

Evaluation of Patients' Satisfaction Towards the Primary Health Care Services in the Old City of Jerusalem, Palestine

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Abstract The evaluation of patients' satisfaction has become an important issue in the assessment of health care system because it is a key determinant of healthcare quality. Providers of health care service in the Old City of Jerusalem are divided into three main categories: Israelis, Palestinians and international organizations, but all of them are operating under the Israeli administration. Consequently, the comparison between different health care providers in the city led to different level of satisfaction among the patients. This study aims to assess the patients' satisfaction as a tool to monitor and evaluate the quality of the primary health care services in the Old City of Jerusalem by investigating the main factors that affect the patient satisfaction and identifying the main problems facing the health sector in the city. A combination of quantitative and qualitative methods was applied to this research using questionnaires and interviews to collect primary data. Descriptive statistics and multiple regression analysis were used to evaluate patients' satisfaction in the Old City of Jerusalem. Study findings showed dissatisfaction of the Arab community in the city towards some of the health care services such as emergency services, x-ray services, provision of bone specialist services and working hours of health care centers. The result of the regression analysis showed four factors that have effects on patients' satisfaction in the Old City of Jerusalem which includes hierarchically, time and access, physical environment in the health care centers, cost and health insurance, and comprehensiveness and quality of the health care. Therefore, there is a critical need to improve the health services sector in the Old City of Jerusalem. Both Israeli and Palestinian authorities as well as the nongovernmental health organizations in the Old City of Jerusalem should pay more attention towards improving the quality of health care centers by providing more facilities and doctors especially bone specialists, obstetricians, pediatricians, x-ray departments and laboratory services, so that the people in the study area do not have to go outside of the walls to get these health services.

Keywords Urban Health Development, Health Care Services, Patient Satisfaction, Old City of Jerusalem

1. Introduction

Development does not only mean an increase or decrease in the national income but rather it is a process that enables the society to be more productive by improving the quality of their lives. The concept of development is about improving our living conditions and the access to necessary community services such as education, health services and availability of a safe living environment [1] [25]. Development, especially in developing countries, is affected by various factors such as poverty, health risks and diseases, as well as the environmental conditions [30].

Health issues are among the critical and complex challenges which face the modern world. Therefore, it is

important for all countries and international organizations to focus on health. Every government is working hard to develop its health care delivery systems so as to increase its capabilities in facing the rising health problems which may threaten the world population. Health sector has an important role in improving and ensuring sustainability of socio-economic development in the developing countries. It has many effects such as increasing labor productivity, increasing rates of domestic and foreign investments, improving human capital, increasing rates of national savings and influencing the demographic changes [19] [2]. In addition, the health care delivery system is one of the largest economic sectors around the world with a global spending rate of USD 6.5 trillion [35], and the International Labor Organization estimates that the number of health workers is about 35 million all over the world a decade ago [34].

Health development is also one of the MDGs because it is a basic human need and it is required for economic growth

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and development of a nation by reducing the child death rate, improving maternal health and combating diseases that hamper development. Examples of such diseases are like AIDS and malaria. Health care is highly correlated with many development aspects such as economic, social, environmental, and political aspects. Furthermore, health care and environment, which is free from diseases, are the basic and fundamental human rights recognized by the United Nations. Therefore, governments should increase the health budget as a fundamental element in the economic development of their countries [31].

Moreover, the primary health care deals with all health problems such as acute, chronic diseases and it also has an important role in the early stage of serious diseases [8]. Primary health care built, over time, strong relationship between the patients and healthcare providers, as it is the service center for various community health needs [8] [6].

The health is an essential component for development and it is an input and a goal of the development. For example, in the 1930s, the improvement of the mortality rate in Latin America was related to the increase of the development level [10]. Thus, improving people's capabilities by upgrading and improving the education level, health services, training courses, and the development of their knowledge and technology skills will help them to be more productive in the modern economic system. It will also lead to economic growth in the country [12] [25]. Moreover, development is considered as one of the important tools in the investment of human resources. It also supports and increases the economic growth [22].

Health care system is an important part of the society in any country [18]. It is a complex expression which includes all the activities that aim to promote and enhance health care. Moreover, it includes various parties such as professional medical attention, traditional medication, home care, health promotion, disease prevention and other health enhancing interventions like road and environmental safety improvement and education [34].

Primary health care is "*what happens when someone who is ill (or who thinks he or she is ill or who wants to avoid getting ill) consults a health professional in a community setting for advice, tests, treatment or transfer to specialist care*" [8]. So, primary health care is the first patient's contact point to health care system and it could reflect the health care situation in the country as it is widely connected to many health problems which patients suffer from [15] [8]. Primary health care in many countries includes care provided by certain clinicians including family medicine, general medicine, obstetrics and gynecology, pharmacy services, health checkup, dental care, small hospital, ambulance, emergency, service provided by general practitioners, school health services, maternal and child clinics and optometry care [20] [8] [15].

The quality of health care services has three dimensions: customer quality, professional quality and management quality. Customer quality is the most important one because it helps in measuring the services quality. The customer

quality shows the level of satisfaction in the services [7]. Thus, evaluating the customers' or patients' satisfaction and studying patients' experiences are the ways that help to monitor the primary health care performance and provide the required information about the problems that the primary health care face. Moreover, patients' suggestions can help in finding solutions and reducing health problems (Wong et al., 2008). Patients' satisfaction is an important measure of service quality and it is one of the important desired outcomes of the health care services. Furthermore, patients' satisfaction helps in planning, developing and improving health care system. There are many factors that have good impact on patients' satisfaction and through these factors we can measure the quality of health care services especially the quality of primary health care [17] [2] [24].

