



Original Article

Evaluation of health and treatment indicators of the private clinics of Bandar Abbas city based on the national standards in 2017



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ABSTRACT

Introduction: Private clinics are one of the most important providers of health services that play a special role in the physical and mental health of patients and also in improving the health level of the community, the aim of this study was to determine the health and treatment indicators of private clinics in Bandar Abbas city based on national standards in 2017.

Methods: In this cross-sectional study, the study population was 80 specialized physicians, surgeons, and dentists' clinics in Bandar Abbas. Data was collected by using a standard checklist including health and treatment indicators. The data were analyzed using descriptive statistics methods in SPSS 16 software.

Results: In terms of treatment indicators, radiology and ultrasonography clinics received the highest score (61.5 out of 69) and the lowest score was for specialized pulmonology clinics (55). In terms of health indicators, the highest scores were for specialized gynecology clinics (27.9 out of 33), pulmonology (27) and psychiatric (27), while the lowest score was for ultrasonography and radiology (23.6), internist and dermatology (24).

Conclusion: According to the results, training on health standards provided by the Ministry of Health and Medical Education will help to increase the level of health and treatment services in clinics in Bandar Abbas.

Introduction

Health promotion and the effective role of environmental factors control in it is one of the issues that have been followed in the past by health and treatment systems. So that the environmental factors control plays a key role in human health promotion and the environmental pollutants that are various, wide and complicated may put the physical, psychological and social dimensions of human health at risk. There are some standards for providing health services in each country, and the assessment of

healthcare and treatment is not possible without standards. Therefore, it is necessary to prepare and apply appropriate indicators in this context for supervising on healthcare units (1, 2). For this purpose, the clinics, hospitals, radiology centers and other health service units are evaluated based on health and treatment indicators. Private clinics are one of the most important providers of health services that play a special role in the physical and mental health of patients and in improving the health level of the community (3). Observing environmental

health issues in physicians' clinics is one of the important factors in determining the quality of health services. Private clinics have a high potential for health hazards' production and releasing due to the presence of different patients, also they're important due to the presence of different patients and the risk of hazardous diseases from the point of view of health issues. For this reason, health and treatment issues should be taken into consideration in these places, because these places may become the focal point for pathogens spreading without sanitation observation, and the health hazards would be created for people associated with these places and their staff (4, 5 and 6). In recent years, many studies have been done on the evaluation of environmental health and treatment indicators of health centers, while fewer studies have examined the health and treatment status of private clinics. Therefore, the aim of this study was to evaluate the health and treatment indicators of private clinics in Bandar Abbas in 2017 and to investigate the health and treatment status of existing clinics with desirable and standard conditions. Therefore, the results of this study can be helpful in providing basic information to help managers and planners of private clinics, creating preventive actions in undesirable health issues and also informing citizens.

Methods

The current study is a cross-sectional study with the aim to evaluate health and treatment indicators of private clinics in Bandar Abbas based on national standards in 2017. The study population consisted of 80 specialist physicians and dentists in Bandar Abbas. They selected by cluster sampling and visited by trained experts after getting a letter of introduction from Deputy Research of Hormozgan University of Medical Sciences and presenting to them and explaining the method of work and the purpose of the research and obtaining written informed consent. Data collection was carried out through a standard checklist approved by the Ministry of Health and Medical Education, comprising 33 yes-no questions including 2 indicators: treatment indicator (20 questions) and health indicator (11 questions) and 2 questions related to the age of the building and the rent or personal form of the office. The treatment

