

# Prioritizing of Ethical Predictability Dimensions effective on patients` tendency to the hospital

GHASEM ABEDI<sup>1</sup>, EHSAN ABEDINI<sup>2\*</sup>

<sup>1</sup>Associate Professor, Health Science Research Center, Mazandaran University of Medical Science, Sari, Iran.

<sup>2</sup>Student Research Committee, Health Sciences Research Center, Mazandaran University of Medical Science, Sari, Iran.

Correspondence to Dr. Ehsan Abedini, Email: abedinia961360@gmail.com, Tel: +989371201680

## ABSTRACT

**Background:** Ethical predictability in hospitals and other healthcare centers is a predisposition of good delivery of medical care accompanies respectful interaction with stakeholders, especially patients. The importance of healthcare delivery makes the topic of ethical predictability much more sensitive.

**Aim:** To prioritize the ethical predictability dimensions effective on patients` tendency to the hospital by using the analytic hierarchy process (AHP).

**Methods:** This study was descriptive and applied. The required data collected by paired comparison questionnaire. 12 experts in health services field were chosen purposively and their view points analyzed by AHP with Expert Choice 11 software.

**Results:** The prioritization of the main factors from experts`viewpoints showed that quality of healthcare services (w= 0.336), observance of patients` rights (w= 0.278), patient management (w= 0.275), observance of staff`s rights (w= 0.215), observance of family members` rights (w= 0.195), transparency (w= 0.130), and adherence to law (w= 0.087) placed in grades first to seventh, respectively.

**Conclusion:** Considering the key role of ethical predictability in patients` tendency to hospitals, experts`viewpointswere assessed carefully and the main dimensions of ethical predictability and their parameters, ranked base on their importance.

**Keywords:** Ethical predictability, hospital, patient, analytic hierarchy process

---

## INTRODUCTION

Patients as consumers of healthcare services need to be respected and considered by the healthcare system<sup>1</sup>. They are looking for the safe, effective, timely, efficient and equitable care<sup>2</sup>, i.e., they want a comprehensive package of healthcare services without any leakage<sup>3</sup>. They need to make sure that they will reach to their full rights through referring to the hospital. But how they can? This matter must be solved. The matter revolves around something that can make the patients sure of achieving to their complete care and treatment package, something that can create a constructive interaction between patient and hospital. What we are talking about, is a new term called "ethical predictability".

Predictability connotes that all aspects of the interaction design should set authentic expectations about what is going to happen – before the people make an attainment or get a service. Predictability is a considerable activator for other important things people are looking for, like doing things faster and cheaper, delivering more with better quality and with lower risk and so on. Casal believed that "To achieve a level of predictability and confidence that enables us to deliver faster, better and cheaper than we did before, takes time, patience, determination, and especially focus". He has suggested three phases to achieve predictability; focus on work in progress, decrease time to get work done, and regard how to get more done<sup>4</sup>. Predictability is often regarded as ability; a feature that leaders find "efficient and desirable"<sup>5</sup>.

Ethical predictability expression is composed of two sections: ethics and predictability. Ethics is a sample of interactional behavior based on respect to the other rights<sup>4</sup>, and Predictability implies on all aspects of precise expectations about what will happen. Thus, ethical

predictability is a tolerant trait of organizations through which beneficiaries can expect all their rights will be observed through a successful interaction<sup>6</sup>. In other words, through respect to the beneficiaries` rights, an organization moves toward ethical predictability<sup>7</sup>.

Regard to the stakeholder theorists, beneficiaries originally defined as those who are affected by and/or can affect the organizations access to the goals. Therefore, lack of ethical predictability in an organization can threaten its survival and make some problems such as disagreement of beneficiaries, complex decision-making process in the organization, delays and cost increases, damage to the reputation and antiquity of the organization and problem in prioritizing and responding to the beneficiaries` demands<sup>7</sup>. Overall, ethical predictability leads to beneficiaries confidence to the organization and plays an effective role in facilitating and correcting the beneficiaries` interaction with the organization<sup>6</sup>. Ethical predictability dimensions and their parameters were introduced (Table 1).