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Health care services are divided into three types: primary, secondary and tertiary health care. This study focuses on the quality of primary health care services through the evaluation of patient satisfaction as a means to monitor the primary health care performance and gather information about the problems that facing the primary health care. Furthermore, the analysis of the evaluation of patient satisfaction can help in the planning and development of the health care system in the study area. This study also addresses the association between patient satisfaction and the main factors that impacted positively or negatively in the level of the patient satisfaction such as accessibility, waiting time, cost, health insurance, physical environment, communication, equity, comprehensiveness and overall health services quality.

The Old City of Jerusalem has been under the Israeli military occupation since 1967. Due to the Israeli's occupation, there are many health care issues that affect the

quality of the population health in the Old City of Jerusalem. As a result of these strict policies, all health care services including the primary, secondary and tertiary health care services went under the Israeli administration. Health care service is one of the important public services and it is an essential need for every community. The providers of the health care service in the Old City of Jerusalem are divided into three main categories: Israelis, Palestinians and international organizations, but all of them are operating under the Israeli administration. The Israeli law imposes compulsory health insurance on all citizens of the Old City of Jerusalem. Therefore, Palestinian citizens in the Old City of Jerusalem have to choose from one of the four Israeli health fund insurance systems [3]. Israeli national insurance scheme is a semi public system which is provided by the Ministry of Health and the country's four health funds, namely: Kupat Holim Clalit insuring 60%, Kupat Holim Maccabi insuring 20%, Meuhedet insuring 10% and Leumit insuring 10% of the population. This system is similar to the United States health care system while each citizen chooses from four non-governmental providers, called a *kupat cholim* (literally, "sick funds," the U.S. equivalent of "health care" providers) [9]. Consequently, the comparison between different health care providers in the city led to different level of satisfaction among the patients in the city.

Patients are facing many health care problems such as the absence of 24 hours clinic, lack of some health services such as house care service especially for the elderly ones, patients with chronic diseases and the disabled people. There is also no single ambulance car available in the city (Rizq and Khader, 2002: 108) and there are insufficient blood test laboratories and x-ray departments. The only hospital in the city (Hospes hospital) was closed down by the Israeli authorities in the middle of 1980s. There are many studies on the Old City of Jerusalem health issues such as the studies by Hidmi (2000), Rizq and Khader (2002) which emphasize on the Israeli occupation practices through the control of the services sectors in the city that involve health care system [13] [23]. As a result of all these problems, the health care centers in the city fail to satisfy the patients' needs in the Old City of Jerusalem especially in the Arab community zone [9]. Figure 1 shows the community services location in the Old City of Jerusalem and the distribution of the health care centers in the city.

Based on the above problems and challenges, instability and differences among the health service providers and lack of health services, both in quantity and quality, have affected the level of patients' satisfaction in the Old City of Jerusalem. This study will therefore address the following research questions:

1. To what extent do the primary health care services in the Old City of Jerusalem fulfill the health needs of the Arab community?
2. What are the major factors that affect the quality of the

primary health care in the Old City of Jerusalem?

3. What are the major problems faced by the Arab community in the Old City of Jerusalem in their primary health care services?

Therefore, this study examines the various variables such as accessibility, waiting time, communication, comprehensiveness of care, equality, physical environment, cost and health insurance which affect patients' satisfaction and force them to leave the Old City of Jerusalem to fulfill their health needs. In addition, this study aims to improve our understanding and knowledge about health needs in the Old City of Jerusalem which will focus on the need to improve the quality of the health care system in the city. Consequently, this research seeks to achieve the following three objectives:

1. To assess the quality of primary health care services in the Old City of Jerusalem through the evaluation of the patients' satisfaction.
2. To investigate the main factors which affect the patient satisfaction towards the primary health care services among the Arab community in the Old City of Jerusalem.
3. To identify the problems faced by the Arab community in their primary health care services.

2. Study Area

The Old City of Jerusalem has been under the Israeli military occupation since 1967. With an area of about 900,000 square meters (0.9 square kilometer), this area constitutes approximately 0.71% of the total area of East and West Jerusalem city in 1999 (Figure 1). The Old city of Jerusalem is a home for 32,952 citizens within the 36,600 square meters area. This high density in population of the city led to a high pressure on the provision of public services [23]. The city is geographically divided into four quarters (see to Figure 1):

1. Muslim quarter - an area of 460,000 square meters (the largest quarter). Muslim population in the Old City makes up 70.5% of the Old City population.
2. Christian quarter - an area of 192,000 square meters with a Christian population of 15.4% of the Old City population.
3. Jewish quarter - an area of 122,000 square meters. The Jewish population in the Old City makes up 6.9% of the Old City population.
4. Armenian quarter - an area of 126,000 square meters. The Armenian population contributes 7.1% of the Old City population

The Arab community can be found in the Muslim quarter, Christian quarter and Armenian quarter [28]. Therefore, The research is primarily conducted on the Arab community in the Old City of Jerusalem.