indicators include: the existence of the original clinic license, the allowed size of the clinic sign, the patient's Simultaneous visit, the presence of paravan and curtain beside the examination bed, the presence of primary examination tools, the presence of the notebook of patient's referral, the presence of the doctor according to the announced timetable, the presence of license for paraclinic equipment, existence of equipments and expired drugs, the screening and reporting to the health center, the existence of allowed titles in the sign, head sheet and stamp, the patients satisfaction, the clinic license for Bandar Abbas city, the presence of qualified persons for injection and dressing, The existence of the injections and dressing unit, filing for each patient, the availability of emergency drugs and essential equipment, the observance of visiting and other services tariff, the observation of the average patients visit duration (10-15 minutes), principal version of the doctor's license and the allowed number of installed boards and the health indicators include: the proper separation of infectious and non-infectious waste, proper sanitary facilities, the existence of trash bin with garbage bag, the presence of elevator to access to the clinic, liquid soap in the bathroom, proper waiting room, sanitary water supply service, the existence of the previous visits ring binder, the suitable medical scrub, the secretary with suitable uniform and the elimination of previous problems. Each available option obtained score 3, each unavailable option obtained score 0 and each option with partly obtained score 1.5. The base score of a standard clinic was 102 according to the checklist and each indicator received a score based on the content of the questions. The total score of the treatment indicator was 69 and the total score of the health indicator was 33. The analytical descriptive indicators such as mean, standard deviation and percentage of data were analyzed by using SPSS16 after completing the checklists, and the clinics located in one treatment branch were compared in terms treatment and health indicators in order to data qualification, clinics that had more than 70 percent of health indicators were reported as desirable and less than that were reported as undesirable

Results

In this study, a total of 80 private clinics were examined, including specialized physicians in a variety of specialized fields.

Table 1. Average score obtained by private clinics.

The name of specialized clinics	Obtained score	Percent	Status (desirable and undesirable)	The name of specialized clinics	Obtained score	Percent	Status (desirable and undesirable)
Pediatric	82.3	80.7	Desirable	General surgeon	84.9	83.2	Desirable
Pulmonology	85	83.3	Desirable	Gastroenterology	86	84.3	Desirable
Nephrology	79.3	77.7	Desirable	Ent	83.3	81.7	Desirable
Dentist	84.6	83	Desirable	Orthopedic	84	82.4	Desirable
Internist	78.8	77.3	Desirable	Radiology and Ultrasonography	85.1	83.4	Desirable
Psychiatry	84.6	83	Desirable	Dermatology	81	79.4	Desirable
Heart and Vascular	85	83.3	Desirable	Gynecology	88	86.3	Desirable
Ophthalmologist	82.3	80.7	Desirable				

Table 1 shows the average score obtained by private clinics separated by specialty. According to the table, the highest score is related to specialized clinic of gynecology (86.3%), and after that is related to gastroenterology clinics (84.3%). Internist's clinics have earned the lowest scores in terms of standard conditions.

The total score earned by each home is also expressed in terms of percentage (of 100) for a better understanding. Table 2 shows the status of private clinics separated by the examined indicators. As it is obvious, radiology and ultrasonography clinics have obtained the highest score in terms of treatment indicators (61.5 out of 69) and the lowest score was for specialized pulmonology clinics (55). In terms of health indicators, the highest score was for specialized gynecology clinics (27.9 out of 33),

pulmonology (27), and psychiatry (27), while the lowest score was for ultrasonography and radiology (23.6), internist and dermatology clinics (24).

Figure 1 shows the average score of the health indicator for all studied clinics in percentage form. Among the options, the proper separation of infectious and non-infectious waste, proper sanitary facilities, the existence of trash bin with garbage bag (100) and then the presence of elevator for access to the clinic (98.8), liquid soap in the bathroom (96.9), proper waiting room (96.25), sanitary water supply service (95), the existence of previous visits' ring binder (77.5) and suitable medical scrub (68.8), have the highest percentage and the elimination of previous problems (12.5) and the secretary with suitable uniform (11.9) have the lowest percentage.

Table 2. The status of private clinics, separated by indicators (percentage)

Indicator specialized clinic	Treatment		Health		Indicator specialized clinic	Treatment		Health	
	Score	Percent	Score	Percent		Score	Percent	Score	Percent
General Surgeon	59.1	85.7	25.7	77.9	Pediatric	56.7	82.1	25.7	77.9
Gastroenterology	60.8	88.11	25.3	76.7	Pulmonology	55	79.7	27	81.9
Ent	57.8	83.8	25.5	77.3	Nephrology	55.5	80.4	23.8	72.12
Orthopedic	58.2	84.3	26.7	81	Dentist	58.7	85.1	25.9	78.5
Radiology and Ultrasonography	61.5	89.1	23.6	71.5	Internist	54.7	79.3	24	72.7
Dermatology	57	82.7	24	72.7	Psychiatry	57.5	83.3	27	81.9
Gynecology	60.2	87.24	27.9	84.5	Heart and Vascular	60	87	25.1	76.1
Ophthalmologist	57.3	83	25	75.8					