The ethical predictability empowers healthcare organizations to provide and deliver better healthcare services, more efficiently. According to previous studies, no study was conducted on the prioritization of ethical predictability dimensions using AHP. So prioritizing of ethical predictability dimensions constitutes the focus of this study. The importance of this study in using its results for better policy-making and management of hospitals and other medical centers to provide and deliver flawless medical and care services.

## MATERIALS AND METHODS

This applied and descriptive study was conducted between June and August 2019. The statistic population composed of healthcare experts with 5 years experience, at least. Out

of them 12 were chosen and studied purposively. A paired comparison questionnaire developed by the researcher based on nine-point scale to rank ethical predictability dimensions and their parameters. AHP as the most famous multi-criteria decision-making techniques was developed by the Saaty<sup>16</sup>. Therefore, after establishment of a hierarchy decision tree, dimensions and their parameters were compared by experts. The scale of "1" indicates the equal importance, "2" same to relatively preferred, "3" relatively preferred, "4" moderately to strongly preferred, "5" strongly preferred, "6" strong to very strong preference, "7" strong preference, "8" very to infinitely preferred and "9" infinitely preferred (Table 2).

In this study, the hierarchy decision tree was constructed first, in which prioritizing of ethical predictability dimensions have been shown as main goal and their parameters as sub-goals. One of the most important issues in AHP is incompatibility of comparisons. Incompatibility of a decision indicates the amount of errors to us. Rate of incompatibility, adjust the compatibility of paired comparisons matrix and indicate that what extent we can trust to the ranking consequences. According to the Saaty<sup>8</sup>, the judgment would be stable when incompatibility ratio of matrix is less than 0.1. In this study, samples with incompatibility index less than 0.1 were accepted. Analytic Hierarchy Process (AHP) has been done with Expert Choice V.11. This study was in accordance with the ethical rule of Mazandaran University of Medical Sciences (MAZUMS), and all processes and instruments were proved by ethical committee of MAZUMS. The ethical code was ir.mazums.rec.96.2845.

## RESULTS

All the 12 participants were men. The mean age was 54.25±4.61 years from 45 to 59 years, and all of them were PhD. The results showed that quality of healthcare services (w=0.336), observance of patients' rights (w=0.278), patient management (w= 0.275), observance of staff's rights (w= 0.215), observance of family members' rights (w= 0.195), transparency (w= 0.130), and adherence to law (w= 0.087) were placed in grades first to seventh, respectively. Results indicated that inequality of healthcare services, the highest importance belonged to both the quality of medical services (0.060) and the quality of nursing services (0.060) and the lowest importance belonged to the quality assurance (0.048). In observance of patients' rights, the importance of right of access to information (0.052) was the first and autonomy to involvement (0.031) was the last priority. In prioritizing of the patient management parameters, control of nosocomial infections (0.073) was the first and both the patient blood management (0.066) and the medication errors monitoring (0.066) were the last priority. In observance of staff's rights, job security (0.064) was the first and career advancement (0.041) the last priority. In observance of family members' rights, the support of family (0.053) was the first and right to involvement (0.044) was the last priority. In transparency, financial transparency (0.047) had the highest and administrative transparency (0.038) the lowest importance. Finally, in adherence to law, the importance of supervision (0.044) was more than administrative discipline (0.043) (Table 3).

