

The copyright © of this thesis belongs to its rightful author and/or other copyright owner. Copies can be accessed and downloaded for non-commercial or learning purposes without any charge and permission. The thesis cannot be reproduced or quoted as a whole without the permission from its rightful owner. No alteration or changes in format is allowed without permission from its rightful owner.



**PERCEPTION OF INTERNATIONAL STUDENT TOWARDS THE QUALITY OF
SERVICES AND THEIR SATISFACTION WITH
PUSAT KESIHATAN UNIVERSITI, UUM**

UGBOAJA CHIOMA JOY



MASTER OF MANAGEMENT SCIENCE

UNIVERSITI UTARA MALAYSIA

August 2020

**PERCEPTION OF INTERNATIONAL STUDENT TOWARDS THE QUALITY OF
SERVICES AND THEIR SATISFACTION WITH
PUSAT KESIHATAN UNIVERSITI, UUM**

BY



Thesis Submitted to

School of Business

Universiti Utara Malaysia

In Partial Fulfillment of the Requirement for the of Master of Management Science

(MSc)

August, 2020.



**Pusat Pengajian Pengurusan
Perniagaan**

SCHOOL OF BUSINESS MANAGEMENT

Universiti Utara Malaysia

PERAKUAN KERJA KERTAS PENYELIDIKAN
(*Certification of Research Paper*)

Saya, mengaku bertandatangan, memperakukan bahawa
(*I, the undersigned, certified that*)
UGBOAJA CHIOMA JOY (818693)

Calon untuk Ijazah Sarjana
(*Candidate for the degree of*)
MASTER OF SCIENCE (MANAGEMENT)

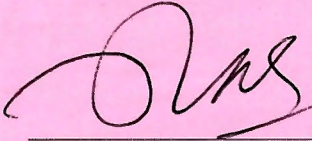
telah mengemukakan kertas penyelidikan yang bertajuk
(*has presented his/her research paper of the following title*)

**PERCEPTION OF INTERNATIONAL STUDENTS TOWARDS THE QUALITY OF SERVICES
AND THEIR SATISFACTION WITH PUSAT KESIHATAN UNIVERSITI, UUM**

Seperti yang tercatat di muka surat tajuk dan kulit kertas penyelidikan
(*as it appears on the title page and front cover of the research paper*)

Bahawa kertas penyelidikan tersebut boleh diterima dari segi bentuk serta kandungan dan meliputi bidang ilmu dengan memuaskan.
(*that the research paper acceptable in the form and content and that a satisfactory knowledge of the field is covered by the research paper*).

Nama Penyelia : **DR. SHAHMIR SIVARAJ BIN ABDULLAH**
(*Name of Supervisor*)

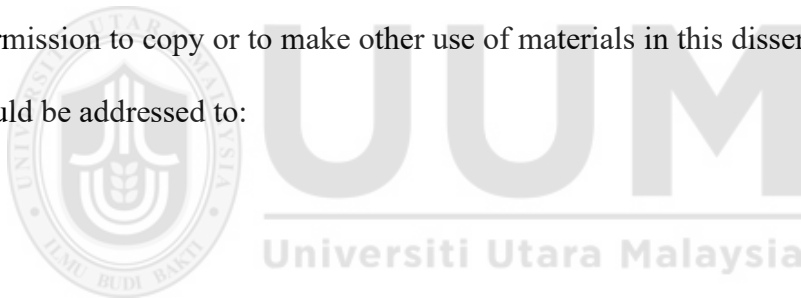
Tandatangan : 
(*Signature*)

Tarikh : **28 JULAI 2020**
(*Date*)

PERMISSION TO USE.

In presenting this dissertation in partial fulfilment of the requirement for a Postgraduate degree from the Universiti Utara Malaysia (UUM), I agree that the Library of this University may make it freely available for Inspection. I further agree that permission for copying of this dissertation in any manner, in whole, in part, for scholarly purposes may be granted by my supervisors, or in their absence, by the Dean of School of Business where I did my dissertation. It is understood that any copying or publication or use of this dissertation parts for financial gain shall not be allowed without any written Permission. It is also understood that due recognition shall be given to me and to UUM in any scholarly use which may be made of any material my dissertation.

Request for Permission to copy or to make other use of materials in this dissertation, in whole or in parts, should be addressed to:



Dean of School of Business.
Universiti Utara Malaysia
06010 UUM Sintok
Kedah Darul Aman, Malaysia.

ABSTRACT

This study was conducted to examine the perceptions of international students towards the quality of service, and their satisfaction with Pusat Kesihatan Universiti, Universiti Utara Malaysia. Previous studies on patient perception and satisfaction identified factors such as medical staff behaviour, medicine and clinic infrastructure availability and medical information as contributing significantly to the patient healing process. This study examined these factors in the context of the services at PKU-UUM. This will enable the management of PKU to tailor as necessary the facilities available at its health centre. It will also provide information on what contributes to the satisfaction of international students when receiving medical assistance. This study used a structured questionnaire which was given to 121 international students at PKU to collect data. The results revealed that both doctor behaviour and clinic infrastructure significantly influence patients' satisfaction with the medical services. Therefore, when seeking to improve the satisfaction with medical services at PKU-UUM especially among international students would require that doctor behaviour and infrastructure be maintained and further improved.

Keywords: Medical Service Quality, Patient's Satisfaction, International Students.

ABSTRAK

Kajian ini dilakukan untuk mengenalpasti persepsi pelajar antarabangsa terhadap kualiti perkhidmatan, dan kepuasan mereka terhadap Pusat Kesihatan Universiti, Universiti Utara Malaysia. Kajian terdahulu mengenai persepsi dan kepuasan pesakit mengenalpasti faktor-faktor seperti tingkah laku kakitangan perubatan, ketersediaan infrastruktur perubatan dan klinik serta maklumat perubatan sebagai penyumbang yang signifikan terhadap proses penyembuhan pesakit. Kajian ini mengkaji faktor-faktor ini dalam konteks perkhidmatan di PKU-UUM. Ini akan membolehkan pihak pengurusan PKU merangka keperluan yang sesuai di pusat kesihatannya. Kajian ini juga akan memberikan maklumat mengenai apa yang menyumbang kepada kepuasan pelajar antarabangsa ketika menerima bantuan perubatan. Kajian ini menggunakan soal selidik berstruktur yang diedarkan kepada 121 pelajar antarabangsa di PKU untuk mengumpul data. Hasil kajian menunjukkan bahawa tingkah laku doktor dan infrastruktur klinik mempengaruhi kepuasan pesakit dengan perkhidmatan perubatan. Oleh itu, ketika berusaha untuk meningkatkan kepuasan dengan perkhidmatan perubatan di PKU-UUM terutama di kalangan pelajar antarabangsa memerlukan tingkah laku doktor dan infrastruktur kini dikekalkan dan seterusnya diperbaiki lagi.