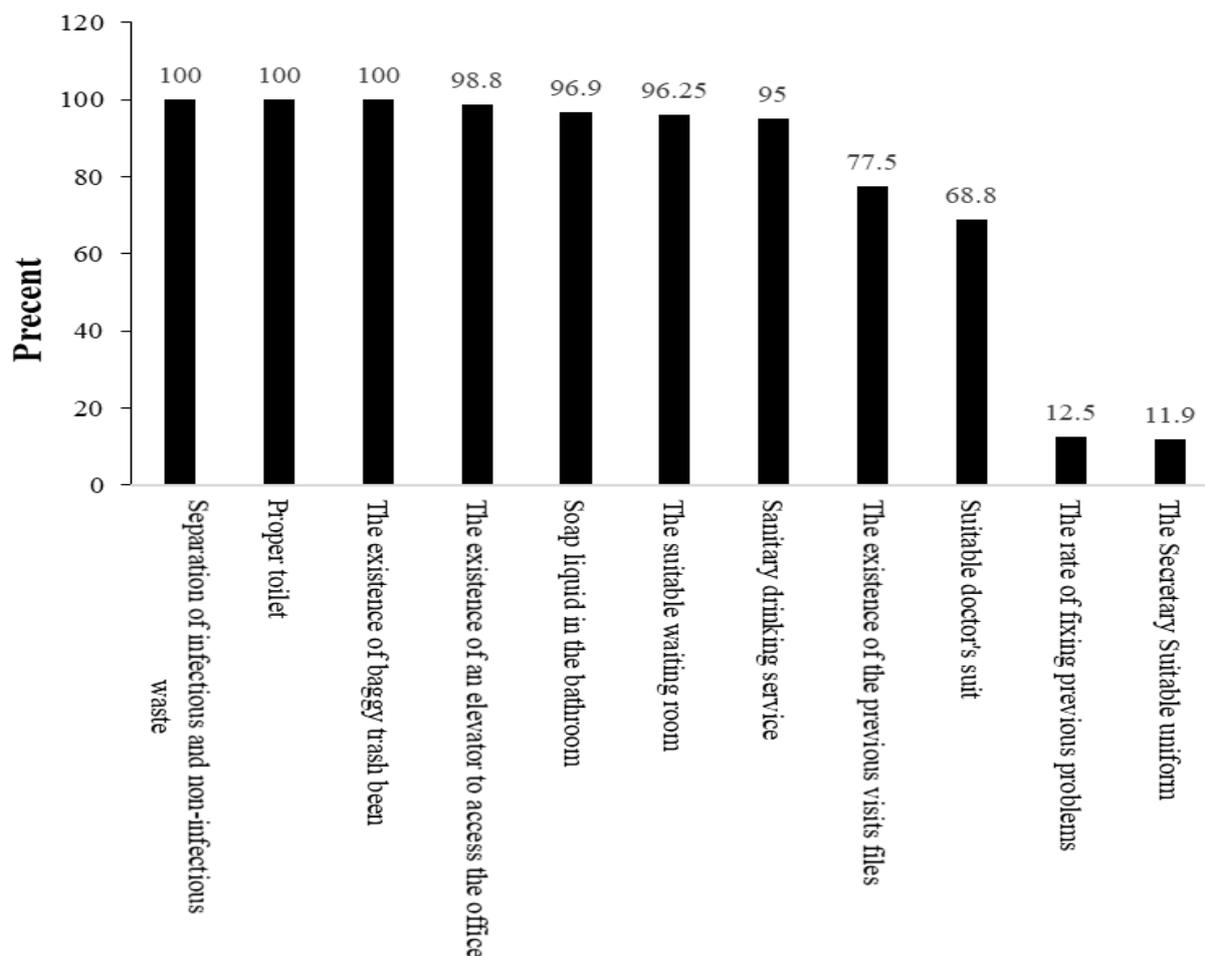


Figure 1. Average score of private clinics in terms of health index (percent)