Table 1. Ethical predictability dimensions and their parameters

Dimensions	Definition	Parameters
Observance of patients' rights	Observance of/respect to the patients' rights by the hospital system	right to information, autonomy to choose or refuse, autonomy to involvement, right to privacy, confidentiality of information, support of patients, handling patients' Complaint
Observance of family members' rights	Observance of/respect to the family members' rights by the hospital system	right to information, right to involvement, complaint handling, support of family
Patient management	A set of operations that lead to the recovery and safety of the patient	medication errors monitoring, patient blood management, medical error monitoring, control of nosocomial infections
Quality of healthcare services	An assessment of whether healthcare services are good enough and whether they are suitable for their purpose	ethical sensitivity, quality assurance, observance of hygiene and cleanliness, access to welfare facilities, quality of medical services, quality of nursing services
Observance of staff's rights	Observance of/respect to the staff's rights by the hospital system	staff empowerment, career advancement, job security, motivational programs
Adherence to law	The extent to which the rules and regulations of the hospital system are adhered by the staff	administrative discipline, supervision
Transparency	The visibility of information and the performance of the hospital system for its stakeholders	financial transparency, informational transparency, administrative transparency

Table 2: A paired comparison questionnaire sample

Dimension	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	element
Observance of patients' rights																		Observance of family members' rights

Table 3. Result of dimensions and their parameters prioritization by AHP

Dimension	Weight	Dimension	Weight	Dimension	Weight	Dimension	Weight
observance of patients' rights	0.278	observance of family members' rights	0.195	patient management	0.275	quality of healthcare services	0.336
Parameters	Weight	Parameters	Weight	Parameters	Weight	Parameters	Weight
right of access to information	0.052	right to information	0.047	medication errors monitoring	0.070	ethical sensitivity	0.054
autonomy to choose or refuse	0.039	right to involvement	0.044	patient blood management	0.066	quality assurance	0.048
autonomy to involvement	0.031	complaint handling	0.051	medical error monitoring	0.066	observance of hygiene and cleanliness	0.058
right to privacy	0.032	support of family	0.053	control of nosocomial infections	0.073	access to welfare facilities	0.056
confidentiality of information	0.041					quality of medical services	0.060
support of patients	0.048					quality of nursing services	0.060
handling patients' Complaint	0.035						

Continuation Table 3:

Dimension	Weight	Dimension	Weight	Dimension	Weight
observance of staff 's rights	0.215	adherence to law	0.087	transparency	0.130
Parameters	Weight	Parameters	Weight	Parameters	Weight
staff empowerment	0.055	administrative discipline	0.043	financial transparency	0.047
career advancement	0.041	supervision	0.044	informational transparency	0.045
job security	0.064			administrative transparency	0.038
motivational programs	0.055				

## DISCUSSION

In this study, after introducing the ethical predictability and their parameters and drawing the decision tree, prioritized with AH Regarding the experts' viewpoint. The prioritization of dimensions showed that the quality of healthcare services, observance of patients' rights, patient management, observance of staff's rights, observance of family members' rights, transparency, and adherence to law were placed at the first to seventh priority, respectively. Among the quality of healthcare services parameters, the highest importance belonged to both the quality of medical services and the quality of nursing services and the lowest importance belonged to the quality assurance from experts' viewpoint. Abedi and Abedini<sup>2</sup> and Abedi et al. (9) showed that the medical and nursing services have a remarkable importance in patients' tendency to the public and private hospital with the second and first grade of importance, respectively. One study revealed that healthcare services had the highest score in choosing a hospital. In addition, professional services provided have the highest importance for patients<sup>10</sup>.

This study showed that among the observance of patients' rights parameters, the right of access to information has the highest importance through experts' viewpoint. Krieger et al<sup>11</sup> believed that the right to be informed is a fundamental right of patients that enable them to receive appropriate information on their own treatment process. So, patients' right of access to information is particularly challenging in healthcare settings. Most physicians believed that patients requested to take information for "further treatment, education, or additional

information"<sup>12</sup>. Present study showed that among the patient management, control of nosocomial infections is the most important parameter. As resulted in a prior study, serious harm to patients and prolonged treatment would be prevented through infection control as a key parameter<sup>13</sup>. One survey concluded that nosocomial infections are one of the major causes of death and the economic costs of these infections are notable due to prolonged stay in hospital and indirect costs<sup>14</sup>. The results showed that in observance of staff's rights, job security is the most important parameter. One study concluded that poor access to the profession for graduates, increased nursing job-seekers and falling numbers of permanent contracts have worsened job security among healthcare staff (15). Regarding previous findings, perceived job insecurity is an important factor associated with less favorable work and well-being outcomes<sup>16</sup>. About the importance of job security/insecurity on staff health, Green<sup>17</sup> believed that the size of the effect of job insecurity on health could be as large as the effect of unemployment.