Kata kunci: Kualiti Perkhidmatan Perubatan, Kepuasan Pesakit, Pelajar Antarabangsa

ACKNOWLEDGEMENT

All praises and gratitude are given to God Almighty for his blessings and guidance from the beginning of my life to this moment, and for the completion of my program. I will like to present my humble appreciation and gratitude to all the people who made this journey possible. I am indebted to those who knowingly and unknowingly were so importance during the difficult moment, especially Ekejiuba Augustine Nnaemeka for his continuous motivation.

Firstly, my deepest appreciation goes to my supervisor, Dr Shahmir Sivaraj Abdullah, who provided me with an unlimited amount encouragement, time and professional supports. May the blessings of God never stay away from you and your family? I will not forget to thank all my lecturers who for the knowledge, assistance, guidance, reading, assignments, sharing ideals, providing technical and psychological assistance, and for guidance and supporting my effort to succeed in this program. A special appreciation goes to my family for their support and encouragement. To all who made a contribution towards realizing this work, you all are much appreciated.

TABLE OF CONTENTS

PERMISSION TO USE.....	iv
ABSTRACT.....	v
ABSTRACK.....	vi
ACKNOWLEDGEMENT.....	vii
TABLE OF CONTENTS.....	viii
LIST OF FIGURES.....	xii
LIST OF TABLES.....	xiii
LIST OF ABBREVIATIONS.....	xiv
CHAPTER ONE INTRODUCTION.....	1
1.1 Background of the Study.....	1
1.2 Problem Statement.....	2
1.3 Research Questions.....	3
1.4 Research Objectives.....	4
1.5 Scope of the Study.....	4
1.6 Theoretical Significance.....	5
1.7 Definition of Terms.....	5
1.7.1 Perception of Students.....	5
1.7.2 Quality of Medical Service.....	5
1.7.3 Patient’s Satisfaction	5
1.8 Organization of the Thesis.....	5
CHAPTER TWO LITERATURE REVIEW.....	7
2.1 Introduction.....	7
2.2 The Measurement and Definitions of Patients’ Satisfaction.....	9
2.3 The Concept of Service Quality.....	13
2.4 Medical Service Quality.....	14

2.4.1 Medicine Availability.....	15
2.4.2 Medical Information.....	16
2.4.3 Staff Behaviour	18
2.4.4 Doctor Behaviour.....	19
2.4.5 Clinic Infrastructure	19
CHAPTER THREE RESEARCH METHODOLOGY.....	22
3.1 Introduction	22
3.2 Research Framework	22
3.3 Hypotheses Development	23
3.4 Research Design	23
3.5. Population and Sample.....	25
3.5.1 Sample size determination.....	25
3.5.2 Sampling Procedure.....	25
3. 5.3 Unit of Analysis.....	26
3.5.4 Population Frame.....	26
3.6 Data Collection Procedure	26
3.7 Questionnaire Design.....	27
3.8 Measurement of Variable.....	28
3.9. Pilot of Study	31
3.10 Conclusion	33
CHAPTER FOUR DATA ANALYSIS AND FINDINGS.....	32
4.1 Introduction.....	32
4.2 Preliminary Analysis.....	32
4.2.1 Non-Response Bias.....	32

4.2.2 Reliability Analysis.....	34
4.2.3 Assessment of Outliers.....	35
4.2.4 Multi-collinearity.....	37
4.2.5 Normality.....	38
4.2.6 Linearity	39
4.2.7 Homoscedasticity	39
4.3 Demographic Analysis.....	40
4.3.1 Gender of the Respondents.....	40
4.3.2 Age of the Respondents.....	41
4.3.3 Education Qualifications of the Respondents.....	42
4.3.4 College of Study	42
4.3.5 Country of Origin	43
4.4 Descriptive Analysis of Variables.....	43
4.4.1 Medicine Availability.....	44
4.4.2 Medical Information.....	45
4.4.3 Staff Behaviour	45
4.4.4 Doctor Behaviour.....	46
4.4.5 Clinic Infrastructure.....	47
4.4.6 Patients' Satisfaction with Medical Services.....	48
4.5 Correlation Analysis.....	49
4.6 Regression Analysis.....	51
4.7 Conclusion.....	54
CHAPTER FIVE DISCUSSION AND CONCLUSIONS.....	55
5.1 Introduction.....	55
5.2 Overview of The study.....	55
5.3 Discussions and Implications.....	55

5.3.1 The Relationship between Medicine Availability and Patients’ Satisfaction.....	56
5.3.2 The Effect of Medical Information of Patients’ Satisfaction of Medical Service.....	56
5.3.3 The Effect of Staff Behaviour on Patients’ Satisfaction of Medical Services.....	57
5.3.4 The Effect of Doctor Behaviour on Patients’ Satisfaction of Medical Services.....	57
5.3.5 The Effect of Clinic Infrastructure on Patients’ Satisfaction of Medical Service.....	57
5.4 Research Contribution.....	58
5.4.1 Theoretical Implication.....	58
5.4.2 Practical Implication.....	59
5.5 Limitation of the Research.....	59
5.6 Recommendations for Future Studies.....	59
5.7 Conclusion.....	60
References.....	61



List of Figures

Figure 3.1: Research Design Frame work.....	24
Figure 3.2: Power Analysis showing the minimum sample required size.....	27
Figure 4.1: Boxplot for Univariate Outliers	36
Figure 4.2: Histogram for Normality.....	38
Figure 4.3: Normal P-P Plot for Linearity.....	39
Figure 4.4 Scatterplot for Homoscedasticity.....	41



