



Kerman University
of Medical Sciences

International Journal of
Health Policy and Management

doi: 10.15171/ijhpm.2013.56

Journal homepage: <http://ijhpm.com>



Original Article

Customers' Complaints and its Determinants: The Case of a Training Educational Hospital in Iran

Hossein Ebrahimipour¹, Ali Vafae-Najar¹, Ahmad Khanijahani², Arefeh Pourtaleb^{1,*}, Zoleykha Saadati³, Yasamin Molavi¹, Shahnaz Kaffashi⁴

¹Health Sciences Research Center, Department of Health and Management, School of Health, Mashhad University of Medical Sciences, Mashhad, Iran

²School of public Health, Zanjan University of Medical Sciences, Zanjan, Iran

³Ghaem Educational, Research and Treatment Center, Mashhad University of Medical Sciences, Mashhad, Iran

⁴Departement of Health and Management, School of Health, Shiraz University of Medical Sciences, Shiraz, Iran

ARTICLE INFO

Article History:

Received: 15 July 2013

Accepted: 18 October 2013

ePublished: 28 October 2013

Keywords:

Patients

Hospitals

Patients' Complaints

Mashhad University of Medical Sciences

ABSTRACT

Background: Today, despite the efforts of the medical community and healthcare staff along with the advancements in medical technology, patients' dissatisfaction and complaints have been increased. The present study aimed at making a survey on the patients' complaints in a large training hospital affiliated to Mashhad University of Medical Sciences (MUMS).

Methods: This descriptive, cross-sectional study was conducted on written and verbal complaints of patients and their relatives in a tertiary (specialty and sub-specialty) training hospital. All the recorded patients' complaints, from March to December 2012, were reviewed. Data were categorized and analyzed using descriptive statistics by Microsoft Excel 2007.

Results: A total of 233 complaints were reviewed, of which 46.35%, 31.34% and 22.31%, respectively, were verbal, written and made on the phone. The main reasons for complaints were accessibility to medical staff (21.46%), communication failures (20.17%) and dissatisfaction with the provided care (14.59%). Thirty one (13.31%) cases were solved at first place, 194 (83.26%) referred to the complaints from the committee and 3.43% referred to the legal authorities. The average response time was about six to seven days.

Conclusion: The findings of the study suggest that sufficient availability of medical staff, improvement in communication skills and paying attention to the patients' needs and expectations may reduce complaints from public health facilities.

Background

Today, despite the efforts of medical professionals and advancements in treatment technologies, patients' dissatisfactions and complaints have been increased (1). "Complaint" is a dissatisfaction symptom which needs attention and response, and it is recognized as a valuable source of information about the quality of current service delivery processes (2). Complaint is an official written or verbal statement by a patient which is not reconciled in the first place (3). Because of the availability of modern information systems and better public education, there is an increase in patients and their families' awareness on their own rights about health and the choice of treatment available. Consequently, complaints regarding the quality of healthcare have been increased significantly (4).

Complaints are regarded as a source of information for assessing adverse events and may be considered as part of the quality and safety improvement programs (5). Patient complaint is seen as a certain way of increasing the quality of care, improving physicians' attention and knowledge, increasing patients' satisfaction, reducing medical costs, and eventually preserving the sanctity of medical society (6). Hospital, as an institute which

provides professional services, not only contributes to patients' satisfaction, but also has a pivotal role in improving the physical and mental health of the community (6). However, personnel and organizational errors are unavoidable and despite the great efforts of hospital staff, errors and adverse events may occur and lead to patients' dissatisfaction (7).

Results of a study in Canada showed that among received complaints (1375), 41% were administrative performance, 9% medical report, 9% ethical complaints, 38% the quality of care, and 2% were unclassified complaints (7). Another study in Iran reported that the most common causes of complaints were as follows: physical injury (27%), lack of concern and negligence (23%), death (22%), unsuccessful surgery (18%), and wrong diagnosis (11%) (1).

Bismark *et al.* found that the rate of patient complaints increased with the severity of damage; and the likelihood of patient complaints from serious damages was 11 times more than minor ones, and 18 times greater after deaths. The possibility of complaining was lower in older patients and those who lived in deprived areas (8).