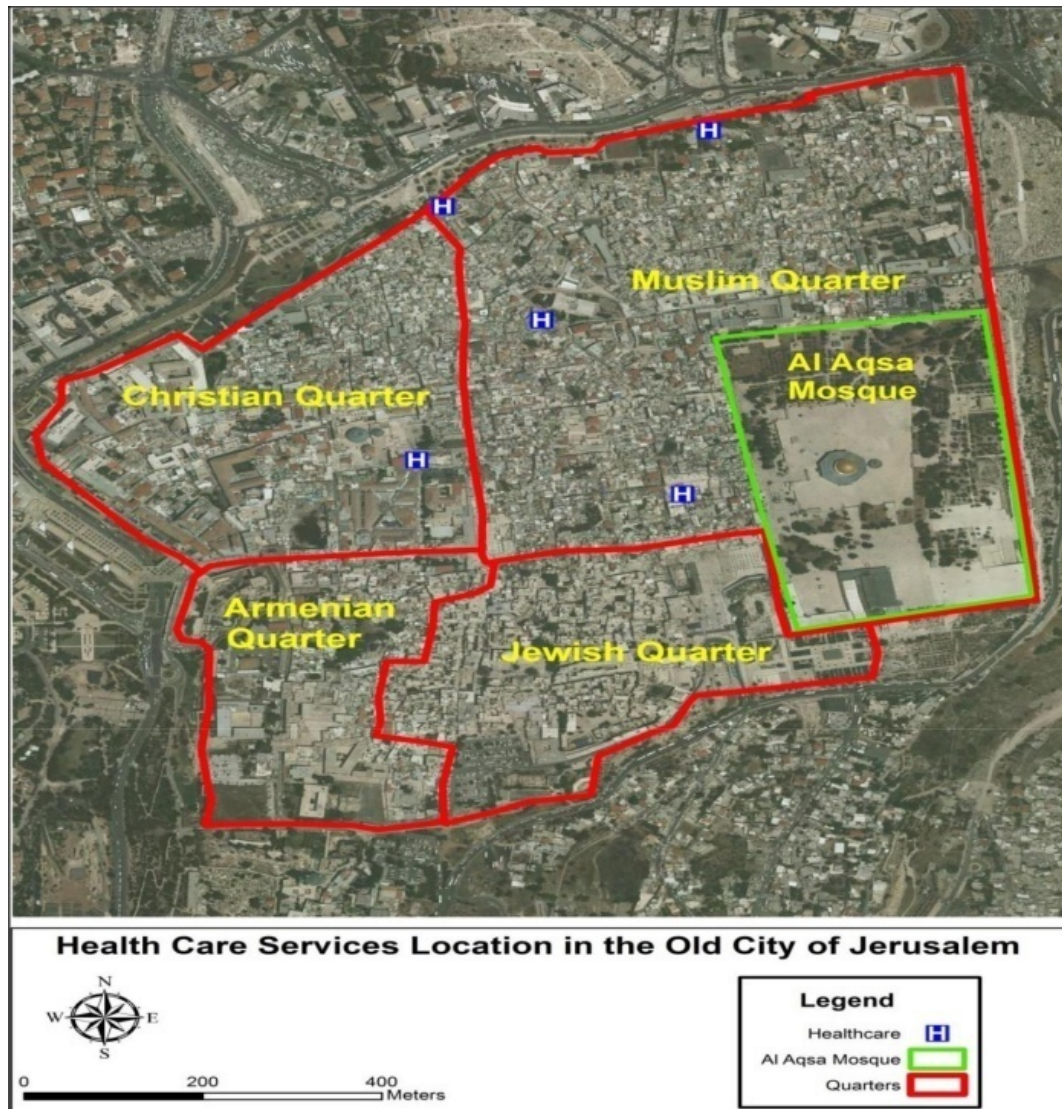


Figure 1. Health Care Centers in Old City of Jerusalem

3. Methodology

Primary data in this study has been collected using a quantitative method and complemented by the qualitative methods. The quantitative method was the main approach to collect data for this study and it employs the close-ended questionnaires to collect the primary data. The use of questionnaires which aims to collect information about people's knowledge, beliefs, attitudes and behavior is one of the most popular methods in satisfaction research [8]. In this study, the questionnaires were given directly to the residents in the Arab quarters in the Old City of Jerusalem to measure patients' satisfaction towards the primary health care they receive. In this research, telephone interview is used as a tool to conduct questionnaire survey to those respondents who were not able to be reached by the researcher [3] [11] [36]. Phone calls were made by calling the Arab households in the city. This method is also used due to the difficulties faced by the researcher to move around the Arab quarters. This is caused by the stringent security measures imposed by the

Israeli authorities. The researcher also conducted some face to face interviews with the responders in order to explain the question in the questionnaire to the older people who have difficulties in reading and writing.

The qualitative data for this study was collected through direct observation conducted by the researcher at the health care centers. Observations were made on the physical aspect of the health centers and patients to understand the actual problems that exist. Many studies have also used the observation methods [16] [32]. The aim of the observation is to identify the real factors that affect the patients' satisfaction with the primary health care in the Old City of Jerusalem. This was done by directly observing the activities in the clinics such as consultation time, environment, and structure of the clinics [8], and by taking photos of health care centers. This additionally obtained information complemented other primary and secondary data collected by the researcher.

The questionnaires were used as the primary source of data in this study and they were distributed to the patients in the Arab community in the Old City of Jerusalem. The

questionnaire consists of close-ended questions, which was developed based on the previous studies that used similar factors and items. However, in the context of this study, the researcher made some modifications based on special conditions in the Old City of Jerusalem, such as political factors because the study area is still under the Israeli occupation and this is one of the few cases in the world. Therefore, apart from the usual factors, this study also includes new items and factors which can contribute to the knowledge and literature in the health and development field.

The questionnaire was divided into four sections (See Table 1). The first is about demographic profiles (6 items); the second, Health and insurance (6 items); the third section is about patient's satisfaction (5 items); the last section is about the factors that affect patients' satisfaction which include seven factors: accessibility and waiting time (5 items), cost and health insurance (5 items), physical environment (6 items), communication and equity (5 items), comprehensiveness and the quality (14 items). The questionnaire was written in Arabic language and the responses were measured by five point Likert Scale. Likert Scale was developed in an attempt to develop standards of measurement in social science research through the use of unified response categories in survey questionnaires. This scale of five points used in the questionnaire in this study asked respondents to indicate whether they are satisfied or dissatisfied with the services they received. Thus, a numerical value can be calculated from the sum of all responses. In this research, the value of the scale indicates the followings: 1= strongly satisfied, 2= satisfied, 3=not sure, 4= dissatisfied, 5= dissatisfied [29].