List of Tables

Table 3.1 Analysis of Variables.....	29
Table 4.1 Mean Comparison and Levene’s Test for non-Response Bias	33
Table 4.2 Summary of Reliability analysis of constructs	34
Table 4.3 Test for Multi-collinearity	38
Table 4.4 Distribution of Gender.....	41
Table 4.5 Distribution of Age of Respondents.....	41
Table 4.6 Distribution of Educational Qualifications of Respondents.....	42
Table 4.7 Distribution of College of Study.....	43
Table 4.8 Distribution of College of a Study	43
Table 4.9 Descriptive Statistics of Medical Availability.....	44
Table 4.10 Descriptive Statistics of Medical Information	45
Table 4.11 Descriptive Statistics of Staff Behaviour	46
Table 4.12 Descriptive Statistics of Doctor Behaviour.....	47
Table 4.13 Descriptive Statistics of Clinic Infrastructure	48
Table 4.14 Descriptive Statistics of Patients’ Satisfaction of Medical Services.....	49
Table 4.15 Cohen’s Guideline of Correlation Strength	50
Table 4.16 Pearson Correlations.....	51
Table 4.17 Correlation among Independent and Dependent Variables.....	51
Table 4.18 Multiple Regression between Independent Variables and Dependent Variable....	51

List of Abbreviations

CAS	College of Art Sciences
CI	Clinic Infrastructure
COB	College of Business
COLGIS	College of Government and International Studies
DB	Doctor Behaviour
MA	Medical Availability
MI	Medical Information
PCAS	Primary Care Assessment Survey
PCP	Primary Care Physician
PKU	Pusat Kesihatan Universiti
SB	Staff Behaviour
SERVQUAL	Service Quality
SPSS	Statistical Packages for Social Sciences
TPB	Theory of Planned Behaviour
UK	United Quality
UUM	Universiti Utara Malaysia
VIF	Variance Inflected Factor



CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Patient satisfaction has been defined as the patients' subjective evaluation of their cognitive and emotional reactions as a result of the interaction between their expectations regarding the quality of medical services which includes; medicine availability, medical information and medical practitioners such as doctors, nurses and other medical staffs (Schmidt, 2007).

Patient satisfaction refers to the combination of experiences, expectations and perceived needs. Hence, the patient satisfaction has been the most critical determinant of high-quality medical services and medical practitioners. Conventionally, this process is significantly connected in every industry. This is especially true in the medical and in healthcare sector that perceived service quality is very critical to the high value of patient satisfaction within the healthcare field.

Agosta, (2005); Alexander, (2000), Senarath et al., (2013) , found that the factors that shape patients' favourable perceptions are significant in advancing medical quality and service deliverance. It is essential to focus on patient satisfaction as a means of discerning medical and healthcare efficiency (Black, 2011). In line with this, stakeholders in the health systems throughout the world are increasingly concerned about the efficiency, effectiveness and quality of healthcare and medical service delivery.

Alashek (2011) conducted a study in the United Kingdom and the United States showed that 56% of doctors and 45% nurses believed that the quality of healthcare and medical service are essential in patient satisfaction. In other words, investigating the perception of patients towards the quality of medical services especially with regards to medicine availability, medical information, staff behaviour, doctor behaviour and clinic infrastructure are crucial in

REFERENCES

- Aagja, J. P. & Garg, R. (2010). Measuring perceived service quality for public hospitals (PubHosQual) in the Indian context. *International Journal of Pharmaceutical and Healthcare Marketing*, 4(1), 60-83.
- Abdelhafez, A.M., Al Qurashi, L., Al Ziyadi, R., Kuwair, A., Shobki, M., & Mograbi, H. (2012). Analysis of Factors Affecting the Satisfaction Levels of Patients toward Foodservices at General Hospitals in Makkah, Saudi Arabia. *American Journal of Medicine and Medical Sciences*, 2 (6), 123-130.
- Agosta, L. J. (2005). Patient satisfaction with nurse practitioner delivered primarily health care services (Doctoral dissertation, University of Texas Health Science Center at Houston).
- Akhtari-Zavare, M., Yunus Abdullah, M., Syed Hassan, S. T., Binti Said, S., & Kamali, M. (2012). Cancer patients' satisfaction with communication and information given by nurses at teaching hospitals of Tehran, Iran. *Medical Journal of the Islamic Republic of Iran (MJIRI)*, 24 (4), 212-220.
- Alashek, W.A., McIntyre, C.W., & Taal, M.W. (2011). Provision and quality of dialysis services in Libya. *Hemodialysis International*, 15 (4), 444-452.
- Alexander, J. (2000). Factors underlying and maintaining nurses' attitudes to patients with severe personality disorder. Department of Mental Health. Nursing. City University London E1 2EA.
- Alhashem, A.M., Alquraini, H. & Chowdhury, R. I. (2011). Factors influencing patient satisfaction in primary healthcare clinics in Kuwait. *International Journal of Health Care Quality Assurance*, 24(3), 249-262.

- Alrubaiee, L. &Alkaai'da, F. (2011). The mediating effect of patient satisfaction in the patients' perceptions of healthcare quality-patient trust relationship. *International Journal of Marketing Studies*, 3(1), 103-127.
- AL-Borie, H.M., &Damanhour, A.M. (2014). Patients' satisfaction of service quality in Saudi hospitals: a SERVQUAL analysis. *International Journal of Health Care Assurance*, 26 (1):20-30
- Amin, M., &Nasharuddin, S.Z. (2013). Hospital service quality and its effects on patient satisfaction and behavioural intention. *Clinical Governance: An International Journal*,18 (3), 238-254.
- Andaleeb, S. (1988), "Determinants of customer satisfaction with hospitals: a managerial model", *International Journal of Health Care Quality Assurance*, Vol. 11 No. 6, pp. 181-7.
- Andaleeb, S. S. (2001). Service quality perceptions and patient's satisfaction: a study of hospitals in a developing country. *Social Science & Medicine*, 52(9), 1359-1370.
- Ashbury, F.D., Findlay, H., Reynolds, B., &McKerracher, K. (1998). A Canadian survey of cancer patients' experiences: are their needs being met? *Journal of pain and symptom management*, 16 (5), 298-306.
- Assefa F. and Mosse A., "Assessment of Clients' satisfaction with health service deliveries at jimma university specialized hospital," *Ethiopian journal of health sciences*, vol/issue: 21(2), pp. 101-10, 2011.
- Babbie, E. (2012). *The Practice of Social Research*. Retrieved from <http://books.google.com/books?id=-YoJAAAAQBAJ&pgis=1>
- Badri, M., Attia, S. &Ustadi, A. M. (2009). Healthcare quality and moderators of patient satisfaction: testing for causality. *International Journal of Health Care Quality Assurance*, 22(4),382-410.