The result of a study at Tehran Heart Center (THC) in Tehran,

*Corresponding author: Arefeh Pourtaleb; Email: arefehpourtaleb@yahoo.com

Iran, showed that a total of 1642 complaints were received over 30 months, 1457 were verbal and 185 were in written of which 35% were related to admission procedures, followed by communication (34%), waiting time (14%), delay (7%) and ignoring the standard of clinical care (4%), respectively (9). A survey on complaints, recorded at three hospitals affiliated to Tehran University of Medical Sciences, declared that most complains (30%) were due to the delay or cancellation of the appointment, communication failures (24%), ignoring the standards of clinical care (21%) and the quality of basic amenities (8%). The majority of complaints (62%) concerned physicians more than nurses (10%). Of all 363 complains, 60% were solved where they had happened. The mean duration to response for the majority of complaints (52%) was 2 days (10).

A recent study at a Large Public Educational Specialized Center of Obstetrics and Gynecology reported that among 758 complains which were investigated, 53%, 41% and 6% were related to therapeutic, administrative support and Para-clinic wards respectively. The main reasons of complaints were about ignoring the standards of clinical care (29%), communication failure (24%), the quality of basic amenities (24%) and delay in the delivery of general services or canceled appointment (13%) (11).

If healthcare organizations systematically analyze patients' complaints, they can accurately address the weak points and risk factors of service delivery processes (12). Given that, this issue has drawn attention in recent years among policy makers and as there is no sufficient evidence in the developing countries regarding this issue, the present study aimed at investigating the patients' complaints in a big tertiary, educational hospital, "Qhaem", affiliated to MUMS.

Methods

In this descriptive cross-sectional study all the written and verbal complaints of patients and their attendance in Qhaem Hospital from March to December 2012 were investigated.

Mashhad is among the biggest cities of the country with a population of about 3 million and accommodating around 20 million pilgrimages each year (13). Qhaem is a big tertiary educational, specialty and sub-specialty hospital; with 815 active beds, 18 wards, 7 emergency wards, para-clinic services and many medical clinics, putting it in a place as one of the main educational-medical hospitals in this region and in the country. This center acts as a medical research and training center for residency and post-doctoral students, in addition to providing medical care for the patients.

The handling complaints process in this hospital is as follows:

1. Patients or attendances report the complaint verbally (on the phone or attending to the complaint department) or by filling out a special form in the Quality Improvement Department (QID).
2. A code for each complaint form is generated and then the data is entered into software (for easy tracking) by QID.
3. Complaint responder would give necessary explanations or comments to the complainant.
4. If the complaint is not resolved, then the medical, nursing or a special team (depending on the complaint issue), will investigate it further.
5. If the complaint is confirmed; the QID manager follows this process to reach an acceptable result.

To collect and classify data, similar studies (9–11) were reviewed and a checklist was developed. In the next step 50 complaints were randomly selected and classified based on the developed checklist, and appropriate justifications were made in the study checklist based on experts' opinions through Nominal Group method. The checklist was finalized with 8 sub-groups. The validity of the checklist was confirmed through expert opinion and content analysis and its reliability was confirmed through inter-method (parallel form) reliability (14). The checklist is shown in Table 1.

As shown in the checklist, the types of complaints were

Table 1. Complaint classification checklist

| Type of complaint | Sub-group | Definition | Example |
|--|--|--|---|
| Accessibility | Lack of access to nurses and physicians | Any deficit in access to medical staff | Difference in accessibility in different work shifts |
| Communication skills | Inappropriate attitude towards patient | Discourtesy, rudeness or inappropriate statement, suggestion or behavior | Surgical ward staff Inappropriate communication with patient |
| | Providing insufficient or not understandable information | Lack of guidance, response and proper explanation to patient and his companion | Patient not guided properly by administrative and medical staff |
| Dissatisfaction from received services | Insufficient attention and consideration to patient | Any inattention and lack of consideration about the physical and mental condition of patient and his care programs | Lack of consideration, the need for more attention to patients in the surgery department |
| | Neglecting the standards of clinical care | Incorrect, inappropriate or insufficient diagnostic and therapeutic actions | Patients received wrong treatment |
| Delay in providing care | Delay in treating patient | Any delay in providing services like medical reports, performing treatment or medical consultation | Delay in decision making for surgery |
| Quality of welfare facilities and basic amenities | Welfare facilities and utilities | Lack of the facilities which don't influence the treatment process directly but increase patient satisfaction | Lack of seating arrangement for the patients and attendants, overnight stay equipment, cleanliness, toilets |
| Quality of hospital care services | Hospital equipment | Lack of or defect in medical supplies or equipment | Defect in hospital beds |
| Admission, discharge | Admission, discharge | Anything related to admission process, appointment making, hospitalization and discharge | Incomplete health record |
| Cost | Cost and payments | Requesting a discount in patient's bill and hospital store objects | Asking for a high charge from patient's companion without providing any facilities |