Sampling method is the process of selecting a number of people as representatives of the total population to understand the characteristic of the population study [27] [5] [4].

The researcher tried many times to get the list of patients from health care centers in Jerusalem Old City, but unfortunately without any positive cooperation from health care managers. This situation came as a result of the control by Israel authority on the health care centers. The managers of the health care centers were worried about giving any information about their patients. Therefore, the researcher used a convenience sampling method by giving the

questionnaires to those patients who were willing to cooperate at the waiting room in the health care centers. Convenience sampling involves choosing the nearest individuals to serve as respondents and continuing that process until the required sample size has been obtained and the researcher simply chooses the sample from those whom she has easy access [4]. The study used total population of the Arab community at the Old City of Jerusalem (including Muslims, Christians and Armenians). The total of Palestinian residents in the Old City of Jerusalem is 29,160 people [28]. This study used table of determining sample size based on Krejcie and Morgan (1970) works that used in may recently research articles in educational and social studies. Their efforts came as a result of increased demand for research has created a need for efficient method of determining the sample size needed to be representative of given population [14]. So, using the table is much simpler than employing a formula. Therefore, this study determines the sample size in this study that include around 400 respondents.

According to Cohen et al (2005), pilot study helps to check if the questionnaire has clear items, direction and layout to obtain the validity of the questionnaire items to achieve the purposes of the research [20]. The pilot survey in this research was conducted in the waiting time room in the Old City of Jerusalem at health care centers in December 2010. This was conducted among the patients aged 18 years and above, who were receiving treatment in the health care centers and lived in the Old City of Jerusalem. Every patient who came to the health centers between morning and afternoon were invited to participate in the survey. Out of 40 questionnaires, all of them were returned and checked by the researcher in terms of the reliability. The reliability index is a tool to measure the quality of research instrument. Coefficient alpha (α) which is called alpha Cronbach is a good indicator of reliability. In general, if the question has a value of 1.0, it means there is good reliability (the questionnaire is reliable) but if the value is less than 0.6, it is a poor question [26]. This study tested the reliability based on 40 questionnaire distributed before the actual data collection using SPSS software. The measure of Cronbach's Alfa in this research is 0.848 and according to Sekaran (2003) it is acceptable [26]. Therefore, this questionnaire was reliable to be used for the primary data collection.

Table 1. Questionnaire Structure

No	Sections	Variables	No. items
1	Demographic profiles		6 items
2	Health and Insurance		6 items
3	Patient satisfaction (Patient satisfaction, number, distribution of primary health center, type of service, and equitable access)	Dependent variables	5 items
4	Factors affecting patients' satisfaction (Time, accessibility, insurance, cost, physical environment, communication, comprehensive and quality health care)	Independent variables	35 items

Table 2. Descriptive Statistics

Items	Rank	Mean	S.D
Provision of bone specialist	1	4.08	1.146
The cost of emergency services and	2	4.05	.804
Working hours of the health centers	3	4.04	1.023
X-ray services in the health centers	4	4.03	1.222
Response time of ambulance to an	5	4.02	1.006
The cost of medicine	6	4.02	.974
Emergency services at health care	7	4.02	.927
Waiting time to see the doctor	8	4.01	1.030
Cost of doctor's visit at home in	9	4.00	1.082
Complete health care needs of	10	4.00	.890
Number of primary health centers in	11	3.99	.937
Types of health services in the Old	12	3.90	1.085
There are bathrooms and Places for drinking water	13	3.83	.897
Cost of doctor's visit in the health care centers in the Old City	14	3.10	1.103
Insurance system in the health care centers	15	3.06	.956
Provision of obstetrics gynecology health care	16	2.87	.966
Pharmacy services	17	2.85	1.077
Referral services for specialist doctors in health care centers in the Old City of Jerusalem	18	2.85	1.015
Provision of diabetic health care	19	2.85	.855
Equitable access to health services	20	2.70	.986
Provision of pediatrics health care	21	2.70	.868
Satisfaction with the primary health care in the Old City of Jerusalem	22	2.68	1.061
The distribution of the primary health center in the Old City of Jerusalem	23	2.68	1.042
Nearness and accessibility to health care centers	24	2.62	1.069
Health care signage with symbols are available in the Old City health centers	25	2.61	1.028
The doctor examines the patients thoroughly	26	2.59	1.025
Referral services for hospitals in health care centers in the Old City of Jerusalem	27	2.59	.927
Laboratory services in the health centers in the Old City	28	2.56	.997
The length of consultation time with the doctor	29	2.55	1.010
Doctor's relationship with the patients during the consultation and treatment in the health centers.	30	2.54	1.015
The waiting area has a comfortable environment	31	2.53	.957
The facilities of the health centers are clean	32	2.51	.947
The center is comfortable in size and has enough number of rooms	33	2.48	.917
Children vaccines in health care centers in the Old City of Jerusalem	34	2.43	.901
Condition of health centers building	35	2.41	.891
Equality between patients and regularity during waiting time at the visit to the health centers in Old City.	36	2.40	.929
Provision of family medical health care	37	2.34	.923
Equality among all patients regardless of their ethnic groups	38	2.33	.854
The reception staff are friendly and show courtesy	39	2.15	.766
The relation among the nurses and the laboratory staff and patients	40	2.12	.729

