district of Kelantan state from April 2003 to September 2003. The inclusion criteria were medical inpatients who spent at least two nights of hospitalization and more than 15 years of age.The data was obtained from the validated, self-administered patient satisfaction toward medical ward service (PSMWS) questionnaires.

PSMWS forms were given to 376 eligible medical inpatients. Each patient satisfaction item was scored in Likert scales from 1 = very unsatisfactory or strongly disagree to 5 = very satisfactory or strongly agree. The respondents were asked to give their satisfaction rating towards seven domains of medical ward services namely doctor service, nursing service, other staff service, loyalty, finance aspect, cleanliness and comfortness and miscellaneous aspect of medical ward services. Before launching the statistical analysis, item variables were summed for the corresponding domain and transformed into percents of the total maximum score weight. One summary measure of patient satisfaction (the composite satisfaction score) was computed by summing all domain variable scores. A series of simple and multiple linear regressions were performed for each domain to identify the social, demographic and patient characteristics associated with the patient satisfaction. The domain scores were then dichotomized at a cut point of below 80 as unsatisfied and equal to or above 80 as satisfied; the dichotomized domain scores were then analyzed using binary logistic regression. Multiple logistic regression models were fitted between each domain and several independent variables. Stepwise variable selection methods were applied on each domain versus nine independent variables namely residence, admission diagnosis, education, phone, age group, income, occupation, expense on food and hospital where the patient was admitted. The cut points of the p-values for entry and removal of the variables from the model were 0.05 and 0.1 respectively. The variables in the prototype final models were checked for interactions and tested whether they were independent risk factors or confounders. Data entry was done by using the EpiInfo 6 software while data analysis by using SPSS version 11.0 software. In this study, the operational definition of patient satisfaction was subjective perception of the patient who received health services based on patient expectations and health provider performance.

RESULTS

Table 1A and 1B show that the demographic characteristics of the Teaching Hospital (TH) and General Hospital (GH) were similar except median family income higher among TH group (RM925 vs. RM775, $p<0.05$), median Patient's Out-of-Pocket Expenditure (POE) was higher among TH group (RM35 vs. RM28, $p<0.001$), mean Length of Stay (LOS) was longer among TH respondents(5.8 vs. 3.3 days, $p<0.05$).

Table 1A: Distribution of the socio-demographic and current admission characteristics of the respondents (categorical variables)

Variables	TH (n =188)		GH (n=188)		p-value	Total (n=376)	
	Number	%	Number	%		Number	%
Gender							
Male	93	49.47	92	48.94	0.918	185	49.2
Female	95	50.53	96	51.06		191	50.8
Age group (year)							
Young (15-35)	64	34.04	67	35.64	0.336	131	34.8
Middle (36-45)	26	13.83	35	18.62		61	16.2
Old (46 and above)	98	52.13	86	45.74		184	49.0
Education							
Low (Primary)	80	42.6	72	38.3	0.131	152	40.4
Middle (Form 1 to 5)	76	40.4	68	36.2		144	38.3
High (University)	32	17.0	48	25.5		80	21.3
Marital status							
Married	144	76.60	154	79.26	0.203	298	79.3
Single	44	23.40	34	20.74		78	20.7
Occupation							
Employed	90	47.87	78	41.49	0.213	168	44.7
Otherwise	98	52.13	110	58.51		208	54.3
Residence *							
Urban	116	61.70	98	52.13	0.061	214	56.9
Rural	72	38.30	90	47.87		162	43.1
Income (RM)							
Low (0-500)	53	28.19	66	35.11		119	31.7
Middle (501-1000)	61	32.45	82	43.62		143	38.0
High (>1000)	74	39.36	40	21.28	0.001	114	30.3