- Bahrampour, A., & Zolala, F. (2005). Patient satisfaction and related factors in Kerman hospitals. *EMHJ - Eastern Mediterranean Health Journal*, 11(5-6), 905-912.
- Baltussen, R.M.Yé, P.M., Haddad, Y., S. & Sauerborn, R. S. (2002). Perceived quality of care of primary health care services in Burkina Faso. *Health Policy and Planning*, 17(1), 42-48.
- Bartlett, J. A. (2002). Addressing the challenges of adherence. *J. Acquir. Immune Defic. Syndr.* 1, 2-10.
- Berehe, T. T., Bekele, G. E., Yimer, Y. S., & Lozza, T. Z. (2018). Assessment of client's satisfaction with outpatient services at Yekatit 12 hospital medical college, Addis Ababa, Ethiopia. *BMC research notes*, 11(1), 507.
- Bernhart, M. H., Wiadnyana, I. G. P., Wihardjo, H., & Pohan, I. (1999). Patient satisfaction in developing countries. *Social science and medicine*, 48(8), 989- 996.
- Benkert, R., Hollie, B., Nordstrom, C. K., & Wickson, B. (2009). Trust, Mistrust, Racial Identity and Patient Satisfaction in Urban. *Journal of Nursing Scholarship*; Second Quarter 2009; 41, 2; ProQuest Central.pg. 21.
- Bilton, S. (2016). Satisfied, loyal.... and leaving? The effect of trust and commitment on consumer satisfaction and loyalty: a study of a non-bank deposit taker and retail banks in New Zealand.
- Bilkish, N. P., Sangita, S., Prakash, A., & Manjunath, K. (2012). A cross sectional study of patient's satisfaction towards services received at tertiary care hospital on OPD basis. *National journal of community medicine*, 3(2), 232-237.
- Bitner, M.J. (1990), "Evaluating service encounters: the effects of physical surroundings and employee responses", *Journal of Marketing*, Vol. 54 No. 2, pp. 69-82.
- Black, L.M. (2011). Original Research: Tragedy into Policy: A Quantitative Study of Nurses' Attitudes Toward Patient Advocacy Activities. *AJN The American Journal of Nursing*, 111(6), 26-35.

- Booij, J. C., Zegers, M., Evers, P. M., Hendriks, M., Delnoij, D.M., & Rademakers, J. J. (2013). Improving cancer patient care: development of a generic cancer consumer quality index questionnaire for cancer patients. *BMC cancer*, 13(1), 203.
- Brawley Margaret. The client perspective, what is quality health care service. 2000
- Brown R. 2001. Behavioural issues in asthma management. *Pediatr. Pulmonol. Suppl.* 21, 26–30.
- Churchil, G. A. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, 16(Feb), 64–73.
<http://doi.org/10.1017/CBO9781107415324.004>
- Christensen, L. B., Johnson, R. B., & Turner, L. A. (2014). *Research Methods, Design, and Analysis. Araştırma Yöntemleri, Desen ve Analiz* (Twelfth Ed). New Jersey: Pearson Education.
- Cockle-Hearne, J., Charnay-Sonnek, F., Denis, L., Fairbanks, H.E., Kelly, D., Kav, S., & Faithfull, S. (2013). The impact of supportive nursing care on the needs of men with prostate cancer: a study across seven European countries. *British journal of cancer*, 109(8), 2121-2130.
- Coyle, J. & Williams, B. (1999). Seeing the wood for the trees: defining the forgotten concept of patient dissatisfaction in the light of patient satisfaction research. *Int. J. Health Care Qual. Assur. Inc. Leadership. Health Service*, 12, 1-10.
- Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative and Mixed Method Approaches*. SAGE Publications (Third Edit). Thousands Oak, California.
<http://doi.org/10.4135/9781849208956>
- Creswell, J. W. (2012). *Educational research. Planning, conducting and evaluating quantitative and qualitative research*. (4th ed.). Boston, MA. United States of America: Pearson Education, Inc.

- Crow, R., Gage, H., Hampson, J., Hart, J., & Kimber, A, (2002). The measurement of satisfaction with healthcare: implications for practice from a systematic review of the literature. *Health Technol. Assess.* 6, 1–92
- Daniel, I. (2012). The Relationship between Nurse Staffing and Patient Satisfaction in Emergency Departments (Doctoral dissertation, University of Toronto).
- Donabedian, A. (1980). Explorations in quality assessment and monitoring. *The Definition of Quality and Approaches to its Assessment*, ed. JR Griffith, 1, 4–163. Washington, DC: Health Adm. Press Ann Arbor. 163.
- Donabedian, A. (1980). Explorations in quality assessment and monitoring. *The Definition of Quality and Approaches to its Assessment*, ed. JR Griffith, 1, 4–163. Washington, DC: Health Adm. Press Ann Arbor. 163.
- Donabedian, A. (1988). The quality of care: how can it be assessed? *Journal of the American Medical Association*, 260, 1743-1748.
- Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G* Power 3: A flexible statistical power analysis program for the social, behavioural, and biomedical sciences. *Behaviour research methods*, 39(2), 175-191.
- Faris S. A. (2014). The impact of service quality perception on patient satisfaction in Government Hospitals in Southern Saudi Arabia, 35(10), 1271–1273.
- Fitzpatrick, R. (1991). Surveys of patient satisfaction: II—Designing a questionnaire and conducting a survey. *BMJ*, 302,1129– 1132
- Gabriel, O. O., Adekwu, A., Amede P. O. (2018). Assessing the Level of Clients' Satisfaction on Outpatient and Inpatient Health Care Services, in a Tertiary Institution in North Central Nigeria. *International Journal of Contemporary Medical Research*, Vol 5, Issue 3, ISSN (Online): 2393-915X; (Print): 2454-7379
- Gopal, R. (2014). Impact of hospital services on outpatient satisfaction in India. *International Journal of Research in Business Management (IMPACT: IJRBM)*, 2(4), 37-44.

