

## ORIGINAL ARTICLE

# ASSESSING THE SERVICE QUALITY OF PHYSIOTHERAPY SERVICES: A CROSS SECTIONAL STUDY AT TEACHING HOSPITALS IN KLANG VALLEY, MALAYSIA

Nasaruddin Mahdzir M.<sup>1</sup>, Aniza I.<sup>2</sup>, Nor Faridah A.R.<sup>3</sup>, Sulha A.<sup>4</sup>

<sup>1</sup> Clinical Training Centre, Faculty of Medicine, MARA University of Technology (UiTM)

<sup>2</sup> Department of Community Health, Faculty of Medicine, National University of Malaysia Medical Centre (UKMMC)

<sup>3</sup> Rehabilitation Medicine Discipline, Faculty of Medicine, MARA University of Technology (UiTM)

<sup>4</sup> Departments of Physic, Ministry of Education, Malaysia

## ABSTRACT

*The physiotherapy services have played major roles as a part of rehabilitation components and emerging in most hospitals throughout Malaysia as well as internationally. As such, there is still a lack of scientific research and reporting about the finding of service quality studies in physiotherapy services at teaching hospitals settings in Malaysia. This study was to assess the level of patients' satisfaction and its contributing factors as well as to assess the quality of physiotherapy services at teaching hospitals in Klang Valley. The cross sectional study was conducted from March until July 2011 among outpatients (311 patients) who has been referred to the Physiotherapy Clinics at Universiti Kebangsaan Malaysia Medical Centre (UKMMC) and Universiti Malaya Medical Centre (UMMC) in Klang Valley. Patients were recruited using simple random sampling technique and data were collected by using the validated self-administered Service Quality (SERVQUAL) Questionnaire. About 62.4% respondents in teaching hospitals have met their expectation. 'Assurance' showed the highest satisfaction score and 'Caring Services' showed the lowest satisfaction score among the entire dimension studied. The factors which significantly influence patient satisfaction include age, education status, working status and number of visit. There are relationships between patient satisfaction with SERVQUAL, Outcome and Corporate Culture components. However, the predictors contributed for overall patient satisfaction at Physiotherapy Clinics at teaching hospitals was not influenced by factors studied ( $p>0.05$ ). The levels of satisfaction that met patients' expectation is 'Moderate' for teaching hospitals and the 'Caring Services' should be focus in order to improve the level of patient satisfaction.*

**Key words:** patient satisfaction, physiotherapy, SERVQUAL, teaching hospital.

## INTRODUCTION

The concept of teaching hospitals in Malaysia is an integral part of the nation's healthcare system, providing an extensive range of modern and sophisticated specialist services such as acute, emergency, newborn, geriatric, diagnostic, rehabilitation, palliative and outpatient care. As part of comprehensive system of health services, teaching hospitals contribute to the nation's health outcomes in combination with other national health keys components, including in higher education and training programmes for various disciplines involving medicine, dentistry, nursing, pharmacy, medical technologist, paramedic and specialist training programmes. Besides that, teaching hospitals also played major roles in disease-prevention strategies, health-promotion strategies, chronic disease management, other primary care services and accessible aged care.

The teaching hospitals have been designed to fulfil the health needs of communities across the nation. In term of physiotherapy services, the patients need to be referred by physicians or specialists through a referral letter in order to receive the physiotherapy services at rehabilitation medicine department which is constitutes the first 'Entrance' between patients and physiotherapists<sup>1</sup>.

Physiotherapy can be describe as physiotherapeutic system of medicine which includes examination, treatment, advice and instructions for the purpose of or in connection with movement dysfunction, bodily malfunction, physical disorder, disability, healing and pain from trauma and disease, physical and mental conditions using physical agents including exercise, mobilization, manipulation, mechanical and electrotherapy, activity and devices or diagnosis, treatment and prevention for Musculoskeletal System, Paediatrics, Neurology, Orthopaedics, Cardio-Respiratory and Women Health<sup>2,3</sup>. The main objective of

physiotherapy services is to facilitate disabled people in order to maximize their potential capabilities of achieving function and independence for activities of daily living by using a variety of techniques such as exercise, massage, joint manipulation and mobilization, muscle re-education, hot and cold packs, electrotherapy, airway clearance techniques and support with the use of aids<sup>4-5</sup>. The proportion of elderly population in Malaysia has been predicted to grow up from 6.3% in Year 2000 to 12.0% or 4.9 million persons by the Year 2030 and the musculoskeletal, neurological, and orthopaedic changes associated with the normal process of ageing recommended that physiotherapy services have major responsibilities and tasks especially in maintaining the normal mobility and function of the well elderly population with physiotherapy intervention through movement rehabilitation, maintenance exercise therapy and preventive health programmes<sup>6-7</sup>.