Telephone *							
Yes	86	36.70	58	30.9	0.003	164	38.3
No	102	63.30	130	69.1		232	61.7
Admission diagnosis *							
Infectious	55	29.26	42	22.34		97	25.8
Respiratory	27	14.36	39	20.74		66	17.6
Cardiovascular	50	26.60	31	16.49	0.024	81	21.5
Renal	14	7.45	24	12.77		38	10.1
Metabolic	10	5.32	17	9.04		27	7.2
Other	32	17.02	35	18.62		67	17.8
Food expenses (RM)							
Low (0-2)	29	15.43	66	35.11		95	25.3
Medium (3-7)	105	55.85	82	43.62	0.001	187	49.7
High (>7)	54	28.72	40	21.28		94	25.0
Hospital bill (RM)							
Low (0-10)	111	59.04	163	86.7	0.001	274	72.9
Medium (11-20)	15	7.98	6	3.19		21	5.6
High (>20)	62	32.98	19	5.05		81	21.5
Length of Stay(day)							
2-3 days	53	28.19	108	57.45		161	42.7
4-5 days	59	31.38	64	34.04		123	32.7
>5 days	76	40.43	16	8.51	0.001	90	24.0
Zero income(RM)	0	0.00	9	100%		9	100%

* Significantly different at p<0.05 (t-test or Mann-Whitney U test)
GH: General Hospital, TH:Teaching hospital, RM: Ringgit Malaysia

Table **1B:** Distribution of the socio-demographic and current admission characteristics (Continuous variables) of the respondents

Variable	TH (n = 188)			GH (n = 188)			Total (n=376)		
	Median	Mean	SD	Med	Mean	SD	Median	Mean	SD
Age (year)	47	44.84	17.72	43	43.93	16.67	44.00	44.38	17.19
Income (RM)*	925	1150.46	824.4	775	905.19	871.05	800.0	1027	855.8
Length of stay (day)*	5	5.77	3.74	3	3.35	1.62	4.00	4.56	3.1
Hospital bill (RM)*	10	21.21	35.64	3	6.66	20.05		13.94	29.8
Food expenses (RM)*	5	6.06	4.37	3	4.46	4.28	5.00	5.26	4.4
Other Expenses (RM)	10	9.06	6.47	9	8.31	6.82	10.0	8.69	6.6
Transport expense (RM)	10	9.03	7.61	5	8.46	9.69	10.0	8.74	8.71
Total Patient-Out-of-Pocket Expenditure (RM)*	35	45.36	39.45	20	27.89	25.08	25.50	36.63	34.1

GH: General Hospital
TH:Teaching hospital RM: Ringgit Malaysia
* Significantly different at P<0.05 (t-test or Mann-Whitney U test)

UNIVARIATE ANALYSIS

Table 2 below shows that four domains of patient satisfaction score toward medical ward services namely doctors, nurses, staff and finance domain were found to be significantly in favour of the GH group.