- Grönroos, C. (1984). A service quality model and its marketing implications. *European Journal of Marketing*, 18(4), 36-44.
- Grondahl, V.A. (2012). Patients' perceptions of actual care conditions and patient satisfaction with care quality in hospital. Karlstad University Studies: Dissertation, Karlstad University .978-991.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2010). *Multivariate data analysis a global perspective (7th ed.)*. U.S.A: Upper Saddle River.
- Hawken, S. J. (2005). Strategies for dealing with the challenging patient. *New Zealand Family Physician*, 32(4), 266.
- Irfan, S.M. and Ijaz, A. (2011), "Comparison of service quality between private and public hospitals: empirical evidences from Pakistan", *Journal of Quality and Technology Management*, Vol. 7 No. 1, pp. 1-22.
- Irurita, V. F. (1999). Factors affecting the quality of nursing care: the patient's perspective. *International Journal of Nursing Practice*. 5, 86-94
- Irurita, V. F. (1999). Factors affecting the quality of nursing care: the patient's perspective. *International Journal of Nursing Practice*. 5, 86-94
- Jackson J. L., et al., (2001). "Predictors of patient satisfaction," *Social science & medicine*, vol/issue: 52(4), pp. 609-20.
- Kenneth S. B. & Bruce, B. A. (2005). *Research Design and Methods: A Process Approach* (6 ed). Boston, MA: McGraw-Hill.
- Kravitz, R. (1996). Patients' expectations for medical care: an expanded formulation based on review of the literature. *Medical Care. Res. Rev.* 53, 3-27
- Kuzari, D., Biderman, A., & Cwikel, J. (2013). Attitudes of women with breast cancer regarding the doctor-patient relationship. *European journal of cancer care*, 22(5), 589-596.

- Leedy, Paul D; Ormrod, J. E. (2005). *Practical Research: Planning and Design. Practical Research - Planning & Design* (8th ed). New Jersey: Pearson Educational International and Prentice Hall.
- Leisen Pollack, B. (2008). The nature of the service quality and satisfaction relationship: empirical evidence for the existence of satisfiers and dis-satisfiers. *Managing Service Quality: An International Journal*, 18(6), 537-558.
- Lim, P. C., Tang, N. K., & Jackson, P., M. (1999). An innovative framework for health care performance measurement. *Managing Service Quality*, 9(6), 423-433.
- Linder-Pelz, S. (1982). Toward a theory of patient satisfaction. *Soc. Sci. Med.* 16: 577–82
- Mackenzie, S. B., Podsakoff, P. M., & Podsakoff, N. P. (2011). Construct measurement and validation procedures in MIS and behavioural research: Integrating new and existing techniques. *MIS Quarterly*, 35(2), 293–334.
- Malhotra, N. (1999). *Marketing Research: An applied orientation* (3rd ed.). New Jersey:
- Mowzer, Z. (2016). *The impact of electronic word-of-mouth in social networking sites on a high-involvement purchase: an empirical study of South African brides' intention to purchase the "once-in-a-lifetime" wedding dress*. University of Cape Town.
- Morrison, R. (2011). Nursing Students' Attitudes toward People with Mental Illness: Do they change after instruction and clinical exposure? Thesis Director Debra Gottel, MHS University of South Florida College of Nursing, Summer 2011.
- Morris Gary. Improving quality of services, South Africa. 1998
- Murphy J, Chang H, Montgomery JE, Rogers WH, Safran DG. 2001. The quality of physician-patient relationships. Patients' experiences 1996–1999. *J. Fam. Pract.* 50:123–29
- Naidu, A. (2009). Factors affecting patient satisfaction and healthcare Quality. *International Journal of Health Care Quality Assurance*, 22 (4), 366-381.
- Newman D, Gloyd S, Nyangez MJ, Machoro F. Satisfaction with outpatient health care service in Manica province, Mozambique. *Health policy and planning*. 1998; 15:179–184.

- Nikbakht, N. A., Emami, A., & Parsa Yekta, Z. (2003). Nursing experience in Iran. *International Journal of Nursing Practice*, 9(2), 78-85.
- Opiyo, E. (2012). Nurses' perspective of their knowledge expertise in breast cancer care.
- Otani, K., Herrmann, P. A., & Kurz, R. S. (2011). Improving patient satisfaction in hospital care settings. *Health Services Management Research*, 24(4), 163-169.
- Pallant, J. (2011). *SPSS survival manual: A step by step guide to data analysis using SPSS* (4th ed). New York: Open University Press.
- Polit, D. F., & Beck, C. T. (2006). The Content Validity Index: Are You Sure You Know What's Being Reported? Critique and Recommendations. *Research in Nursing & Health*, 29, 489-497. <http://doi.org/10.1002/nur>
- Parasuraman, A., Zeithaml, V.A. & Berry, L.L. (1985), "A conceptual model of service quality and its implications for future research", *Journal of Marketing*, 49(4), 41-50.
- Parasuraman, A., Zeithaml, V. A. & Berry, L. L. (1988), "SERVQUAL: a multiple-item scale for measuring consumer perceptions of service quality", *Journal of Retailing*, 64(1), 12-40.
- Peyrot, M., Cooper, P., & Schnapf, D. (1993). Consumer satisfaction and perceived quality of outpatient health services. *Journal of Health Care Marketing*, 13(1), 24-33.
- Quintana J. M., et al., "Predictors of patient satisfaction with hospital health care. BMC health services research," vol/issue: 6(1), pp. 102, 2006.
- Rejab, I.B.A. (2012). Conceptual Framework of the Relationship Between Service Quality and Patient Satisfaction. In *Public and Private Hospitals in Tripoli, Libya: The Importance of Hospital Access And Cost*. Al-Madinah Management and Finance Science.
- Rafii, F., Hajinezhad, M.E., & Haghani, H. (2008). Nurse caring in Iran and its relationship with patient satisfaction. *Australian Journal of Advanced*.