categorized in 8 sub-groups by two reviewers separately. In the cases of disagreement between the two reviewers, the problem was solved through arguments. The collected data were analyzed by descriptive statistics using Microsoft Excel 2007.

Results

In total, 233 cases of complaints were identified. 46.35% of the complaints were verbal, 31.34% written and 22.31% received by phone. In 54.00% of cases, complaints were made by patients' relatives while in 46.00% of cases they were made by patients themselves. Thirty one complaints (13.31%) were resolved in this stage by offering an explanation or apology from QID or the staff, 194 (83.26%) were referred to complaint management committee, and 8 (3.43%) were referred to legal authorities. The mean duration of response to complaint was six to seven working days.

Content analysis of complaints showed that 50 cases (21.46%) of the complaints were related to staff accessibility in which majority of them were related to nurses (76.00%) and physicians (24.00%).

Forty seven (20.17%) of all complaints were about communication, which ranked this issue as the second reason of dissatisfaction. In this group, expressed dissatisfaction and annoyance about personnel's inappropriate attitudes was (73.34%) and providing insufficient or not understandable information by staff was (27.65%).

The other complains were made about dissatisfaction from provided care 35 (14.59%). In this regard, lack of consideration and insufficient attention to patients by the staff was (73.52%).

12.45% of complainants, believed that delay and postponement in providing services was another problem which made this subject as the fourth reason for complaint.

Results showed that other important parts of the patients' complaints were about the quality of welfare facilities and basic amenities (11.59%) and the quality of hospital care services (8.15%). Table 2 shows that the least complaints made were related to therapeutic costs (3.00%) in this public hospital.

Discussion

This descriptive cross-sectional study aimed at investigating the complaints in a tertiary training hospital affiliated to MUMS.

Verbal complaints were the most common type in this study which is compatible with the findings of another study conducted in Tehran hospitals (9). THC study showed that 88.7% of the complaints were verbal and 11.3% were in written (9). In our study, all verbal and phone complaints were not documented appropriately in the complaint registry system; therefore we did not have complete information about them. It should be noted that in countries like Iran, people prefer to complain verbally and not in written. So, the complaint handling system should be designed in such a way that the verbal complaints are received and transferred properly.

In this regard it must be considered that the method of complaints varies widely; depending on the hospital policy and social, cultural, demographic and other factors. It is important to ensure that the complaint management system is established and developed in a way that everyone can submit his/her complaints in the most convenience way. Usually more than 50% of complaints are presented by patients' relatives. In studies conducted in England, Singapore, Turkey and Iran (Tehran) this number ranged from 50–86% (10,15,16). This might be because of the patients' health status which does not usually allow them to report and pursue their complaints.

In order to have more satisfied customers and proper use of their feedback, designing an effective complaint handling system is essential. Health Services Review Council recommends some guiding principles which include: proper organizational foundation, describing complaint handling process and skills, setting up needed tools and finally evaluating the system by Seriousness Assessment Matrix (17).

Encouraging patients or their relatives to critically evaluate the services which they receive will help hospitals to recognize their weaknesses and plan for subsequent improvements. It is always better to resolve the patients' complaints in place. Chavan *et al.*

Table 2. The frequency of complaints based on complaints subject

| Complaint subject | N | % | % from all the complaints | |
|--|---|-----|---------------------------|-------|
| Accessibility to healthcare staff | Access to nurses | 38 | 76.00 | 21.46 |
| | Access to physicians | 12 | 24.00 | |
| Communication skills | Inappropriate personnel attitudes | 34 | 73.34 | 20.17 |
| | Providing insufficient or not understandable information | 13 | 27.65 | |
| Dissatisfaction from provided care | Lack of consideration and insufficient attention to patients by staff | 25 | 73.52 | 14.59 |
| | Neglecting the standards of clinical care | 9 | 26.47 | |
| Delay in providing services | Delay in providing treatment | 29 | 29.00 | 12.45 |
| Quality of welfare facilities and basic amenities | Welfare facilities and utilities | 27 | 27.00 | 11.59 |
| Quality of hospital care services | Hospital equipment | 19 | 19.00 | 8.15 |
| Admission, discharge | Discharge | 9 | 56.25 | 6.87 |
| | Admission and appointment making | 7 | 43.75 | |
| Cost | Therapeutic costs | 7 | 7.00 | 3.00 |
| Other | Other topics | 4 | 4.00 | 1.72 |
| Total | | 233 | | 100 |