In this study, the quantitative analysis was conducted using the statistical analysis facilitated by the Statistical Package for Social Sciences (SPSS). This study employed two types of statistical analysis: descriptive analysis and multiple regressions. According to Pallant (2005) descriptive analysis is used to describe the general characteristics of sample and address specific questions [21]. Therefore, this study used frequencies method in order to know how many people gave response to each item in the questionnaires. This method gave comprehensive and clear image about respondent answers and their characteristics. Therefore this study used this method to evaluate all of the questions and items. Apart from the frequencies analysis, another descriptive statistical analysis attempted in this study includes the computation of the mean and standard deviation of the items. This method provides clear description about ranking of the dimensions based on their level of importance. The second method that was used in this study was regression analysis. According to Pallant (2005) multiple regressions is used to explore the relationship between one dependent variable and a number of independent variables and it can be used to address many research questions [21]. Thus, this study used multiple regressions analysis to evaluate the impact of independent variables consisting of time and access to health care services, cost and health insurance, physical environment in the health care centers, comprehensive and the quality of health care services on the patient satisfaction as dependent variables. The result shows which factors affect the patient satisfaction (see figure 2-Proposed Model of Patient Satisfaction with Health Care Centers). In addition, based on the regression analysis, it is possible to formulate a multiple regression equation that help us to know which factor we need to support and improve it so as to increase the overall patient satisfaction. This study also used qualitative methods namely observation further validate the quantitative analysis. Therefore, we can say that this study used a triangulation method of both quantitative and qualitative data collection tools and analyses in order to seek the answers of the research questions.

4. Result and Discussion

Table 2 below shows the rank of all items that affects the patient satisfaction and it using calculation of mean score and standard deviation and followed by the discussions on the factors and problems that affect the quality of the primary health care centers in the Old City of Jerusalem.

The rank of all items that affects the patient satisfaction and it using calculation of mean score and standard deviation and followed by the discussions on the factors and problems that affect the quality of the primary health care centers in the Old City of Jerusalem. Table (2) shows, most patients are dissatisfied about the provision of the bone specialist doctors in the health care centers as there is no health care center in the Old City which has bone specialist doctors in the Old City of Jerusalem. This is a critical problem especially for the elder people who have fragile bones and they have to

seek treatment outside the city and this is difficult for them. The second problem is the cost of the emergency and ambulance services. Many respondents have financial problems in the Old City of Jerusalem and that is due to most of the respondents are unemployed and they cannot pay about 200\$ if they need this service. We can note that this service depends on the patient's situation, if the patient have emergency situation and stayed in the hospital for a night then the Israeli health insurance will return the money that they have paid for the service. The eligibility to claim back the money from the health care insurance depends on the patient's situation. Only after the hospital report confirmed that the patient needs this emergency service, and then only he or she can claims the money back from the insurance. For the poor people, they have to borrow money from others in order to pay for this service.

The third item that patients are dissatisfied about is the working hours in the healthcare centers. There is no 24 hours health care center in the area because most centers close at 7 o'clock in the evening and that means about 32,952 citizens in the Old City of Jerusalem are without any health care services at night. If any patient needs any health service during this time then they have to get the service outside the walls of the city and that led to negative impact on the level of patient satisfaction due to their dissatisfaction about this service. The fourth item that the patients are dissatisfied about is the x-ray service. Only one health care center has recently opened a new x- ray department to provide the service exclusively for the members of this health care center only and also it is not opened every day. As a result, it is a big problem for 32,952 citizens in the Old City of Jerusalem. One x- ray department is not sufficient to serve the large population and this affects their level of satisfaction and forced them to go to health care centers outside the city. As mentioned before, the ambulance is one of the real problems in the Old City of Jerusalem because the response time of the ambulance to an emergency location takes a long time.

Most of the patients are dissatisfied about long waiting time for an ambulance to arrive. It can take half an hour or more and that is because every ambulance car and its crew need protection from the security forces when the ambulance car travels into the Arab area which has high population density. This is time consuming and many patients had died while waiting for an ambulance. One of such cases is Sharif Anton Habash who died in October 29, 2009 after severe bleeding in his house in the Old City of Jerusalem due to the late arrival of the ambulance to bring him to the hospital. The cost of some medicine also seems to be a problem for some patients and that is because not all the medicine is fully covered by the insurance. Some medicine is too expensive, for example skin drugs like Curatane that cost around 100\$ which many respondents could not afford to pay if the insurance does not fully cover the price. Generally, patients have negative feedbacks about emergency services and that affects the level of the patient satisfaction. They are dissatisfied about the emergency services because there is no health care center in the Old City of Jerusalem which is

equipped for emergency cases, especially in the closure situation which happened quite frequently in this unstable city. Thus, this forces people to go to the hospital outside the city which greatly affects some patients who have emergency cases and need urgent medical attention. Therefore, there is an apparent need for emergency services in this city which have high density population 32,952 citizens but without any emergency services. Many events had occurred and proved that the lack of emergency services has severe effects on people's life in the city. For example, Al- Aqsa Intifada which happened in September 2000 and led to several deaths among the Arabs due to the attacks from Israeli forces and lack of emergency rooms in the Old City of Jerusalem to treat the wounded patients. Accordingly, the city critically needs emergency rooms that are fully equipped for heart treatment and respirators. Respondents cannot evaluate waiting time accurately but some patients feel that they spend most of their time in the waiting area in the health care centers. Sometimes, they spend more than an hour in waiting area for the doctors especially after the holidays where there will be a large number of patients in the health care centers. According to Gadallah *et al* (2003), long waiting time for patient means less satisfaction and that's too implausible for them to return to the health care center for future treatment and that is exactly what happen in the Old City of Jerusalem health care centers [7]. The cost is one of the essential problems which facing the patients in the city as the insurance do not cover the visit of the doctors in the emergency cases at home. This is a problem especially for the elderly and disabled people who sometimes need the doctors to visit them at home. Based on the data analysis, the main score of the doctor's visit during emergency cases is 4.00 and that shows the dissatisfaction among the patients and causes negative impact on the quality of this service. Normally, the patients have to pay around 60\$ for every visit from the doctor to their homes.