Also, Figure 2 shows the average score of the treatment indicator's criteria for all of the clinics under study in percentage form. The options of simultaneous visits of patients, the presence of paravans and curtains beside the examination bed, the presence of primary examination tools, the presence of the notebook of patient's referral, the presence of the doctor according to the announced timetable, principal version of the doctor's license and the presence of license for paraclinic equipment have earned the highest percentage (100), and then the criteria of the existence of equipments and expired drugs, the screening and reporting to the health center, the existence of allowed titles in the sign, head sheet and stamp, the patients satisfaction,

the clinic license for Bandar Abbas (98.8%), and the options of the presence of qualified persons for injection and dressing (98.12), The existence of the injections and dressing unit (93.8), filing for each patient (87.5%), the availability of emergency drugs and essential equipment (85.7%), and the options of the allowed size for the sign (43.75%), the observance of visiting and other services tariff (22%), the observation of the average patients' visit duration 10-15 minutes (11.25) and the allowed number of installed boards (7.5), have earned the lowest percentage.

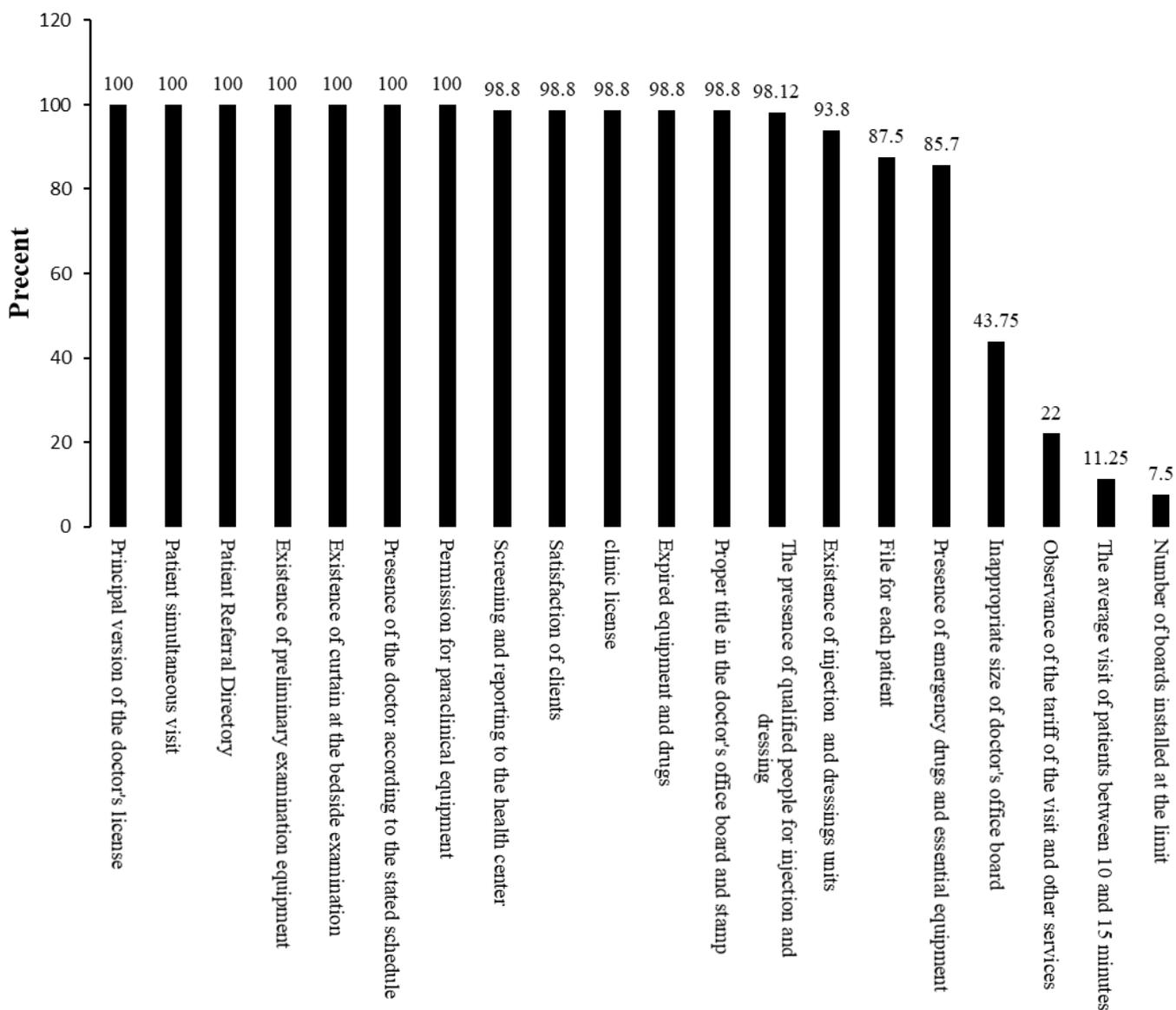


Figure 2. Average score of private clinics in terms of treatment index (Percent)

Discussion

In this study 80 private offices in Bandar Abbas city in 2017 were studied. The results of this study indicate that the status of the studied offices in Bandar Abbas was desirable, so that the obtained scores in all the studied clinics were more than 70%. Hosseini et al., in a study on the environmental health of private offices, laboratories and radiology centers in Bushehr, in 2012, found that in terms of building health status, lavatories status, waste management, supply the health of clients, and sewage and sanitary facilities the average were 85.3, 82, 87.2, 61.1, 95.3 and 99.1%, respectively, all studied items were favorable. Also, most of the problems were related to

the inappropriate disposal of syringes and surgical blades in the safety box, the lack of disposable glasses for the patients and the lack of installation of fire extinguishers (4), which is consistent with the results of the present study.

Also, according to the indicators of the status of lavatories and waste management, they were in a very favorable situation (100%) and reach standards, which indicated the proper management and sensitivity of the medical staff and office staff in terms of observing the health indicators in the studied office. In addition, according to the results, it is clear that in terms of observing health indices, internist and dermatology offices, the lowest score has been obtained, which can be attributed to the lack of adequate supervision and attention of the staff of these clinics in terms of health indicators, but