reported that in an eye hospital in United Kingdom (UK), 84% of complaints were resolved in first place by assessment, explanation or apology and only 1% were referred to legal authorities (18). Wong study showed that also 83.9% of complaints in Singapore were resolved in place (15). However, in this study, most of complaints were referred to complaint management committee and relatively small proportion of complaints was resolved in place. It may be concluded that the complaints were serious or the complaint sides were unable to settle an argument due to the lack of communication skills.

Results of another Study has shown that improving communication skills (explanation in place, apology) of staff significantly reduced the number of complaints (19). Further complications can be prevented through proper behavior and apology in first stages of disputes (12,15,20–22).

Manochehri reported that less than 90% of all the complaints including verbal complaints were solved by providing proper explanations in which, 2.1% and 1.3% were solved by verbal apology, and paying compensation, respectively (9).

The mean duration for response was six to seven working days in this study, while in Mirzaaghaee's study in Tehran it was two days (10), and in Syambalapatiya study in UK it was 20 days (4). Responding to complaints in a proper time without any unreasonable delays and providing a convenient traceable complaint audit process may help promoting patient satisfaction.

Access to healthcare staff was the most common cause of complaints in this study. This result is compatible with the study of three hospitals in Tehran and a big hospital in Australia (10,23). Most of the hospitals' problems are related to the lack of personnel or ineffective distribution of staff (24). However, it is believed that the reason for low operational indicators and as the consequent increases in hospital costs is not lack of human or non-human resources (24). Allocation of human resources based on systematic need assessment, employing personnel in positions based on their ability and education, promoting skills and enthusiasm among staff, on-site training of personnel under specialist supervision, and opportunity for task change and job promotion can increase human resources outcome and access to healthcare staff, which may improve patients' satisfaction (24).

In this study, communication failure was the second cause of patients' complain, which is compatible with the study conducted in Mashhad, Iran (11). Montini *et al.* in Boston showed that communication failure was also the second cause of complaints (2); while in Italy, Victoria and Singapore as well as Turkey this issue was accounted for most of complaints (2,9–11,15,16,23). Improper communication or providing incomplete or inappropriate explanations are usually the consequences of patients' dissatisfaction with personnel behavior. Healthcare staff must use strategies to improve their communication skills and promote their knowledge and effort in this regard (18). Personnel must know how to interact with different people and it is important to know that one-way communication is not proper for all the patients (18). Performing educational workshops targeting at professional needs and informing patients about proper way of communication with healthcare staff can reduce communication problems and consequent complaints. Improving listening skills and patience will help healthcare staff in their communication with patients (16).

Dissatisfaction with the provided healthcare, which was the third cause of complaints in this study, has also been emphasized in other national and international studies (9,15,23,25–27). An

analysis on the patients' complaints by Zengin in a Turkish survey showed that the main issue of complaint was about "medical care" in which 16.7%, 7.4% and 5.6% were about treatment dissatisfaction, misdiagnosis and examination dissatisfaction, respectively (16). Wong stated that 76% of complaints related to dissatisfaction from health services were not accredited. Most of the service providers believed that, the main cause for patients' complaints is derived from patients' high expectations and demands (15). Evaluating this subject is difficult because there is not a specific standard to determine it properly and the main parts of these complaints are caused by poor communication skills of healthcare staff with patients, not providing explanations for therapeutic action and its common side effects. Wrong or late diagnosis, errors in prescription drug, weak and inappropriate therapeutic techniques or approaches are the main causes of this category of complaints (26,27). In most of these cases, implementing proper diagnostic and therapeutic approaches along with good communication skills can reduce complaints significantly (16).