Although the existing five centers provide many services in the Old City of Jerusalem, they are still not enough to meet the need of the population. They need more services as indicated by the main score of the complete of service which is 4.00. There are still some services which are lacking or unavailable in the Old City like specialist doctors, ambulance, and many more. The number of primary health centers in the Old City of Jerusalem is only five to cater for 32,952 citizens in the area. This is not enough and they need more health care centers to fulfill their rising medical needs in the city. The main score is about 3.99 which indicate high level of dissatisfaction among the patients. People in the Old City need more improvement of the health care services because they do not want to go outside the city to seek medical treatment. The patients are also dissatisfied about the type of the services as they feel that the centers have to improve the quality of the provided services. This is indicated by the main score of the type of service of 3.90. Most of the health care centers are rented building and they are not designed as medical centers from the beginning. Also, the size of the medical centers is small because that is the

usual size of any house in the Old City. For that reason, there is a lack of drinking water facilities and toilets in the medical center, and the patients are dissatisfied about this as indicated by a mean score of 3.83. The cost of a doctor's visit to the health care center had a mean score of 3.10. Anyone who do not have any insurance have to pay 15\$ for every visit but the patients who have insurance do not have to pay anything as the insurance has already covered for the doctor's visit to the health care center. The patients do not know how much is the exact cost and they are also dissatisfied about the cost of visit for specialist doctors and that have negative impact on their satisfaction level. So, the health care insurance should cover all the patients' needs. Not all respondents know how much they pay to the Israeli health insurance system in the health care centers. However, the people who know how much they pay are dissatisfied and they said the quality of the services has to be better because they pay for health tax of about 4.8% of their monthly income. Thus, the main score of insurance system is 3.06. The main score of the provision of obstetrics and gynecology health care is 2.87 and it is not too high satisfaction because there is only one health care center which has specialists for obstetrics and gynecology. The specialist, however, is not available everyday and only come to the health care center once a week. Meanwhile, the other four health care centers do not have a specialist but only nurses and midwives to handle related cases. In addition, the main score of the pharmacy services is around 2.85 and it is not a high satisfaction indicator because there is no health care center that has pharmacy services except the UN health center which have a pharmacy service with free medicine. However, not all types of medicine are always available in the UN health center and the patients have to come many times to the center to obtain free medicine.

Some respondents said that they have to wait a long time to get referral services for specialist doctors in health care centers in the Old City of Jerusalem and it is a big problem to wait for months just to see the specialist doctors especially in emergency situation. Thus, the main score of referral services for specialist doctors in health care centers in the Old city of Jerusalem is only 2.85. There are large numbers of patients with diabetes problems, but there is no diabetes specialist doctor in the health care center. It is the family doctor who treated all diabetes patients and the patients feel more satisfied and comfortable if there is a diabetes specialist doctor in the health care centers and for that reason the main score for this item is 2.85. Although most of the health care center is in the Muslim quarter, the respondents feel that there is equitable and easy access to health care centers to some patients but it is difficult for others. For example, the people who are living in the Armenian Quarter need to travel quite a distance in order to reach the health care centers. The main score for access to health care centers is 2.70 and it is not a high level of satisfaction. The main score of the pediatrics health care is 2.70 and the patients are generally satisfied about this service. The respondents are also satisfied with the primary health care in the Old City of Jerusalem with a main score of 2.68. Also, the respondents

are satisfied about the distribution of the primary health centers in the Old City of Jerusalem and the main score is 2.68. Although most of the health care centers are distributed in the Muslim quarter but the people are satisfied because it is the largest quarter in the area with the population of about 70.5% of the Old City population.

The main score of the nearness or proximity and accessibility to the health care centers is 2.62. All the health care centers have many important signs with symbols and the main score of it is 2.61. Most of the patients are satisfied about the medical examination conducted by the doctors and the main score is 2.59. Although most of the health care centers do not have specialist doctors but they feel that the family doctors are so good because these doctors examine the patients thoroughly and treated them kindly. Most of the respondents are satisfied about the referral service for hospitals and the main score is 2.59 but the patients in the UN health centers face a problem of long waiting time for referral to the hospital. Although there are insufficient blood tests laboratories and the laboratories in the Old City provide only simple tests but the patients are generally satisfied about this service. However, for certain lab tests, patients have to do them in labs outside the city. As a consequence, they will feel more satisfied if they can perform all the laboratories tests in the same health care center. Thus, the main score of the laboratories services is 2.56. Most respondents are satisfied with the length of consultation time with the doctors because as mentioned above. The doctors examine the patient thoroughly, so the patients are satisfied about the length of consultation time and the main score is 2.55. Patients are also satisfied about the doctor relationship with the patients during the consultation time and said that the doctors are kind and respect their patients. The main score of this item is 2.54. Even though the waiting area is in the corridor but patient are not bothered about this but rather they are satisfied and they said that structure of the buildings in the Old City is small, so it does not affect their level of satisfaction and the main score of the waiting area is 2.53. Overall, the facilities of the health care centers are clean but in some health care centers, there is a big problem of cleanliness in the toilets and the patients are dissatisfied about this situation. On the other hand, they are satisfied about the cleanliness of other facilities and the main score of the facilities is 2.51. Although the health care centers are small but patients are satisfied and said it is comfortable if we compare it with the size of the Old City houses.