Physiotherapy services can assist to repair the physical damage by speeding up the healing process and reducing pain and stiffness. However, physiotherapist's roles not bound for offering the treatment only but also to advice patient to prevent problems from returning or even from happening in the first place<sup>5</sup>. In-patients at the 'Working Age' ranged between 19 to 55 years old are the highest number of patients being referred at General Hospital Kuala Lumpur in Year 2003 for the physiotherapy services and still, there is an increasing demand from those patients above 55 years old<sup>4</sup>.

The perception's level of quality of care and services that has been received by the patient in healthcare setting has played the major roles in order to ensure the fulfilment is achieved based on the outcome of the services that shown positive, satisfying and meets their expectations<sup>8</sup>. The rapid changing of modern medical technology and increasing the sub-specialization services in healthcare setting has produced the medical personals that more rely on sophisticated analysis rather than on obtaining a high quality history and physical examination<sup>9</sup>. Nowadays, arising of general awareness regarding the human rights have made the patient's expectations become higher and they requested the best services

by participating actively in decision making, proposed procedures or treatments and various alternative<sup>10</sup>. Other important aspect is the implementation of doctor-patient relationship by respecting the patients believed and values and treating them with dignity<sup>11</sup>.

The patient satisfaction can be defined as 'Meeting the patient's requests'. However, the definition can be further extent that the 'Delighted' patients are those whose expectations or needs were not only met, but have been exceeded<sup>12</sup>. Patient's expectations is persuaded by elements such as previous experience, word of mouth, healthcare providers reputation, mass media, surrounding factors and crucially, the needs and characteristics of the service user<sup>13</sup>.

The aims of this research was to assess the level of patient satisfaction at Physiotherapy Clinics, to identify the association between patient satisfaction with socio-demographic factors, to identify factors contributing to patient satisfaction, to assess the quality of physiotherapy services based on Service Quality (SERVQUAL), outcome and corporate culture components and to explore the strategies in improving healthcare services among physiotherapy.

## MATERIALS AND METHOD

This study is a cross sectional study, conducted from March 2011 to July 2012 among outpatient who was referred to physiotherapy clinics at Universiti Kebangsaan Malaysia Medical Centre (UKMMC) and Universiti Malaya Medical Centre (UMMC) in Klang Valley. Inclusion criteria include the outpatients who had written the consent form, aged 18 years old and above and being referred to physiotherapy clinics. The exclusion criteria consist of in-patients referral to physiotherapy clinics, refuse to participate, whose are not stable condition and non-Malaysian citizens.

The sample size was calculated by using the formula estimating the single proportion with a requirement for 95.0% confidence interval<sup>14</sup>. The prevalence of patient satisfaction in teaching hospitals was estimated to be 90.5% based on the previous satisfaction study conducted at paediatric

clinic in UKMMC<sup>15</sup>. Considering the available resources, a sample size of 247 samples was selected with a precision of 0.05 (5.0%). To accommodate for 20% non-response rate, minimum 295 samples were invited to participate in this study<sup>16</sup>.

A simple random sampling method was applied to select the respondents<sup>16</sup>. The sampling interval was decided based on the estimated number eligible patients attending the clinics on a normal outpatient day, every fifth patients was invited to participate. No possible biases regarding the selection of the study population were anticipated and the samples were representative of the reference population. This research was approved by the Research and Ethic Committee at UKMMC and UMMC in Klang Valley. The SERVQUAL Questionnaire that being applied in this study was a structured, guided Self-Administrated Questionnaire, using the modified and validated by Ministry of Health (MoH) Malaysia<sup>17</sup>. It consists of 18 questions and the dimensions that identified in SERVQUAL components such as:

- a.) Tangibles: Up to date equipments, physical facilities and appearance of personnel
- b.) Reliability: Ability to perform the promised service dependably and accurately
- c.) Responsiveness: Willingness to help customers and provide prompt service
- d.) Assurance: Knowledge and courtesy of employees and their ability to inspire trust and confidence
- e.) Empathy: Caring, individualised attention
- f.) Outcome: Treatment
- g.) Corporate Culture: Caring Services, Team Work and Professionalism

SERVQUAL Instrument has been the predominant technique utilized to measure patient satisfaction in healthcare setting and the gaps of services that 'Meet patients' expectations' by producing the differences between patients' expectations and experiences of the services received<sup>18</sup>. Patients are invited to designate the extent of agreement or disagreement, by using of a Five-Point Likert Scale. Patient is categorised as satisfied if the score is 3 and above and dissatisfied if the score is less than 3<sup>17</sup>.