- Ross C, Frommelt G, Hazelwood L, Chang R. (1994). The role of expectations in patient satisfaction with medical care. In *Health Care Marketing: A Foundation for Managed Quality*, ed. P Coope
- Safran D. G. (2003). Defining the future of primary care: What can we learn from patients? *Ann. Intern Med.* 138:248–55
- Salam, A.A., Alshekteria, A.A., Alhadi, H.A., Ahmed, M., & Mohammed, A. (2010). Patient satisfaction with quality of primary health care in Benghazi, Libya. *Libyan Journal of Medicine*, 5(1).
- Salkind, N. J. (2010). Qualitative Research. In *Encyclopedia of Research Design* (255). <http://doi.org/10.4135/9781412961288.n78>
- Saunders, M., Lewis, P., & Thornhill, A. (2012). *Research Methods for Business Students*. (S. Edit, Ed.) *Business* (Vol. 5th). London: Pearson Custom Publishing. <http://doi.org/10.1017/CBO9781107415324.004>
- Schmidt, S.W. (2007). The relationship between satisfaction with workplace training and overall job satisfaction. *Human Resource Development Quarterly*, 18 (4), 481-498.
- Sekaran, U., & Bougie, R. (2010). *Research Methods for business: a skill building approach* (Fifth Edit). New York: John Willey & Sons.
- Senarath, N.S., Gunawardena, B.S., Arosha, S., Sachintha, L., Anushka, S., Madushan, J., & Dilshan, W. (2013). Patient satisfaction with nursing care and related hospital services at the National Hospital of Sri Lanka. *Leadership in Health Services*, 26(1), 63 – 67.
- Shabbir, A., Malik, S.A. and Malik, S.A. (2016). Measuring patients' healthcare service quality perceptions, satisfaction, and loyalty in public and private sector hospitals in Pakistan. *International Journal of Quality & Reliability Management*, 33(5), 538-557.
- Sien, L. Y. (2015). Factors influencing consumers' purchase intention towards online group buying in Malaysia. University of Tunku Abdul Rahman, Perak, Malaysia.

- Sitzia, J., & Wood, N. (1997). Patient satisfaction: a review of issues and concepts. *Social Science & Medicine*, 45, 1829–1843
- Snijders, T. A. B. (2005). Power and Sample Size in Multilevel Linear Models. In: B.S. Everitt and D.C. Howell (eds.), *Encyclopedia of Statistics in Behavioural Science*. 3, 1570–1573.
- Swan, J.E., Richardson, L.D. and Hutton, J.D. (2003), “Do appealing hospital rooms increase patient evaluations of physicians, nurses, and hospital services?”, *Health Care Management Review*, Vol. 28 No. 3, pp. 254-64.
- Tabachnick, B.G.. & Fidell, L.S. (2007). *Using Multivariate Statistics* (5th ed). Boston, Massachusettes: Allyn and Bacon/Pearson Education.
- Thompson A, Sunol R. 1995. Expectations as determinants of patient satisfaction: concepts, theory and evidence. *International Quality Health Care* 7, 127–141
- Thompson A, Sunol R. 1995. Expectations as determinants of patient satisfaction: concepts, theory and evidence. *International Quality Health Care* 7, 127–141
- Trochim, W. (2005). *Research methods knowledge base*. Retrieved June, 14th. 2006, from Professor Cornell University Website: <http://www.socialresearchmethods.net/kb/>
- Tucker, J. (2002), “The moderators of patient satisfaction”, *Journal of Management in Medicine*, Vol. 16 No. 1, pp. 48-66.
- Turner, P. and Pol, L. (1995), “Beyond patient satisfaction”, *Journal of Health Care Marketing*, Vol. 15 No. 3, pp. 45-53.
- Vinagre, M., & Neves, J. (2008). The influence of service quality and patients’ emotions on satisfaction. *International Journal of Health Care Quality Assurance*, 21(1), 87-103.
- Williams B. (1994). Patient satisfaction: A valid concept? *Social Science & Medicine*, 38, 509–516
- Woodside, A.G., Frey, L.L. and Daly, R.T. (1989), “Linking service quality, customer satisfaction and behaviour intention”, *Journal of Health Care Marketing*, Vol. 9 No. 4, pp. 5-17.

- Yeakel, S., Maljanian, R., Bohannon, R.W., &Coulombe, K.H. (2003). Nurse caring behaviours and patient satisfaction: improvement after a multifaceted staff intervention. *Journal of Nursing Administration*, 33(9), 434-436.
- Yin, R. K. (1994). *Case study research: Design and methods* (2nd ed.). Newbury Park, CA: Sage Publications.
- Yost, S. (1992). Determinants of subsequent home health care nursing services use by hospitalized cancer patients. *Journal of Advanced Nursing*, 742-754.
- Zarei A, Arab M, Froushani AR, Rashidian A, Tabatabaei SMG. Service quality of private hospitals: the Iranian Patients' perspective. *BMC Health Serv Res*. 2012;12(1):31.



Appendix

Questionnaire



Dear Sir/Madam,

This survey questionnaire for a study titled “The Perception of International Students towards the Quality of Medical Services and their Satisfaction with PKU, UUM”. The study aims at examining the influence of international students’ perceptions of medicine availability, medical information, medical staff, doctor behaviour, clinic infrastructure on medical service satisfaction.

Kindly be assured that, your responses will be strictly confidential and only aggregated data will be reported. Your information will be coded and will remain confidential.

Thank you very much for your time and support.

Best regards,

Ugboaja Chioma Joy

School of Business,

College of Business,

Universiti Utara Malaysia

06010 UUM Sintok,

Kedah.