Table 2: Univariate analysis of item and domain scores of PSMWS questionnaire

Domains and Items Satisfaction Scores	TH		GH		Hospital given higher scores by patients	p-value*
	Median	Mean	Median	Mean		
Loyalty	12.00	79.25	12.00	78.86	TH	0.700
-Overall quality	4.00	3.91	4.00	3.95	GH	0.900
-Will come back	4.00	3.96	4.00	3.94	TH	0.500
-Will recommend	4.00	4.01	4.00	3.93	TH	0.100
Nurse	16.00	78.62	16.00	80.37	GH	0.050
-speak politely	4.00	3.86	4.00	3.98	GH	0.013
-satisfied service	4.00	3.92	4.00	4.04	GH	0.036
-skill & knowledge	4.00	3.89	4.00	3.94	GH	0.700
-use easy language	4.00	4.03	4.00	4.09	GH	0.300
Doctor	48.00	74.30	50.00	76.48	GH	**0.010**
-speak politely	4.00	4.11	4.00	4.09	TH	0.500
- introduce themselves	3.00	3.18	3.00	3.26	GH	0.400
-greet patient						
-listen to patient	3.00	3.15	3.00	3.27	GH	0.200
problems	4.00	3.91	4.00	3.96	GH	0.300
-explain procedure						
-explain treatment	4.00	3.74	4.00	3.89	GH	0.020
-use easy language	4.00	3.80	4.00	3.93	GH	0.023
-explain discharge plan	4.00	3.87	4.00	4.04	GH	0.038
-told side effect	4.00	3.84	4.00	3.82	TH	0.900
-told appointment						
-told compliance	4.00	3.48	4.00	3.63	GH	0.100
-satisfied with service	4.00	3.70	4.00	3.91	GH	0.003
-skill & knowledge	4.00	3.72	4.00	3.86	GH	0.005
	4.00	3.88	4.00	3.92	GH	0.500
	4.00	4.00	4.00	4.07		0.500
Staff	16.00	78.19	16.00	80.05	GH	0.055
-dress appropriately	4.00	4.11	4.00	4.16	GH	0.400
-satisfied attendant service	4.00	3.83	4.00	3.98	GH	0.032
-satisfied attendant skills	4.00	3.78	4.00	3.87	GH	0.600
-other staff skill	4.00	3.89	4.00	3.98	GH	0.300
Clean & comfort	34.00	73.27	33.00	71.60	TH	**0.039**
-furniture is adequate	4.00	3.82	4.00	3.65	TH	0.014
-lighting is functioning						
-ventilation is satisfactory	4.00	4.01	4.00	3.92	TH	0.039
-bed spacing adequate	4.00	3.93	4.00	3.74	TH	0.053
-linen satisfactory						
-number of fans adequate	4.00	3.99	4.00	3.57	TH	0.001
-TV adequate	4.00	3.50	4.00	3.66	GH	0.033
-toilet cleanliness	4.00	3.73	4.00	3.62	TH	0.255
-ward cleanliness						
	3.00	3.09	3.00	2.96	TH	0.043
	3.00	3.23	4.00	3.36	GH	0.100
	4.00	3.63	4.00	3.69	GH	0.500

Miscellaneous	34.50	69.31	35.00	69.33	GH	0.900
-food satisfactory	4.00	3.57	4.00	3.61	GH	0.600
-understand ward materials	3.00	3.05	3.00	3.23	GH	0.100
-public transport is adequate	4.00	3.45	3.50	3.44	TH	0.900
-ambulance is satisfactory	4.00	3.61	4.00	3.63	GH	0.500
-ward sign adequate	4.00	3.50	4.00	3.64	GH	0.100
-car parking is adequate	3.00	3.10	3.00	2.86	TH	0.010
-child-visitors law allowed	4.00	3.56	4.00	3.53	TH	0.800
-outside food law allowed	4.00	3.80	4.00	3.77	TH	0.800
- valuables thing law allowed	3.00	2.83	3.00	2.82	TH	0.800
- caretaker allowed	4.00	4.12	4.00	4.09	TH	0.500
Finance	6.00	64.49	7.00	68.78	**GH**	**0.001**
-afford hosp bill	3.00	3.15	3.00	3.38	GH	0.001
-bills reasonable	3.00	3.29	4.00	3.49	GH	0.002
All combined	74.37	73.79	75.32	75.07	**GH**	**0.018**

* Nonparametric test p-values
PSMWS: Patient Satisfaction Medical Ward Service
GH: General hospital TH= Teaching hospital

LEVEL OF PATIENT SATISFACTION

Table 3 below shows that the level of patient satisfaction toward medical ward services in GH was 54 percent while TH was 42 percent (p=0.018) by using cut-off domain satisfaction scores of 80.