The SERVQUAL Questionnaire consists of three (3) sections. Part One (I) consists of socio-demographic questions<sup>17</sup>. In Part Two (II), patients were also being asked about their expectations which was consists of 13 questions<sup>17</sup>. However, Part Three (III) was consists of 17 questions regarding patient's experience which was Question 14, 15, 16, 17 are optional<sup>17</sup>. During the sampling process, the Part One (I) and Part Two (II) were given to patient during registration process at the counter, while the Part Three (III) was given to patient once treatment session was completed. Only complete questionnaires are taken as samples<sup>13,17</sup>. Question 18 has functioned to measure the patient's perception regarding the overall satisfaction with physiotherapy services at teaching hospitals in Klang Valley.

The complaints and recommendations by the respondents would be welcomed through the Open Ended Question in the Questionnaire. The results are tabulated into Descriptive Analysis and Multivariate Regression was used to test the hypothesis<sup>19</sup>.

Statistical analysis was carried out using Statistical Package for Social Science (SPSS) version 18.0 and Microsoft Office Excel 2007. Statistical value was considered significant if  $p$  value  $< 0.05$ <sup>20</sup>.

## RESULTS

A total of 311 respondents were surveyed at physiotherapy clinics in teaching hospitals with response rate more than minimum sample size calculated (295 respondents). Out of 311 respondents' perceptions (SERVQUAL Questionnaire: Question 18), 296 (95.2%) respondents were satisfied with the physiotherapy services provided whereas 15 (4.8%) respondents were not satisfied with the services (Question 18: score is less than 3) at teaching hospitals in Klang Valley ( $p < 0.01$ ). The overall level of satisfaction based on patients' experiences (SERVQUAL Questionnaire: Part III) shows those 310 (99.7%) respondents in teaching hospitals were satisfied with physiotherapy services provided ( $p < 0.01$ ). The results showed about 117 (62.4%) respondents at physiotherapy clinics in teaching hospital found that the services provided by physiotherapy clinics have met their expectations ( $p < 0.01$ ). (Table1)

Table1. Patient satisfaction according to overall satisfaction (n = 311)

Satisfaction Category	Overall Satisfaction				P Value
	Satisfied		Not Satisfied		
	f	(%)	f	(%)	
Patient's perception	296	95.2	15	4.8	*<0.01
Patient's experience	310	99.7	1	0.3	*<0.01
Patient's expectation	194	62.4	117	37.6	*<0.01

\*Chi-Square Test, #significant at p<0.05.

The socio-demographic factors which significantly influences the level of patient satisfaction in Teaching Hospitals includes age, education status, working status and number of visits (p value < 0.05) and no significant associations between patient satisfaction with gender, ethnic group, marital status and waiting time (p value > 0.05). (Table2)

Table2. Patient Satisfaction and associated factors (n = 311)

Variables	Frequency (%)		P Value
	Satisfied	Not Satisfied	
Gender			
Male	133 (95.7)	6 (4.3)	0.708
Female	163 (94.8)	9 (5.2)	
Age (Year)			
<40 years	91 (91.0)	9 (9.0)	*0.018
40 - 56 years	86 (94.5)	5 (5.5)	
>56 years	119 (99.2)	1 (0.8)	
Ethnicity			
Malay	171 (96.6)	6 (3.4)	0.273
Chinese	58 (90.6)	6 (9.4)	
Indian	63 (95.5)	3 (4.5)	
Others	4 (100.0)	0 (0.0)	
Marital Status			
Not married	88 (92.6)	7 (7.4)	0.165
Married	208 (96.3)	8 (3.7)	
Education Status			
No formal education	4 (100.0)	0 (0.0)	*0.004
Primary	45 (97.8)	1 (2.2)	
Secondary	148 (98.7)	2 (1.3)	
Tertiary	99 (89.2)	12 (10.8)	
Working Status			
Working	142 (91.6)	13 (8.4)	*0.010
Not Working	154 (98.7)	2 (1.3)	
Number of Visits			
≤3 times	81(91.0)	8 (9.0)	*0.030
>3 times	215 (96.8)	7 (3.2)	
Waiting Time			
≤30 minutes	285 (95.6)	13 (4.4)	0.069
>30 minutes	11 (84.6)	2 (15.4)	

\*Chi-Square Test, #significant at p<0.05.