The main score of the center in terms of size and sufficiency of rooms is 2.48. Not all the health care centers give children vaccines and only two of the five health care centers provide free children vaccines for all patients regardless of their health care insurance fund. The patients are satisfied with the free vaccines so they do not have to leave the Old City to get the children vaccines and that resulted in positive impact on the patient satisfaction which led to the main score of this item of 2.43. As mentioned before, patients are satisfied with the condition of the health care building and made positive impact on the satisfaction

level with a main score of 2.41. The main score for equality between patients and regularity during waiting time at the health centers in Old City of Jerusalem is 2.40 and that indicates that there is a system in existence in the waiting room. There is also equality between all patients and all patients have the same health care rights. All the health care centers have family doctors who provide treatment to the patients and the patient are satisfied with them and the main score of the provision of the family medical health care is 2.34. There are no problems between the Arab ethnic groups and the patients are satisfied that all of them receive equal treatment regardless of their ethnic groups and the main score of this factor is 2.33.

The patients are satisfied about the reception staff and said they are friendly and show courtesy. The main score of this item is 2.15 and they are also very helpful and attentive. The nurses and the laboratory staff are friendly and kind with the patients which made them satisfied. The main score of the relation among the nurses and the laboratory staff is 2.12.

To summarize, table (2) discusses the patients' feedback about the items which affect the level of patient satisfaction and the quality of the primary health care centers. Based on the findings, the respondents are dissatisfied about twelve items namely: availability of bone specialists, cost of the emergency and ambulance, working hours of the health centers, X-ray services in the health centers in the Old City, response time of ambulance to an emergency location, the cost of medicine, emergency services at health care centers in the Old City, waiting time to see the doctor, cost of doctor's visit at home in case of emergency, number of primary health centers in the Old City of Jerusalem, complete health care needs of citizens in the Old City of Jerusalem and types of health services in the Old City of Jerusalem. All these factors have an effect on the primary health care services in the Old City of Jerusalem so there is a need to improve the negative items in order to increase the quality of primary health care services. Although the patients are generally satisfied with the other items, there are still rooms for improvement for each of the item in the near future.

5. Effect of Various Factors on Patient Satisfaction

In order to find out the effect of the factors identified in table (3) on the overall satisfaction of the patients with the health care services in Jerusalem Old City, a regression analysis was done with the five factor scores as the independent variables and patient satisfaction as a whole as the dependent variable. The significance of the F-value came out to be 0.016, which indicates that the model is statistically significant at 5 per cent level of significance. The non-standardized and the standardized beta values and the significance levels of t-tests for the significance of individual independent variables are given in table (3) As shown in the table (3), only four variables are statistically significant in the model at 5 per cent significance level. Looking at the 'B'

values for all the variables it can be seen that only four factors are positively related to overall patient satisfaction as a dependent variable.

Based on standardized beta values, it can be said that in absolute terms, Factor 1, which is time and access to health care services with 0.348 value, has the maximum effect on overall satisfaction of the customer while Factor 5, that is comprehensive and quality health care services with 0.125 values has the least effect. Thus, it was found that, hierarchically, F1- Time and access to health care services (0.348), F3- Physical environment in the health care centers (0.144), F2- Cost and health insurance (0.128), F5- Comprehensive and the quality health (0.125), were amongst the significant factors having an impact on the overall satisfaction of the patients with the health care services in

Jerusalem Old City. On the basis of the values obtained, a regression equation can be formulated to get the value of the dependent variable as follows: Patient satisfaction with health care services as a whole = $0.464 + 0.382$ (Time and access to health care services) + 0.141 (Cost and health insurance) + 0.144 (Physical environment in the health care centers) + 0.112 (Comprehensive and quality health care services). The equation obtained denotes that patient satisfaction with health care services in the Old City of Jerusalem as a whole will increase when their satisfaction with time and access to health care services, cost and health insurance, physical environment in the health care centers, comprehensive and quality health care services increases. The model can also be represented diagrammatically as shown in Figure (2).

Table 3. The Effect of Various Factors on Patient Satisfaction

Model	Coefficients ^a				
	Non- standardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sig
Constant	.464	.193		2.410	.016
F1- Time and access to health care services	.382	.053	.348	7.189	.000
F2- Cost and health insurance	.141	.049	.128	2.881	.004
F3 - Physical environment in the health care centers	.144	.052	.144	2.754	.006
F4- Communication with patient	.062	.057	.053	1.099	.273
F5 -Comprehensive and quality health care services in the health care centers	.112	.043	.125	2.614	.009
a. Dependent Variable: DV1 (patient satisfaction)					