According to the results, the support of family was the most important parameter among the observance of family members' rights parameters. Barken & Lowndes<sup>18</sup> declared that mental and emotional support, financial support, and appreciation of relational care work are very important parameters. Another study indicated that nursing staff could support the family needs, caring, comfort, supportive care, and social support. Healthcare staff must care and provide emotional support for the families of patients<sup>19</sup>. The results showed that financial transparency was the most important parameter among the transparency parameters. Previous study indicated that transparent cost-related

information is very important parameter for patients to choose a hospital<sup>20</sup>. A related survey concluded that transparent prices that reflect costs are essential to signal information to customers. This information is central in a patient-driven marketplace<sup>21</sup>. In line with this result, a previous study revealed that many debts in the hospital might due to the lack of financial transparency as a key parameter<sup>22</sup>. The findings indicated that the supervision is a main parameter of adherence to low dimension. Regarding to previous study, the supervision of staff's performance leads to the prevention and early detection of illegal activities<sup>23</sup>. One study concentrated on the importance of clinical supervision and declared that it can improve the process of care in hospital<sup>24</sup>. Prior study introduced the clinical supervision as an excellent position to support healthcare activities<sup>25</sup>.

## CONCLUSION

This study was conducted to determine the importance of ethical predictability dimensions and parameters that make an impact on patients' tendency to choose a hospital from experts' viewpoint by AHP technique. According to the finding, quality of healthcare services, observance of patients' rights, patient management, observance of staff's rights, observance of family members' rights, transparency, and adherence to law were placed in grades first to seventh, Respectively.

**Acknowledgements:** The authors would like to thank the participants for their generous time in completing the questionnaire

## REFERENCE

1. Rowe K, Moodley K. Patients as consumers of health care in South Africa: the ethical and legal implications. *BMC Medical Ethics* 2013; 14(15): 1-9.
2. Abedi G, Abedini E. Prioritizing of marketing mix elements effects on patients' tendency to the hospital using analytic hierarchy process. *International Journal of Healthcare Management* 2016; 10(1): 34-41. DOI: 10.1080/20479700.2016.1231435
3. Mosadeghrad AM. Healthcare service quality: Healthcare service quality towards a broad definition. *International Journal of Health Care Quality Assurance* 2013; 26(3): 203-209. [DOI 10.1108/09526861311311409]
4. Linders B. Achieving Predictability in a Complex World 2019. Available from [www.infoq.com/news/2019/08/predictability-complex-world/?p13nId=55454401&p13nType=followUser](http://www.infoq.com/news/2019/08/predictability-complex-world/?p13nId=55454401&p13nType=followUser).
5. Osing R. Is "Being Predictable" essential for remarkable success? *THE GLOBE AND MAIL* 2019. Available from <https://gethppy.com/talent-management/predictable-essential-remarkable-success>.
6. Faramarz Gharamaleki A. Ethical predictability of organization and human resource development. 3rd Conference of Human Resource Development, Tehran 2006. (Persian)
7. Harkiolakis N. Leadership Explained: Leading Teams in the 21st Century (1st ed.). Taylor & Francis 2016.
8. Saaty RW. The analytic hierarchy process-what is and how it is used. *Mat/d Modelling* 1987; 9(3-5): 161-176.