The 'Assurance' in teaching hospitals showed the highest satisfaction score in SERVQUAL components. However, 'Caring Services' in 'Corporate Culture' component showed the lowest satisfaction score among the entire dimensions in teaching hospitals. There was significant difference in level of patient satisfaction (p value < 0.05) in SERVQUAL (Tangibles (p<0.001), Reliability

(p=0.001), Responsiveness (p<0.001), Assurance (p=0.003), Empathy (p=0.003)), Outcome (p<0.001) and Corporate Culture (Caring Services (p=0.002), Team Work (p<0.001), Professionalism (p<0.001)).

The correlation of independent variables which showed significant association with level of patient satisfaction was included for

multivariate analysis in teaching hospitals. Gender, ethnic group, marital status, and waiting time were not included in the statistical analysis. The Logistic Regression Analysis Model previewed that there was no significant difference between level of patient satisfaction and group of age, educational status, working status, number

of visits, SERVQUAL components, outcome component and corporate culture components in teaching hospitals ( $p > 0.05$ ). The Nagelkerke  $R^2$  value in this analysis was 0.294 which signify that factors in this study contributing only 29.4% to overall patient satisfaction in teaching hospitals. (Table 3)

Table3. Contributing risk factors with Patients' Satisfaction in Teaching Hospital (n = 311)

Variables	B Value	S.E	WALD	P Value	ODD Value	95% C.I	
						Lower	Upper
Constant	-2.913	4.108	0.503	0.478	0.054		
<b>Age</b> ≤56 years old, [>56 years old]	-2.081	1.351	2.374	0.123	0.125	0.009	1.762
<b>Working Status</b> [Govern.], Non-Govern. Sector	0.377	0.657	0.330	0.566	1.458	0.402	5.282
<b>Educational Status</b> [Lower Level], Higher Level	-0.277	1.369	0.041	0.840	0.758	0.052	11.096
<b>Number of Visits</b> ≤3 times, [>3 times]	-0.881	0.634	1.929	0.165	0.414	0.119	1.437
<b>Tangible</b> [Satisfied], Not Satisfied	1.882	1.233	2.330	0.127	6.569	0.586	73.656
<b>Reliability</b> [Satisfied], Not Satisfied	0.525	1.480	0.126	0.723	1.691	0.093	30.772
<b>Responsiveness</b> [Satisfied], Not Satisfied	0.755	0.988	0.584	0.445	2.128	0.307	14.767
<b>Assurance</b> [Satisfied], Not Satisfied	1.046	1.283	.664	0.415	2.846	0.230	35.197
<b>Empathy</b> [Satisfied], Not Satisfied	-1.582	1.122	1.988	0.159	0.206	0.023	1.853
<b>Outcome</b> [Satisfied], Not Satisfied	2.180	1.127	3.740	0.053	8.849	0.971	80.639
<b>Caring Services</b> [Satisfied], Not Satisfied	-0.869	1.703	0.260	0.610	0.419	0.015	11.801
<b>Teamwork</b> [Satisfied], Not Satisfied	0.324	1.208	0.072	0.788	1.383	0.130	14.762
<b>Professionalism</b> [Satisfied], Not Satisfied	-1.733	1.592	1.184	0.276	0.177	0.008	4.006

\* Logistic Regression Analysis Model, #significant at  $p < 0.05$ .

About 89 (28.6%) respondents have feedback their complaints and 59 (19.0) respondents have given their recommendations regarding physiotherapy services at teaching hospitals in Klang Valley. (Table 4)

Table4. Patients' Complains and Recommendations

Domains	Complain s		Recommendatio ns	
	n	%	n	%
Staff	13	14.6	3	5.1
Waiting Time	7	7.9	0	0.0
Treatment	5	5.6	1	1.7
Communicati on	4	4.5	0	0.0
Appointment	8	9.0	2	3.4
Equipment	6	6.7	7	11.9
Environment	26	29.2	38	64.4
Cleanliness	6	6.7	0	0.0
Space/Buildin g	14	15.7	8	13.6
<b>Total</b>	<b>89</b>	<b>100.0</b>	<b>59</b>	<b>100.0</b>

## DISCUSSION

The response rate in this study was 311 respondents (minimum sample size calculated was 295 respondents) which can be considered as good response comparable to other studies such as Ayiesah R. (2003) who did her study regarding the 'Physiotherapy service need: Physicians' and patient referral in Hospital Universiti Kebangsaan Malaysia (HUKM)' with the response rate of 58.0% (116 from 200 respondents). The reason for good response rate in this research was because this study was conducted anonymous with the respondents replying and communicating directly to the researchers. Besides that, the structured and comprehensive validated questionnaire which was applied in the collection of data has played a function in inspiring and stimulating the respondents to guide the respondents in order to express their expectation and experience regarding physiotherapy services and also managed to give feedback within a short time.