5. College of study

College of Arts and Science	
College of Business	
College of Law, Government and International Studies	



A. Medicine Availability

Please **circle** to indicate the extent to which you **agree or disagree** with the statements about your perception of medicine availability at PKU, UUM.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

S/N	Statements	SD	D	N	A	SA
1	The pharmacy at PKU has adequate medicine	1	2	3	4	5
2	The medicines I receive from the pharmacy at PKU are never expired	1	2	3	4	5
3	I always receive clear usage description of medicine from the pharmacy at PKU	1	2	3	4	5
4	The pharmacy at PKU has special medicine for special ailments	1	2	3	4	5

B. Medical Information

Please **circle** to indicate the extent to which you **agree or disagree** with the statements about your perception of medical information at PKU, UUM.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

S/N	Statements	SD	D	N	A	SA
1	I receive adequate information about my medical status from PKU	1	2	3	4	5
2	My medical records at PKU are properly recorded					
3	My medical records are always missing at PKU					

C. Medical Staff

Please **circle** to indicate the extent to which you **agree or disagree** with the statements about your perception of medical staff at PKU, UUM.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

S/N	Statements	SD	D	N	A	SA
1	Medical staffs at PKU are always willing to help	1	2	3	4	5
2	Medical staffs at PKU give personal attention	1	2	3	4	5
3	Medical staffs at PKU are consistently courteous	1	2	3	4	5
4	Medical staffs at PKU are never too busy to respond to my requests	1	2	3	4	5
5	Medical staffs at PKU has my best interest at heart	1	2	3	4	5
6	Medical staffs at PKU understand my specific need	1	2	3	4	5

D. Doctor Behaviour

Please **circle** to indicate the extent to which you **agree or disagree** with the statements about your perception of doctor behaviour at PKU, UUM.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

S/N	Statements	SD	D	N	A	SA
1	Doctors at PKU give prompt medical service without appointment	1	2	3	4	5
2	Doctors at PKU give prompt medical service					
2	Doctors at PKU give sympathetic and reassuring	1	2	3	4	5
3	Doctors at PKU are responsive to my medical needs	1	2	3	4	5
4	Doctors at PKU are always willing to help my medical condition	1	2	3	4	5
5	The behaviour of Doctors at PKU build confidence in me as a patient	1	2	3	4	5

E. Clinic Infrastructure

Please **circle** to indicate the extent to which you **agree or disagree** with the statements about your perception of clinic infrastructure at PKU, UUM.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

S/N	Statements	SD	D	N	A	SA
1	The environment of PKU is neat	1	2	3	4	5
2	PKU has healthy toilets and bathrooms	1	2	3	4	5
3	The patient wards and sick-bays are always clean	1	2	3	4	5
4	PKU has enough medical infrastructures	1	2	3	4	5
5	The location of PKU is easily accessible	1	2	3	4	5
6	There are clear directional signs at PKU	1	2	3	4	5
7	There are up-to-date medical technologies at PKU	1	2	3	4	5

F. Medical Service Satisfaction

Please **circle** to indicate the extent to which you **agree or disagree** with the statements about your perception of medical service satisfaction at PKU, UUM.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

S/N	Statements	SD	D	N	A	SA
1	I am satisfied with the overall medical services	1	2	3	4	5
2	I am satisfied with the time taken to receive treatment	1	2	3	4	5
3	I am satisfied with the time taken to receive drugs	1	2	3	4	5
4	I am satisfied with the outcome of treatment received	1	2	3	4	5
5	I am satisfied with the physical organization of the clinic	1	2	3	4	5
6	I often receive medical service at PKU with no waiting time	1	2	3	4	5
7	Medical services at PKU are received at affordable cost	1	2	3	4	5

Appendix B: Total number of sample of International students

Mean Comparison and Levene's Test for Non-Response Bias

Variables	Group	N	Mean	Std. Deviation	Levene's Test for Equality of Variances	
					F	Sig.
Medicine	EARLY	46	3.6208	.35629	1.821	.178
Availability	LATE	92	3.5554	.41350		
Medical	EARLY	46	3.5109	.39362	.069	.794
Information	LATE	92	3.4822	.37420		
Staff Behaviour	EARLY	46	3.7309	.52933	.221	.639
	LATE	92	3.5589	.52522		
Doctor Behaviour	EARLY	46	3.7925	.48399	.119	.730
	LATE	92	3.6616	.52293		
Clinic	EARLY	46	3.9679	.58384	.468	.494
Infrastructure	LATE	92	3.8110	.58904		
Patients'	EARLY	46	3.5544	.41132	.123	.726
Satisfaction	LATE	92	3.4548	.41605		

Summary of Reliability analysis of constructs

Constructs	Number of Items	Cronbach's Alpha
Medicine Availability	4	0.705
Medical Information	3	0.664
Staff Behaviour	6	0.655
Doctor Behaviour	5	0.951
Clinic Infrastructure	7	0.844
Patients' Satisfaction	7	0.758



Test for Multi-collinearity

Dependent variables	Independent variables	Collinearity Statistics	
		Tolerance	VIF
Patients' Satisfaction	Medicine Availability	.535	1.870
	Medical Information	.223	4.479
	Staff Behaviour	.663	1.509
	Doctor Behaviour	.195	5.138
	Clinic Infrastructure	.527	1.898



Appendix C: SPSS RESULTS

Demographic Tables

Distribution of Gender

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	89	73.6	73.6	73.6
Female	32	26.4	26.4	100.0
Total	121	100.0	100.0	

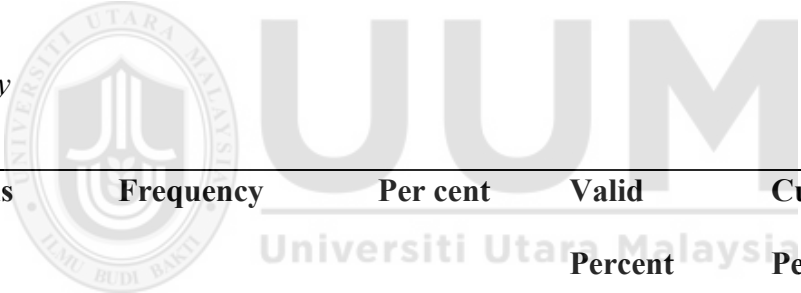
Respondents of age

Age	Frequency	Percent	Valid Percent	Cumulative Percent
20-29	55	45.5	45.5	45.5
30-39	51	42.1	42.1	87.6
40-49	15	12.4	12.4	100.0
Total	121	100.0	100.0	