10. Abedi G, Rahmani Z, Abedini E, Rostami F. Surveying the Impact of Services Marketing Mix Components (7Ps) on Patients' Disposition towards the Public & Private Hospitals of Sari City. *jhosp*. 2015; 13(4): 63-71.
11. Lux MP, Fasching PA, Schrauder M, Lohberg C, Thiel F, BaniMR, et al. The era of centers: the influence of establishing specialized centers on patients' choice of hospital. *Arch GynecolObstet* 2011; 283(3):559-68.
12. Krieger JL, Krok-Schoen JL, Dailey PM, Palmer-Wackerly AL, Schoenberg N, Paskett ED, Dignan M. Distributed Cognition in Cancer Treatment Decision Making: An Application of the DECIDE Decision-Making Styles Typology. *Qualitative Health Research* 2017; 27(8): 1146-1159.
13. McKenizePJ, Oliphant T. Informing Evidence: Claims-making in Midwives' and Clients' Talk About Interventions. *Qualitative Health Research* 2009; 20(1): 29-41.
14. RaveisVH, Conway LJ, Uchida M, Pogorzelska-Maziarz M, Larson EL, Stone PW. Translating Infection Control Guidelines Into Practice: Implementation Process Within a Healthcare Institution. *Qualitative Health Research* 2014; 24(4): 551-560. doi.org/10.1177/1049732314524488
15. Khazaei S, Khazaei S, Ayubi E. Importance of Prevention and Control of Nosocomial Infections in Iran. *Iran J Public Health*. 2018;47(2):307-308.
16. Galbani-Estragues P, March PM-M, Pastor-Bravo MDM, Nelson RN S. Emigration and job security: An analysis of workforce trends for Spanish-trained nurses (2010–2015). *Journal of Nursing Management* 2019; 27(6): 1224-1232. doi.org/10.1111/jonm.12803
17. Bruke RJ, Singh P. Correlates and Consequences of Nursing Staff Job Insecurity. *J Health Hum ServAdm* 2016; 39(3): 383-406.
18. Green F. Health effects of job insecurity. *IZA World of Labor* 2015; 212: 1-10. doi: 10.15185/izawol.212
19. Barken R, Lowndes R. Supporting Family Involvement in Long-Term Residential Care: Promising Practices for Relational Care. *Qualitative Health Research* 2017; 28(1): 60-72. <https://doi.org/10.1177/1049732317730568>
20. Donaldson-Andersen J. The Nurse's Role in Supporting Patients and Family in Sharing Personal Accounts of Traumatic Events: A Personal Experience. *Journal of Trauma Nursing* 2016; 24(2): 134-140. doi: 10.1097/JTN.0000000000000276
21. Kurzman ET, Grene J. Effective presentation of healthcare performance for consumer decision making: A systematic review. *Patient EducCouns* 2016; 99: 36–43.
22. Hilsenrath PE, Eakin CF, Fischer K. Price-Transparency and Cost Accounting: Challenges for Health Care Organizations in the Consumer-Driven Era. *Inquiry* 2015; 52(1): 1–5. DOI: 10.1177/0046958015574981
23. Gupta R, Tsay C, FogertyRL. Promoting Cost Transparency to Reduce Financial Harm to Patients. *AMA J Ethics*. 2015;17(11):1073-1078. doi: 10.1001/journalofethics.2015.17.11.mhst1-1511
24. Zhang W, Grouse L. Physician bribes in the US and China. *Journal of thoracic disease* 2013; 5(5): 711–715. <https://doi.org/10.3978/j.issn.2072-1439.2013.10.03>
25. Snowdon DA, LeggatSG, Taylor NF. Does clinical supervision of healthcare professionals improve effectiveness of care and patient experience? A systematic review. *BMC Health Serv Res*. 2017;17(1):786. doi:10.1186/s12913-017-2739-5
26. Tomlinson J. Using clinical supervision to improve the quality and safety of patient care: a response to Berwick and Francis. *BMC Med Educ* 2015; 15(103): 1-8. <https://doi.org/10.1186/s12909-015-0324-3>.