revealing the exact and effective etiological factors requires additional research. Few studies in Iran have been carried out in order to investigate the health and medical indicators of private clinics, including studies of 342 private clinics in Chaharmahal-Bakhtiari province; the results showed that environmental health indicators including safety and protection, disinfection of equipment, solid waste disposal, and improvement of the office environment in less than 30% of the studied clinics were in desirable conditions (7); in contrast with the results of the present study, health indicators including the separation of infectious and non-infectious waste, proper sanitation and improvement of the office environment of Bandar Abbas's offices have better status. Also, in terms of criteria related to the treatment index, many of the indicators including the presence of paravan and curtains at the examination bed, the injection and dressing unit, the screening and reporting to the health center had a score of over 90%. In addition, the survey of environmental health standards in Kerman hospitals showed that in 25% of hospitals and 39.7% of the whole of the departments, they had a favorable status for health indicators, which is consistent with the results of the present study (8).

However, according to the findings in Sabzevar hospitals in 2014, it was stated that among the different dimensions of sanitation and hospital care, the highest score was for hygiene and safety of equipment's (80.6%) and the lowest score was related to health and infection control (28.5), and the index of how to collect and dispose of waste was of moderate and poor status, so that the health and cleaning condition of all three hospitals was assessed as poor (9). Also, in the study of the status of environmental and construction health indicators of hospitals in Urmia in 2016, it was determined that the hospitals were moderate in terms of environmental health indicators and in terms of improvement, water and wastewater indicators were in poor condition (10). In addition, the results of the survey on the health status of Qom hospitals showed that the health status of the environment in the two parts of the radiology departments, the launderette and the kitchen of the hospitals was in an unfavorable situation. The low level of environmental health was due to lack of adequate supervision of hospital managers the processes of these two sectors and the presence of the private sector in the provision of services in these two sectors, especially in the laundry and kitchen sector were reported, and in the other parts of the hospital the average health status was assessed (11). Which was very different from the results of the present study.