Table 3: Proportion of Satisfied Respondents of TH and GH Using Domain Satisfaction Scores of 80

	Proportion of satisfied patient at cut-off point of domain score 80
TH respondents (n=188)	42.0%
GH respondents(n=188)	54.3%
Combined HUSM and HKB (n=376)	48.1%

TH= Teaching hospital, GH= General hospital

MULTIVARIATE ANALYSIS

Table 4A and 4B below show the results of eight different multiple logistic regression models fitted separately between each domain and a set of independent variables. The loyalty domain had seven significant predictors; the younger patients admitted with non-infectious disease, owning a phone, high income group, and high education level living in a rural district and admitted to the Teaching hospital(TH) were more likely to be loyal to the hospital than those who were older, admitted with chronic diseases, not owning a phone, low income, low education level, living in an urban area, and admitted to the General Hospital(GH). Belonging to the GH group, younger age and phone-ownership were about

two times more satisfied with the nursing services compared to the respective referent groups. The respondents were satisfied with the doctor services more if they were highly educated, residents of a rural district, having a phone, spending more on food, , and belonged to the GH group. The staff domain had a wider spectrum of predictors; namely hospital group, place of residence, age, education, phone ownership and food cost. The GH patients, younger age, middle education level, owning a phone, those coming from the rural area, and could afford to pay for food, were satisfied with

the staff services. Clean-and-comfort domain was satisfied by those who were not employed, could afford to pay for food, more educated, owner of phone and with chronic diseases. Those who were admitted with chronic diseases, paid high food cost and had phones were satisfied with miscellaneous services. The older patients who had phones and who could effort on food expenses and belonging to the GH group were financially satisfied. When it comes to the overall composite scores of patient satisfaction, the GH group was twice as satisfied as the TH group along with low income group and those who could afford to pay for food. A simple computation based on the r-squared values after a series of simple linear regressions of the composite scores on each domain showed relative contribution of each domain to the variation in the composite scores. The nurse (20%), the staff (19%) and the doctor (17%), made up over fifty percent of the variation in the composite scores and these domains were scored high among the patients in the GH group. We also found that the hospital where the respondent was admitted is the most important variable showing significant association with five domains after adjusting with the other variables such as demographics and cost and diagnosis related to the index admission to the medical wards. In particular, the GH group was satisfied with five domains; namely the doctors, nurses, other staff, finance and composite scores. However, the TH patients were about two times more likely to come back to the hospital during future hospitalization. The clean-and-comfort and the miscellaneous domains were not associated with any patient groups. Other independent variables which were retained in the stepwise multiple regression models as independent risk factors, in a descending order of statistical significance; were phone, food expenses, age group, education, admission-diagnosis, area of residence, income and occupation.

DISCUSSION

Level of Patient Satisfaction

Our result found that by using domain satisfaction score of 75 as the cut point for level of satisfaction, the level of patient satisfaction (based on composite seven domain scores) was 47.9 percent compared to 15.7 percent by using satisfaction domain score cut point domain score of 80. The low prevalence of satisfaction level found in this study was consistent with previous local patient satisfaction study. For instance, in a satisfaction study which involved seven public hospital in Malaysia, Roslan found that only 19 percents of inpatients were satisfied toward the medical care they received (Roslan JMG,2000). However, Hall's meta-analysis of 221 patient satisfaction studies reported that the overall satisfaction toward health care services varied from study to study (Hall and Dornan,1988a). Another patient satisfaction survey in three public general hospitals in Athen, Greece, (n=1295 patients) reported high prevalence of satisfaction (86 percents) toward medical and nursing services (Niakas et al,2004).

Patient satisfaction toward satisfaction domains of medical ward services of TH and GH

As the overall satisfaction score was the weighted average of the seven domains of medical ward services which again are contributed by the corresponding item scores, we evaluated the satisfaction domains and items which are attributable to the overall patient satisfaction. As stated earlier; nurse, doctor and staff domains carried highest weight for the composite scores, we would discuss these domains, their respective items and their underlying explanation.