Delay in providing health services was the fourth cause of complaint in this study consistent with German, Turkish and Iran studies (11,12,16). In national studies, long waiting time is reported as the main cause of complaints (9,10). In educational hospitals, limitation of resources along with the high number of patients are two main reasons for delay in providing care. The necessity of providing unexpected services like emergency services and time-consuming nature of some surgeries are also other reasons for delay (28).

Finally we found that, quality of welfare facilities, basic amenities and utilities were one of the reasons for complaint. This factor is not only related to welfare of patients, but it is also related to patients' to feel better and accelerate this process. Inappropriate facilities impose risk to patients and their companions (29).

Limitation

Patient complaints are complex, recondite and some may have been incorrectly categorized. In this study verbal and phone complaints were not documented appropriately in complaint registry system, therefore we did not have complete information about them. Lack of demographic information about the subjects and not specifying the person that has been the subject of the complaints by clients were other limitations of this study.

Conclusion

This cross-sectional study presented many interesting insights. The findings revealed the primacy of improving complaint registry systems in hospitals. The study emphasizes hospitals and other health settings to implement proper policies to improve their procedures in responding to complaints and to systematically determine the causes of the patients' complaints. Improving personnel skills in providing high quality healthcare, increasing their communication skills and providing proper information to patients will help reducing the complaints.

Designating further welfare facilities to patients, improving conditions of hospitals rooms, increasing staff numbers and sufficiently equipping the hospitals, are among the most important items which can help reducing the complaints. Promoting cleanness of the hospital environment, controlling the noises, air conditioning, convenient temperature in rooms and public places and improving washroom conditions are

essential for reducing the complaints at public facilities. It is recommended to design an efficient, fair and accessible mechanism to handle customers' complaints.

In order to have better handling of customers' complains, we suggest some strategies including: Effective communication approach, promoting a culture of reporting and accountability, gathering and using information, following up the issues, conducting consumer satisfaction surveys, tracking the progress of the investigation and resolving the complaint, initiatives taken to address consumer complaints or feedback, comparing the complaints system against external standards, Learning from complains and making changes to improve the services in response to issues raised in complaints. Conducting further studies about the idea of patients' complaints as a tool for assessing the quality of care is recommended.

Acknowledgments

This study was funded by the Vice-chancellor of Research and Technology, Mashhad University of Medical Sciences (Grant NO. 910251). The authors are grateful to all the participants in this research, especially Dr. Amir Parviz Tavassoli (manager of Qhaem hospital), administrators and honorable staff of this center. We express our special thanks to Dr Maryam Taghavi.

Ethical issues

This study was approved by the ethics committee of MUMS.

Competing interests

The authors declare that they have no competing interests.

Authors' contributions

AVN, HE and AP had a substantial role in content, design and data analysis. ZS and SK: participated in the data gathering phase, finalizing the analysis and writing the initial version of the manuscript. AK and YMT, did the literature review and participated in developing the initial data gathering form.