The health and medical effects of the offices are considerable due to the high number and distribution in comparison with other health centers such as hospitals, therefore, with the observance of health standards in accordance with the standards announced by the Ministry of Health and Medical Education, it is possible to prevent infectious diseases and environmental contaminations.

Conclusion

The results of current study indicate that there is a desirable status in terms of health and treatment indicators in private clinics in Bandar Abbas, which could be due to increased training and awareness of infection control's provided standards of the staff of private clinics by the Ministry of Health and Medical Education and also continuous monitoring of environmental health, and the continuation of the conditions in terms of health indicators in the clinics leads to increased satisfaction of patients and personnel and improves the quality of health services presentation at the clinics. Due to the limitation, the health and treatment indicators study didn't take place in other clinics in Bandar Abbas, therefore, it is suggested to continue this study in other clinics, radiology, laboratories and hospitals in Bandar Abbas to assess the health status of these places in order to improve the health services provision and public awareness.

Ethical disclosure

Not applicable.

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Authors' contribution

Authors are responsible for the content of the article and approve it

Conflict of interest

The authors declare that they have no conflict of interest.

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References

1. Ghorbani R, Ahmadian K, Ranjbar Z. To Compare the Performance Indexes of Selected Hospital with National Standards. *J Health Promo Manag.* 2017; 6(5): 1-7. DOI:10.21859/jhpm-07031

2. Amerioun A, Tofighi S, Mahdavi S, Mamaghani H, Meskarpour Amiri M. Assessment of International Joint Commission (IJC) accreditation standard in a military hospital laboratory. *Iranian J Mil Med.* 2011; 13(2):75-80.
3. Jonidi Jafari A, Golbaz S, Sajjadi HS. The study of environmental hygiene indexes status in Karaj Hospitals: 2011. *J Hospital.* 2012; 10(4): 9-18.
4. Alihoseini N, Ravanipour M, Motamed N, Mohammadi Baghmolaei M. Assessment the environmental health status of private clinics, laboratories and Radiologies of Bushehr in 2012. *Iran South Med J.* 2016; 19(2):284-295. DOI:10.18869/acadpub.ismj.19.2.284
5. Pasquarella C, Veronesi L, Castiglia P, Liguori G, Montagna MT, Napoli C, et al. Italian multicentre study on microbial environmental contamination in dental clinics: a pilot study. *Sci Total Environ.* 2010; 408(19):4045-51. DOI:10.1016/j.scitotenv.2010.05.010
6. Goodarzi B, Hahsemi N, Heidarinejad Z. health and Protection status of radiology centers of Bandar Abbas city in 2016. *J Prev Med.* 2017; 4(1):47-55.
7. Fadaei A. Comparison of Environmental Health Indices of Private Clinics in Chramahal and Bakhtiari Province, Iran. *Adv Environ Biol.* 2014; 8 (7): 2335-38.
8. Mehdipour Rabori M, Khalooei A, Nakhaei Amroudi N, Nourmoradi H. Compliance with Environmental Health Standards in Educational Hospitals of Kerman University of Medical Sciences in 2009. *J Health.* 2014; 5(2): 159-69.
9. Razghandi F, Molazem Alhoseini R, Khamirchi Ramezan A, Hoshmand R. The Status of Environmental Hygiene Indexes in Sabzevar Educational Hospitals: 2014. *Beyhagh.* 2016; 21(36): 60-6.
10. Hosseinpoor S. Investigating Status of Environmental and Structural Health Indicators among Therapeutic and Educational Hospitals of Urmia, in 2016. *J Urmia Nurs Midwifery Fac.* 2017; 15(1): 58-66.
11. Salimi M, Arab M, Akbari F, Zeraati H, Farzianpoor F. A survey on the status of environmental health management in Qom province hospitals. *J School Public Health Institute Public Health Res.* 2007; 5(3):59-66.