This study has found that about 99.7% patients satisfied with the physiotherapy services based on their 'experiences' and the patients' perception have indicated that about 95.2% patients satisfied with the physiotherapy services provided at teaching hospitals in Klang Valley. However, only

62.4% patients at physiotherapy clinics in teaching hospitals were met their expectations. Satisfaction towards physiotherapy services is determined by focusing on social demographic factors, Service Quality (SERVQUAL), outcome and corporate culture components.

In view of gender categories, this outcome shows that gender had no significant association with level of patient satisfaction in physiotherapy clinics at teaching hospitals and the result is similar with the previous studies<sup>21-22</sup>. However, the previous studies found that male patients tend to be more satisfied rather than female patients towards the healthcare services because females have higher anticipation and as well as to be more critical in judging towards the services received<sup>19,23</sup>. Indeed, female patients were found to be more concerned with the healthcare services than men<sup>24</sup>. Gender associated differences in satisfaction with physiotherapy services may require further investigations.

The statistical analysis demonstrated that the level of patient satisfaction at physiotherapy clinics in teaching hospital has increased with increasing of ages and corresponds with previous studies<sup>25-26</sup>. Part of younger patients have shown higher expectation and lack of passionate by impressing their dissatisfied with the services received, tend to be more impatient and usually become easily annoyed when the expectations are not met, suggesting that the quality of physiotherapy services provided is not important to younger rather than older individuals<sup>25,27</sup>. The elderly respondents usually rate their care more positively and higher perceivement than younger respondents<sup>26</sup>.

The result of this study also showed that other ethnic group, Malay and Indian respondents were more satisfied with the physiotherapy services at teaching hospitals that they had received compared to Chinese respondents. However, the study showed no association between ethnicity and the level of satisfaction and the result is similar with the previous finding<sup>13,28</sup>. This finding caused by the composition of higher income Chinese population as the dominant in urban areas based on the income share of household analysis conducted by Department of Statistic Malaysia in 2012, which the

majority with panel clinics services and personnel healthcare insurance and mostly look forward to get the physiotherapy services at any cost especially at semi or fully private healthcare facilities<sup>29</sup>.

In term of marital status, married respondents were found to have higher percentage of satisfaction as compared to bachelor respondents. However, the result of the study showed that there was no statistical association between marital status and the level of patient satisfaction with physiotherapy services at teaching hospitals and this result is contradicted with previous study done<sup>25</sup>. The bachelor patients are shown to express their dissatisfied with the services received, tend to be more intolerant and usually become easily aggravated if their expectations are not met compared with married patients those who have shown high consciousness and mature manners in conjunction of their marital responsibility.

Based on the education status, outcome of this study showed that respondents with lower level of education status were found to have higher level of satisfaction as compared to respondents with higher level of education status in teaching hospitals and was comparable by previous patient satisfaction studies<sup>13,28</sup>. This can be explained as respondents with higher level of education will have higher expectation of service received compared to respondents with lower level of education as they are more exposed to higher learning education, global information technologies and broad coverage by modern massmedia<sup>12</sup>. The statistical association produced that education status has influenced the level of satisfaction with physiotherapy services in teaching hospitals and supported by the finding from previous patient satisfaction research<sup>30</sup>. This result also has influenced by the lacked of knowledge by the respondents with lower level of education status in term of physiotherapy services, choice of treatment and only based on referral from other specialist clinics<sup>1</sup>.

Among the three groups of working status, the statistical analysis has revealed significant association between working status and level of patient satisfaction with physiotherapy services in teaching hospitals and supported by previous studies<sup>13,15</sup>. The

unemployed respondents were found to have higher satisfaction level with physiotherapy services as compared to working respondents. This can be attributed as working respondents will have higher monetary demands and expectations of services that they should received compared to unemployed respondents, more exposed to global socialization environment and service status to various healthcare providers<sup>13</sup>. The working status has significant association with the level of patient satisfaction in physiotherapy clinics at teaching hospitals in Klang Valley.