Composite satisfaction score

We found that the major contributors to the overall satisfaction score were service and communication skills of nurses ($r=0.7$; $P<0.001$), doctors ($r=0.62$; $P<0.001$), and staff ($r=0.27$; $P<0.001$) (Table 5). Our finding was consistent with one study which looked at the general and specific aspects of consumer satisfaction with general practitioner services, general dental care services and hospital in-patients care. Despite high general levels of consumer satisfaction (83-97%); detailed and specific questions revealed greater levels of expressed dissatisfaction; 38% felt that they could not discuss personal problems with their general practitioners, 51% felt their dentist was not easy to reach at weekends or holidays, whilst 35% felt hospital doctors did not give sufficient information (Williams and Calnan 1991).

Nurse domain

We found that the GH respondents gave significantly high satisfaction scores toward items of 'nurses spoke politely' and most of them strongly agreed with the services provided by the nurses. These items were attributable to the high nurse domain scores among this group. The patients were also satisfied with the nurses' use

of understandable language and confident in the nurses' skills and knowledge.

Staff domain

Hospital care is a holistic venture in which all parties play crucial roles to achieve goals and mission of the institution. However, no studies highlight the role of the hospital staff other than doctors and nurses in patient satisfaction. We found that staff service and communication skills played important role in patient satisfaction and hence patient loyalty to the hospital. For instance, the impact of pharmacist interventions on the care and outcomes of patients with depression in a primary care setting was compared with the physician-led conventional care. The results showed similar rates of adherence to antidepressant regimens and improvements in the outcomes of depression at one year (Capoccia, Boudreau et al. 2004).

Doctor domain

In our study, the significant satisfaction items in the doctor domain were doctors' use of easy language, doctors' explanation of medical procedure, doctors' explanation of treatment, doctor told patient about the importance of compliance to treatment and doctor told about the appointment dates. These items were given high satisfaction scores by the GH group. Of the thirteen satisfaction items investigated under the doctor domain, eight items including doctor behaviors such as politeness in greeting and speaking to patients and doctors' explanation of patient's discharge plan were significantly below the acceptable level of satisfaction. This finding was consistent with Steiber statement that insufficient personal attention such as poor doctor-patient communication is the biggest problem for American patient (Steiber and Krowinski,1990). Other satisfaction study in a medical oncology ward in St George Hospital found that the cancer patients were more satisfied and less anxious if more information given by their doctor (Steptoe et al.,1991). However, our study did not address issues related to specific diseases such as cancers.

Finance domain

Seventy-two percent of these patients paid nothing for hospital services and the maximum expenses for food and transport were less than RM 60. The amount of hospital bills paid was not associated with hospital days or with the type disease for which the patient was admitted. Nevertheless' only 37% of the patients were satisfied with this domain' even at the cut-off point domain scores of 75. The GH group was about three times more satisfied financially because they spent less on hospital bills and other expenses.

Clean and comfort domain

The items on furniture, lighting, ventilation, space, linen and audio-visual facilities were significant attributes of the clean-and-comfort domain and much favored by the TH group. However, all items except lighting under this domain were well below the acceptable level satisfaction scores. This can be explained by the fact that TH building was built since last 21 years ago. The TH's medical ward building and facilities (e.g. patient bed, lighting, ward toilet) are relatively newer compared to the GH building which was built 74 years ago. This may explain why TH respondents more satisfied than GH respondents in the clean and comfort domain of medical ward services.

CONCLUSIONS AND RECOMMENDATIONS

Despite low prevalence of patient satisfaction for both HKB and HUSM (54% versus 42%, p=0.018), GH medical inpatients were more satisfied with the interpersonal communication and perceived services of medical ward staff and financial aspect of medical ward services while TH medical inpatients were more satisfied with the cleanliness and comfortness (medical ward facilities) aspect of medical ward services. We recommend local hospital managers to improve healthcare management policy on patient satisfaction activities in public and private hospitals at national level, state level and hospital level; establish a patient satisfaction committee in the hospitals; initiate human resource training in patient satisfaction and enhance research and development on standardized patient satisfaction survey instrument. Hospital managers can use this satisfaction data by identification and improvement of specific medical ward services area. in order to gain higher patient satisfaction and better utilization of their medical ward services.