References

- Nobakht-Haghighi A, Zali MR, Mahdavi MS, Nowroozi A. Malpractice claims: a preliminary study in Tehran. *Arch Iran Med* 2002; 15: 52–3.
- Montini T, Noble AA, Stelfox HT. Content analysis of patient complaints. *Int J Qual Health Care* 2008; 20: 412–20.
- Dublin Dental School & Hospital. Patient Complaints Policy–Currently under review [internet]. Ireland: Dental education and training institution; 2007. p. 1–7. Available from: <http://www.dentalschool.ie/patients/policies/>
- Siyambalapatiya S, Caunt J, Harrison N, White L, Weremczuk D, Fernando DJ. A 22 month study of patient complaints at a National Health Service hospital. *Int J Nurs Pract* 2007; 13: 107–10.
- Romios P, Newby L, Wohlers M. Turning wrong into rights: learning from consumer reported incidents; An annotated literature review [internet]. Department of Health and Ageing, Commonwealth of Australia; 2003. Available from: <http://www.healthissuescentre.org.au/documents/items/2008/04/204843-upload-00001.pdf>
- WHO. *The World health report 2000: health systems: improving performance*. Geneva: World Health Organization; 2000.
- College of Physicians & Surgeons of Alberta. CPSA 2012 Complaint Statistics [internet]. Canada: College of Physicians & Surgeons of Alberta; 2012. Available from: http://www.cpsa.ab.ca/services/Complaints_department/Complaint_Statistics.aspx
- Bismark MM, Brennan TA, Paterson RJ, Davis PB, Studdert DM. Relationship between complaints and quality of care in New Zealand: a descriptive analysis of complainants and non-complainants following adverse events. *Qual Saf Health Care* 2006; 15: 17–22.
- Manouchehri Moghadam J, Ibrahimipour H, Akbari Sari A, Farahbakhsh M, Khoshgoftar Z. Study of patient complaints reported over 30 months at a large heart centre in Tehran. *Qual Saf Health Care* 2010; 19: e28.
- Mirzaaghaee F, Moeinfar Z, Rashidian A, Eftekhari S. [Complaints recorded at three hospitals affiliated to Tehran University of Medical Sciences and the factors affecting it, from April 2007 to March 2008]. *Journal of Hospital* 2012; 10: 19–28.
- Vafae-Najar A, Pourtaieb A, Ebrahimipour H, Dehnavieh R. Study of patient's complaints reported over 36 months at a large public educational specialized center of obstetrics and gynecology. *Middle-East Journal of Scientific Research* 2013; 16: 23–9.
- Pichert JW, Gerald H. Using Patient Complaints to Promote Patient Safety. In: Henriksen K, Battles JB, Keyes MA, Grady ML, editors. *Advances in Patient Safety: New Directions and Alternative Approaches (Vol. 2: Culture and Redesign)*. Rockville: Agency for Healthcare Research and Quality; 2008.
- Ebrahimipour H, Vafae-Najar A, Khanijahani A, Pourtaieb A. Health system responsiveness: a case study of general hospitals in Iran. *International Journal of Health Policy and Management* 2013; 1: 85–90.
- Skaran U. [Research Methods in Management]. Tehran: Governmental Management Training Center; 2011.
- Wong LL, Ooi SB. Patients' complaints in a hospital emergency department in Singapore. *Singapore Med J* 2007; 48: 990–5.
- Zengin S, AL B, Yavz E, Şen C, Cindruk Ş, Yildirim C. Patient and relative complaints in a hospital emergency department: a 4-Year analysis. *Tr J Emerg Med* 2012; 12: 163–8.
- Gorton M, Brous D, Coleman M, Schwarz R. Guide to complaint handling in health care services [internet]. Available from: http://www.health.vic.gov.au/hsc/downloads/complaints_handling.pdf
- Chavan R, Porter C, Sandramouli S. Formal complaints at an eye hospital: a three-year analysis. *Clinical Governance: An International Journal* 2007; 12: 85–92.
- Bazrafkan L, Shokrpour N, Tabeie S. [A survey of patients' complaints against physicians in a five year period in Fars province: implication for medical education]. *Journal of Medical Education* 2008; 12: 23–8.
- Bendall-Lyon D, Powers TL. The role of complaint management in the service recovery process. *Jt Comm J Qual Improv* 2001; 27: 278–86.
- Halsel D. Handling patient complaints. *Mo Med* 1993; 90: 645–7.
- Holte A. Professional communication skills. *Scand J Prim Health Care* 1990; 8: 131–2.
- Anderson K, Allan D, Finucane P. A 30-month study of patient complaints at a major Australian hospital. *J Qual Clin Pract* 2001; 21: 109–11.
- Rezapour A, Asefzadeh S, Ebadi Fard Azar F. [Calculating of daily-patient hotel cost in hospitals of Qazvin university of medical sciences]. *Teb va Tazkieh Journal* 2010; 18: 8–18.
- Natangelo R. Clinicians' and managers' responses to patients' complaints: A survey in hospitals of the Milan area. *Clinical Governance* 2007; 12: 260–6.
- Salazar A, Ortega B, Escarrabill J, Corbella X. Emergency department complaints: A 12-Year study in a university hospital. *Ann Emerg Med* 2004; 44: S20.
- Taylor DM, Wolfe R, Cameron PA. Complaints from emergency department patients largely result from treatment and communication problems. *Emerg Med (Fremantle)* 2002; 14: 43–9.
- Saravanan B, Ranganathan E, Jenkinson L. Lessons learnt from complaints by surgical patients. *Clinical Governance: An International Journal* 2007; 12: 155–8.
- Habibullah S. Responsiveness of the federal health system to the needs of 18-45 year old adults with physical disabilities in Islamabad, Pakistan [Dissertation]. Florida: University of South Florida; 2012.