Results from this study also showed that the number of visits had significant association with level of patient satisfaction. The outcome previewed that the respondents who have attend more than three times are more satisfied rather than the respondents who have attend three times and less. This probably may due to decrease the level of patients' stress caused by the rapid process of recovery of illness that shown when more times the respondents visited the physiotherapy clinics, the more satisfied they were as they may have discovered or experienced more positive things following these visits, certainty about their future and perhaps their expectations to return back to work or career opportunities. However, this results not supported by the finding from the previous study<sup>12</sup>.

In term of waiting time, the outcome from this study also shows contradict result from previous studies that the waiting time had no significant association with level of patient satisfaction at physiotherapy clinics<sup>12,15</sup>.

Quality in term of health delivery were referred to the services that manage to meet the eligible standards, implying excellence and assure the needs of both parties which were patients and healthcare providers<sup>31</sup>. SERVQUAL has functioned as a diagnosis instrument where the healthcare services 'Quality Gaps' as recognized by patients and also allows for prioritization across the five (5) dimensions<sup>32</sup>.

Across the five (5) dimensions of SERVQUAL, statistically significant gap scores were found for Tangibles, Reliability, Responsiveness, Assurance and Empathy<sup>32-33</sup>. Analysis of means by using Mann-Whitney U

Test shows that on each of dimensions disclose satisfaction in all dimensions measured includes outcome (Treatment) and corporate culture (Caring Services, Teamwork and Professionalism) components. For SERVQUAL component, the highest level of satisfaction was in the dimension of 'Assurance' and the dissatisfaction noted in the dimension of 'Tangibles'. It is important to assure patients that they will obtain the desired level and quality of services when referred to physiotherapy clinics. Feeling of assurance are the best conveyed through the skills, professionalism, commitment and efficacy of the staff whose competence and training must come through in every interaction and encounter with patients<sup>33</sup>. 'Tangibles' in the dimension of SERVQUAL component is the area of concern where the physiotherapy clinics in teaching hospitals need for improvement especially the allocation of premises, number of equipments and facilities for the physiotherapy clinics<sup>32</sup>.

From the entire three elements in the dimension of corporate culture, the outcome of this study shows that the greatest satisfaction was in the dimension of 'Teamwork' and the highest disappointment being impressed with element of 'Caring Services'. 'Caring Services' in the dimension of corporate culture component is the area of concern where it shows the lowest satisfaction score among the entire dimensions of SERVQUAL, outcome and corporate culture at physiotherapy clinics in teaching hospitals and required to be given priority in order to improve the level of patient satisfaction. This suggests that staff consciousness needs to be more sympathetic of patient's anxiety perhaps through provision of training or simply through good communication skills<sup>33</sup>.

Multivariate regression was used to test the hypothesis and Logistic Regression Analysis Model has found that the level of patient satisfaction was not influenced by factors studied in teaching hospitals ( $p > 0.05$ ). Other contribution factors that associated with level of patient satisfaction regarding physiotherapy services may required for further investigations and extension study, may perhaps the implementation of qualitative approach should be conducted in order to bring up better understanding regarding the process of patients evaluation

because the knowledge about complexity of such evaluation is still unsatisfactory for physiotherapy services in teaching hospitals in Klang Valley<sup>34</sup>.

The quarter of the complaints in teaching hospitals are about the environment and then followed by the building. This is because the setup of physiotherapy clinics in teaching hospitals was planned soon after the development of the hospitals and lots of renovation works and inconvenience surrounding during operation hours at physiotherapy clinics. The management of physiotherapy clinics should emphasis 'Good Physiotherapy Practice' for the physiotherapists in order to homogenize, structured and well planned the treatment for their patients. Besides that, the complimentary suggestions which support the the high general satisfaction of physiotherapy services are also attributed by emphasizing the equal number of skilled and knowledgeable staffs, most up-to-date and equal number of facilities, competent registration and text messaging appointment system, efficient treatment applied, good communication skills, high personal attention, achieve benchmarking (Clients' Charter) and soft skills implementation.

### Limitations of the study

This study was based entirely on self-reports by patients through an interviewer guided questionnaire. The researchers did not attempt to correlate patients self assessment of their physiotherapy problem and medical records or to compare patients' desired treatments and professional assessments of their needs. Furthermore, since the samples of this study were involved patients who being referred by other specialist clinics to physiotherapy clinics for further treatment, the patients would not expected to alert and aware about the physiotherapy services<sup>4</sup>. The types of treatment and services are delivered by different physiotherapies to variety of patients with varying needs and conditions has attribute to the environment of service act differs from one to another because of variations in technical and human aspects in term of training institutions, experience and individual abilities and personalities<sup>10,33</sup>. Technical, communication and soft skills between staffs at physiotherapy clinics and patients and timing factors combine in an



infinite number of ways to affect the performance of physiotherapy services rendered<sup>35</sup>.