Respondents of Educational Qualification

Qualifications	Frequency	Percent	Valid Percent	Cumulative Percent
Bachelor's Degree	25	20.7	20.7	20.7
Masters' Degree	83	68.6	68.6	89.3
PhD	13	10.7	10.7	100.0
Total	121	100.0	100.0	

College of Study



Qualifications	Frequency	Per cent	Valid Percent	Cumulative Percent
CAS	42	34.7	34.7	34.7
COB	41	33.8	33.8	68.5
COLGIS	38	31.4	31.4	100.0
Total	121	100.0	100.0	

Country of origin

Qualifications	Frequency	Per cent	Valid Percent	Cumulative Percent
Africa	42	34.7	34.7	34.7
Asia	48	39.6	39.6	74.3
Middle East	31	25.6	25.6	100.0
Total	121	100.0	100.0	



Statistics of Medicine Availability

Items	Min	Max	Mean	Std. Deviation
The pharmacy at PKU has adequate medicine	1	5	3.40	.780
The medicines I receive from the pharmacy at PKU are never expired	2	5	3.32	.721
I always receive clear usage description of medicine from the pharmacy at PKU	1	5	3.03	.816
The pharmacy at PKU has particular medicine for special ailments	2	5	3.66	.770

N = 121. Scale: 1 Strongly Disagree - 5 Strongly Agree.

Statistics of Medical Information

Items	Min	Max	Mean	Std. Deviation
I receive adequate information about my medical status from PKU	1	5	3.31	.696
My medical records at PKU are properly recorded	1	5	3.17	.799
My medical records are always missing at PKU	1	5	3.02	.875

N = 121. Scale: 1 Strongly Disagree - 5 Strongly Agree.



Statistics of Staff Behaviour

Item	Min	Max	Mean	Std. Deviation
Medical staffs at PKU are always willing to help	1	5	2.90	.870
Medical staffs at PKU give personal attention	1	5	3.48	.848
Medical staffs at PKU are consistently courteous	1	5	3.41	1.070
Medical staffs at PKU are never too busy to respond to my requests	1	5	3.10	.907

Medical staffs at PKU has my best interest at heart	2	5	3.66	.770
Medical staffs at PKU understand my specific need	1	5	3.14	.745

N = 121. Scale: 1 Strongly Disagree - 5 Strongly Agree.

.Statistics of Doctor Behaviour

Items	Min	Max	Mean	Std. Deviation
Doctors at PKU give prompt medical service without an appointment	1	5	3.17	.799
Doctors at PKU give prompt medical service	1	5	3.02	.875
Doctors at PKU give sympathetic and reassuring	1	5	3.14	.830
Doctors at PKU are responsive to my medical needs	1	5	2.88	.802
Doctors at PKU are always willing to help my medical condition	1	5	2.68	.788

N = 121. Scale: 1 Strongly Disagree - 5 Strongly Agree.

Clinic Infrastructure

Items	Min	Max	Mean	Std. Deviation
The environment of PKU is neat	1	5	2.83	.667

PKU has healthy toilets and bathrooms	1	5	3.15	.615
The patient wards and sick-bays are always clean	1	5	3.28	.777
PKU has enough medical infrastructures	1	5	3.09	.785
The location of PKU is easily accessible	2	5	3.15	.872
There are clear directional signs at PKU	1	5	3.36	1.015
There are up-to-date medical technologies at PKU	1	5	3.57	.773

N = 121. Scale: 1 Strongly Disagree - 5 Strongly Agree.

Patients' Satisfaction of Medical Services

Items	Min	Max	Mean	Std. Deviation
I am satisfied with the overall medical services	1	5	2.69	.805
I am satisfied with the time taken to receive treatment	1	5	2.68	.829
I am satisfied with the time taken to receive drugs	1	5	2.90	.898
I am satisfied with the outcome of treatment received	1	5	2.64	.913
I am satisfied with the physical organisation of the clinic	1	5	2.79	.939
I often receive medical service at PKU with no waiting time	1	5	2.97	.957

Medical services at PKU are received at an affordable cost	1	5	3.14	.830
--	---	---	------	------

N = 121. Scale: 1 Strongly Disagree - 5 Strongly Agree.



Appendix D

Reliability Test Table

Cohen's Guideline of Correlation Strength

r-values	Strength of Relationship
$r = +.10$ to $.20$ or $r = -.10$ to $-.29$	Small
$r = +.30$ to $.40$ or $r = -.30$ to $-.49$	Medium
$r = +.50$ to 1.0 or $r = -.50$ to -1.0	Large

Correlation Table

Pearson Correlations



Variables	MA	MI	SB	DB	CI	PS
Medicine Availability	1					
Medical Information	.538**	1				
Staff Behaviour	.611**	.879**	1			
Doctor Behaviour	.482**	.458**	.463**	1		
Clinic Infrastructure	.579**	.554**	.600**	.516**	1	
Patients' Satisfaction	.435**	.409**	.483**	.398**	.544**	1

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations among Independent and Dependent Variables

Relationships	Correlations	Strength
MA and PS	.435**	Medium
MI and PS	.409**	Medium
SB and PS	.483**	Medium
DB and PS	.398**	Medium
CI and PS	.544**	Large

** . Correlation is significant at the 0.01 level (2-tailed).

Regression Table

Regression Test

Multiple Regression between Independent Variables and Dependent Variable

Model	Coeff.(B)	Std. Error	Beta (b)	T	Sig
(Constant)	-.977	.507		-1.925	.057
Medicine Availability	.121	.168	.074	.719	.474
Medical Information	-.191	.232	-.131	-.824	.412
Staff Behaviour	.560	.318	.300	1.759	.081
Doctor Behaviour	.180	.151	.110	1.187	.238
Clinic Infrastructure	.539	.165	.337	3.258	.001
R ²					.350
Adjusted R ²					.322
F Change					12.403****

**** P < 0.001, *** P < 0.01, ** P < 0.05, *P < 0.10.