Table 4A: Multiple logistic regression analysis showing association between independent variables and the loyalty, nurse, doctor, and staff domains of the patient satisfaction scores

Socio-demographic variables	Adjusted odds ratios and 95% CI of OR for patient satisfaction score domains			
	Loyalty	Nurse	Doctor	Staff
Residence				
Urban	1		1	1
Rural	2.32(1.05-5.13)		2.63(1.27-5.44)	2.34(1.20-4.54)
Admission diagnosis				
Infectious				
Chest	1			
Cvd	5.13(1.99-13.24)			
Renal	3.11(1.19-8.13)			
Metabolic	4.90(1.68-14.28)			
Other	7.86(2.41-25.65)			
	3.08(1.23-7.74)			
Education				
High	1		1	1
Medium	-		-	1.83(1.07-3.13)
Low	0.29(0.13-0.68)		0.54(0.27-1.09)*	
Phone				
No	1	1	1	1
Yes	2.50(1.31-4.80)	1.76(0.92-3.34)*	2.85(1.42-5.68)	2.45(1.24-4.81)
Age				
Young	1	1		1
Middle	0.37(1.15-0.92)	0.39(0.18-0.86)		0.41(0.18-0.93)
Old	0.39(0.20-0.75)	0.60(0.36-1.00)*		
Income				
Low	1			1
Middle	-			-
High	2.51(1.31-4.81)			1.68(0.96-2.94)*
Occupation				
Employed				
Otherwise				
Expense on food				
Low			1	1
middle		-	1.36(0.94-1.97)*	2.75(1.35-5.62)
High			-	3.07(1.41-6.69)
Patient groups				
HUSM	1	1	1	1
HKB	0.56(0.29-1.07)*	1.66(0.97-2.86)*	1.83(1.00-3.37)*	2.51(1.38-4.56)

* Significant at P<0.1 (all others are significant at P<0.05)

Table 4B: Multiple logistic regression analysis showing association between independent variables and the clean & comfort, miscellaneous, and finance domains and composite patient satisfaction scores

Socio-demographic variables	Adjusted odds ratios and 95% CI of OR for patient satisfaction score domains			
	Clean & Comfort	Miscellaneous	Finance	All combined
Residence				
Urban				
Rural				
Admission diagnosis				
Infectious	1	1		
Chest	4.29(1.46-12.59)	6.45(1.55-26.78)		
Cvd	2.74(0.90-8.33)*	-		
Renal	5.15(1.43-18.57)	-		
Metabolic	-	-		
Other	-	5.56(1.45-21.29)		
Education				
High	1	-		
Medium	4.24(1.56-11.62)			
Low	3.51(1.02-12.10)			
Phone				
No	1	1	1	1
Yes	2.62(1.11-6.17)	4.31(1.39-13.35)	2.14(1.18-3.90)	1.67(0.94-2.98)*
Age				
Young		-	1	-
Middle			1.83(1.03-3.24)	
Old				
Income				
Low		-	-	1
Middle				0.58(0.37-0.90)
High				-
Occupation				
Employed	1	-		
Otherwise	3.76(1.40-10.15)			
Expense on food				
Low	1	1	1	1
middle	3.82(1.56-9.34)	-	1.85(1.06-3.22)	2.49(1.45-4.16)
High	-	2.57(0.83-7.91)*	-	2.18(1.18-4.03)
Patient groups				
HUSM	-	-	1	1
HKB			2.89(1.73-4.77)	2.56(1.58-4.64)

* Significant at P<0.1 (all others are significant at P<0.05)

Table 5: Relative contribution of each domain scores to the variation in overall domain

Domain score in percent	r-square values	Relative contribution to variation in overall domain
Nurse	.6871	20.09
Staff	.6552	19.16
Doctor	.5962	17.44
Loyalty	.5003	14.63
Clean & Comfort	.3402	9.95
Miscellaneous	.3377	9.88
Finance	.3027	8.85

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