## CONCLUSION

The findings of this study highlight the responsibility of the physiotherapist at teaching hospitals in meeting the patient's expectations is at 'Moderate' level. These results emphasize the significance roles played by physiotherapist in addressing imbalance the patients' knowledge and determining suitable levels of service delivery based on the lowest score shown by the 'Caring Services' component. This suggested that the physiotherapist must develop their soft skills such sense on giving the empathy, determining, interpreting, assuming responsibility for, creative in making decision and acting on patient's expectations, condition and severity. This study also highlights the needs for more in-depth research of patient's attitudes, knowledge and expectations in order to discover the main factors contribute to the satisfaction of physiotherapy services at teaching hospitals in Klang Valley. The continuation of the high quality of physiotherapy services is dependent on retaining and improving relationships with all Service Quality components and focusing and addressing aspects of these relationships in order to maximize and consolidate physiotherapy services influence in the satisfaction level.

## ACKNOWLEDGEMENT

We would like to express our deepest gratitude to Directors of teaching hospitals, Heads of Rehabilitation Medicine Departments, Physiotherapy Units and staffs of physiotherapy services at teaching hospitals in Klang Valley for providing us necessary assistance in carrying out this research. Our utmost sincere appreciation to all outpatients for giving us fullest cooperation without whom there would be no findings. We remain indebted to MARA University of Technology (UiTM), Universiti Kebangsaan Malaysia Medical Centre (UKMMC), Universiti Malaya Medical Centre (UMMC) and Ministry of Health (MoH) Malaysia for granting us permission to embark on this research.

## REFERENCES

- 1 Ayiesah R. Physiotherapy service need: Physicians' and patient referral in Hospital Universiti Kebangsaan Malaysia. *Malaysian Journal of Community Health* 2003; **10**: 57-64.
- 2 Physiotherapy. Official website of India Association of Physiotherapy. 2009. Available from: <http://www.physiotherapyindia.org/> (accessed 1<sup>st</sup> August 2012).
- 3 Department of rehabilitation medicine. Physiotherapy services brochure. Universiti Kebangsaan Malaysia Medical Centre: Kuala Lumpur, 2010.
- 4 Ayiesah R, Zaleha MI. The role of physiotherapy and its services among in-patient referral in Hospital Kuala Lumpur. *Malaysian Journal of Community Health* 2004; **10**: 57-64.
- 5 Physiotherapy and you. Official website of Australian association of physiotherapy. 2008. Available from: <http://physiotherapy.asn.au/>; (accessed 1<sup>st</sup> August 2012).
- 6 Rabieyah M, Hajar MT. Socio-economic characteristics of the elderly in Malaysia. 21<sup>st</sup> Population Census Conference: Kyoto, 2003.
- 7 Feeney SNC, Phelan M, Duffy F, Roush S, Cairns MC, Hurley DA. Patient satisfaction with private physiotherapy for musculoskeletal pain. *BMC Musculoskeletal Disorders Journal* 2008; **9**(50): 1-13.
- 8 Yellen E, Davis GC, Ricard. The measurement of patient satisfaction. *Journal of Nursing Care Quality* 2002; **16**: 23 - 28.
- 9 Shattner A. The essence of patient care. *Journal of Internal Medicine* 2003; **254**:1-4.
- 10 Yousuf RM, Fauzi ARM, How SH, Akter SFU, Shah A. Hospitalised patient's awareness of their rights: a cross-sectional survey from a tertiary care hospital on the east coast of