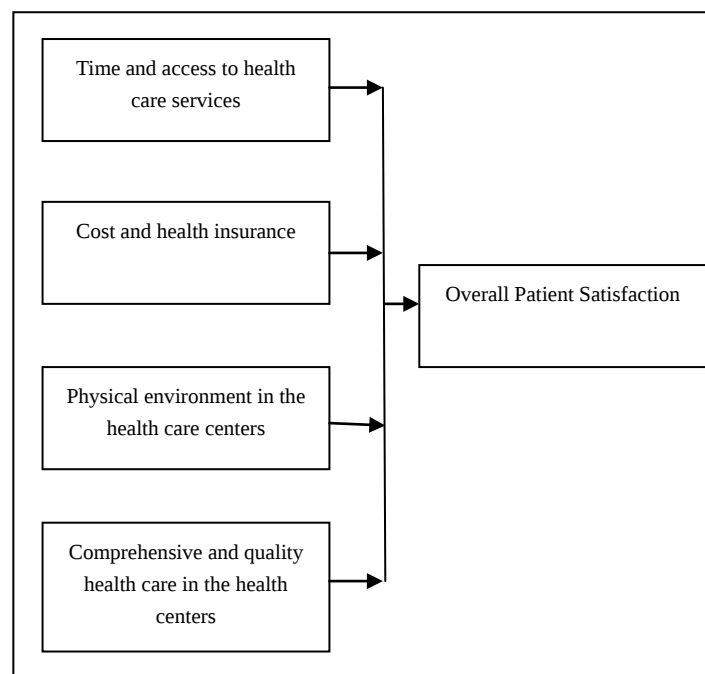


Figure 2. Proposed Model of Patient Satisfaction with Health Care Centers

6. Conclusions and Recommendations

Any development of the health care system has to take into account the patients' needs based on the evaluation of patient satisfaction. This study shows a framework to understand and describe the importance of various factors that affect the patient satisfaction with health care services in the Old City of Jerusalem. Patient satisfaction reflects the quality of services. When respondents perceived performance of various dimension to be of poor quality, they were less satisfied with the health care services. The proposed model Figure (2) of patient satisfaction with health care services means that careful attention should be paid by health organization in the Old City of Jerusalem to each identified factor. As reflected in the proposed model, time and access to health care services has been assigned the greatest relative importance by the respondents. This implies that time and access to health care service that includes nearness and accessibility to health care center, response time of ambulance to an emergency location, working hours of the health care centers, waiting time to see the doctor and the length of consultation time with the doctor can reinforce or decrease the patient satisfaction level. Therefore, the health organization and health providers in the Old City of Jerusalem like Israeli health insurance, Palestinian health services and international organization should pay more attention and improve efficiency of health care centers by:

1. Health care organization and policy makers have to improve the health care centers in the Old City of Jerusalem and increase the number of the health care centers to reach as many residents as possible.
2. Increase the operation hours of the health centers and introduce a night shift system between medical centers in order to be available to patients even at night time.
3. Develop the emergency services sector especially ambulance services in the Old City of Jerusalem with at least need one ambulance car for every health care center for urgent cases.

The next important dimension was that of physical environment in the health care centers which includes variables such as condition of health centers building, the center is comfortable in size and has enough number of rooms, the waiting area has a comfortable environment, the facilities of the health care center are clean, there are bathrooms and places for drinking water and means of information and recreation are available in the Old City health centers. This implies that the decision makers at health care center at the Old City of Jerusalem should be provided with the required support to increase the patients' satisfaction level by:

1. Improving the condition of the health care centers building.
2. Improving the level of the cleanliness in the health care centers.
3. Improving the planning, designing, and construction of the health care facilities in the Old City of Jerusalem.

Third important dimension affecting the satisfaction level of patients was cost and health insurance factor that include variables such as the cost of doctors' visit to the health care centers, cost of doctor visit at home in case of emergency, the cost of emergency services and ambulance, the cost of medicine and insurance system in the health care center. Support and improvement of these variables by health authorities are very important efforts through:

1. The health care insurance has to cover a percentage of the doctor visit at home especially during emergency situation as well as to cover the cost of medicine.
2. Reduce the cost of emergency services and ambulance in order to be available to all patients.

Finally, in the model of patient satisfaction, the last factor affects the overall patient satisfaction that is comprehensive and the quality of health care services which include complete health care needs of citizen in the Old City, provision of family medical health, provision of pediatrics health, provision of bone specialist, provision of obstetrics and gynecology health, pharmacy services, x-ray services, laboratory services, emergency services, childhood vaccines, referred services to specialist doctor, referred services to hospitals and the doctor examination of the patient thoroughly. This implies health care center and authorities to pay more support by:

1. Provisions of specialist doctors in all fields in the Old City of Jerusalem
2. The health care centers in the Old City must provide more services such as x-ray, laboratory, emergency services and pharmacy services.
3. Facilitate the process of referral patient services for necessary treatment to the specialist doctors and hospitals.

According to the above results and discussions, the following recommendations are suggested to improve and better develop the health care quality in the Old City of Jerusalem based on the patients' satisfactions level and index. As the Arab people in the Old City of Jerusalem is facing financial problems due to low income, health authorities especially the Israeli health system should setup a new health policy and introduce programs to help the Old City residents by reducing the medicine cost for patients such as skin and psychological medicine. On another hand, they should work hard to reduce the cost of ambulance for patients especially the elder people because the structure of the Old City hinders the easy movement to and from the health centers.

The Old City of Jerusalem also has to deal with high density population of 32,952 citizens per km² with only five health centers available in the city. Thus, the Israeli, Palestinian and International Health Organizations should open a new health center and redistribute the existing health care centers to cover all study area in order to be more accessible for all residents. The UN also needs to play a sufficient role in increasing the provision of people health care to the Palestinian people.

Furthermore, the Old City of Jerusalem is still politically

under unstable situation with conflicts between the Arab and Jewish people. This situation requires more health centers and more efficient emergency services by increasing the emergency rooms and centers especially around the Al-Aqsa Mosque. In addition, the Israeli Army should allow ambulance cars to pass through the area without any difficulties during emergency situation.

There is also a need to increase the people's awareness about the importance of medical services and about their rights to obtain them especially the issues that relate to health insurance as compared to the health services provided to the Jews because they are paying a part of their income equally as the Jews to the health insurance system. Setting up a new awareness program for the Arab people in the Old City of Jerusalem will be useful to improve their knowledge about the health insurance system and health services.

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