- Peninsular Malaysia. *Singapore Medical Journal* 2009; **50**(5): 494-499.
- 11 Beach MC, Sugarman J, Johnson RL. Do patient treated with dignity report higher satisfaction, adherence, and receipt of preventive care? *Ann Family Medicine Journal* 2005; **3**(33): 1-8.
- 12 Roslan MG, Tahir A, Nasir AR. Patient satisfaction in Public Hospitals. Ministry of Health. Malaysia Medical Development Division Report: Kuala Lumpur, 2005.
- 13 Nor Hayati I. In-patients' satisfaction in the medical and surgical wards - a comparison between accredited and non-accredited hospitals in the state of Selangor. Master's thesis of Universiti Kebangsaan Malaysia Medical Centre: Kuala Lumpur, 2006.
- 14 Lwanga SK, Lemeshow S. Sample size determination in health studies: A practical manual. World Health Organization Guidelines: Geneva, 1991.
- 15 Aniza I, Rizal AM, Ng YS, Mardhiyyah M, Helmi I, Khair SB, Tahar AR. Caregiver's satisfaction of the healthcare delivery paediatric clinics of Universiti Kebangsaan Malaysia Medical Centre in Year 2009. *Malaysia Medical Journal* 2010; **43**51: 1-19.
- 16 Osman A. Epidemiology methods. Penerbit Dewan Bahasa dan Pustaka: Kuala Lumpur, 1997.
- 17 Maznisham MS. Patient's satisfaction survey: 2/2009 by Health District Office Muar. Ministry of Health: Muar, 2009.
- 18 Taner T, Antony J. Comparing public and private hospital care service quality in Turkey. *Journal of Leadership in Health Services* 2006; **19**(2): 1-10.
- 19 Mon MTO, Saddki N, Hassan N. Factors influencing patient satisfaction with dental appearance and treatments they desire to improve aesthetics. *Biomed Central Journal* 2011; **11**(6): 1-8.
- 20 Nor Hayati I, Azimatun NA, Rozita H, Sh Ezat WA, Rizal AM. In-patients' satisfaction in the medical and surgical wards - a comparison between accredited and non accredited hospital in the state of Selangor. *Malaysian Journal of Community Health* 2010; **11**: 1.
- 21 Xiao J, Zhou X, Zhu W, Zhang B, Li J, Xu X. The prevalence of tooth discolouration and the self-satisfaction with the tooth colour in a Chinese urban population. *Journal of Oral Rehabilitation* 2007; **34**(5): 351-360.
- 22 Akarlan Z, Sadik B, Erten H, Karabulut E. Dentel esthetic satisfaction, received and desired dental treatments for improvement of esthetics. *India Journal of Dental Research* 2009; **20**(2):195-200.
- 23 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. *Journal of Women Health Medicine* 2000; **9**(6): 657-65.
- 24 Hassel A, Wegener I, Rolko C, Nitschke I. Self-rating of satisfaction with dental appearance in an elderly German population. *International Dental Journal* 2008; **58**(2): 98-102.
- 25 Hall JA, Dornan MC. Patient socio-demographic characteristic as predictors of satisfaction with medical care: a meta-analysis. *Social Science Medical Journal* 1990; **30**(7): 811-818.
- 26 Suhaila A. Client's satisfactions study between ISO 9000 certified health clinic in Bandar Baru Bangi, Selangor and non ISO 9000 certified health clinic in Tanglin, Kuala Lumpur and its associated factors. Master's thesis of Universiti Kebangsaan Malaysia Medical Centre: Kuala Lumpur, 2009.

- 27 Young GJ, Meterko M, Desai KR. Patient satisfaction with Hospital care: Effects of demographic and institutional characteristics. *Medical Care Journal* 2000; **38**: 325-334.
- 28 Dyah PS. A customer satisfaction study at the Antenatal Clinic, Hospital Universiti Kebangsaan Malaysia. Master's thesis of Universiti Kebangsaan Malaysia Medical Centre: Kuala Lumpur, 2005.
- 29 Inayati. Client satisfaction among mother in Obstetrics Ward, Universiti Kebangsaan Malaysia Medical Centre (UKMMC). Master's thesis of Universiti Kebangsaan Malaysia Medical Centre: Kuala Lumpur, 2004.
- 30 Pascoe GC. Patient satisfaction in primary health care: A literature review and analysis. *Evaluation and Program Planning* 1983; **6**: 185-210.
- 31 Arries EJ, Newman O. Outpatients experiences of quality service delivery at a teaching hospital in Gauteng. *Health SA Gesondheid* 2008; **3**(1): 40-54.
- 32 Wisniewski M, Wisniewski H. Measuring service quality in a hospital colposcopy clinic. *International Journal of Health Care Quality Assurance* 2005; **18**(3): 217-228.
- 33 Andaleeb SS. Service quality perceptions and patient satisfaction: A study of hospitals in a developing country. *Social Science & Medicine Journal* 2001; **52**: 1359-1370.
- 34 Marcinowicz L, Chlabicz Z, Grebowski R. Patient satisfaction with healthcare provided by family doctors: primary dimensions and an attempt at typology 2009; *BMC Health Services Research* 2009; **9**: 63.
- 35 Ajayi AOO. Patients' waiting time at an outpatient clinic in Nigeria - can it be put to better use?. *Journal of Patient Education and Counselling* 2002; **47**: 121-126.