

Research Article

Survey on distributing situation in nursing group working in Tehran Medical Science University Emam Khomeinee Hospital During 2013-14

**Azari S^{1,2}, Mokhtari S³, Mousavi SH⁴,
Hatefi_Moadab N⁴, Mohammadi M⁴,
Salimi M⁵ and Azari GH⁶**

¹Health Management and Economics Research Center,
Iran University of Medical Sciences, Tehran, Iran

²School of Public Health, Tehran University of Medical Sciences, Tehran, Iran

³The Headquarters Students of Witness and Gallantry,
Tehran University of Medical Sciences, Tehran, Iran

⁴Student Research Committee, Kermanshah University of Medical Sciences, Kermanshah, Iran

⁵Health Services Management Research Center, Institute for Futures Studies in Health,
Kerman University of Medical Sciences, Kerman, Iran

⁶MSc in Health Services Management, Department of Health Services Management,
Science and Research Branch, Islamic Azad University (IAU),
Tehran, Iran (corresponding Author)

ABSTRACT

Introduction: Nowadays justice in health and injustice elimination in health section turns out to a most important concern of health systems in the world, especially for developing countries. So current research happened with purpose to survey manner of distribution and dedication of Tehran Medical Science University Emam Khomeinee (may rest in peace) Hospital nursing staff.

Analysis method: The studying society of this descriptive analytical research in Tehran Medical Science University Emam Khomeinee Hospital During 2013-14 includes entire units nursing group personnel (Nurse, Paramedic and Nurse Aid). Information has been gathered by self-made forms and data analyzing has done by EXCEL Software, Descriptive statistical indexes and suggested standard guidance from Ministry of Health.

Findings: Results of done estimation in 27 units of studying hospital and comparing that to current situation shows that based on suggested pattern of Health Ministry just one unit (3.7%) from manpower staff matches this pattern, 18 units (66.67%) were lower and 8 units (29.62%) were far upon this pattern.

Conclusion: Generally in studying hospital lack of nursing staff was obvious that combination and distribution of nursing forces in their different units was uneven and they didn't match the current situation. Hereupon, intended hospitals require correct management and planning in this field, so that will cause increase in hospital performance and presenting service quality to patients.

Keywords: Estimation, nursing staff, hospital, personnel standard

INTRODUCTION

Manpower is the most basic unit in health care services. Appropriate planning of manpower is the most efficient, most effective and most acceptable approach that facilitate justly and favorable health care reaching way in condition of using suitable nurses (1). In a report from WHO is has been considered that Bangladesh with 11 nurses per

100,000 populations has the lowest and U.S with 970 nurses per 100,000 populations has the highest ratio of nurse to population. This high domain and alteration in related indexes to number and ratio of manpower in different regions of a country or several countries in the world, indicates significant structural difference in

related standards to deployment manpower and manner of presenting services quality and quantity (2). One of a way in studying and assessment of health care systems is considering to distributing situation of manpower. Determining hospital requirements about manpower is a hospital common problem (3). Effective manpower is the main factor of constancy, success and organization purpose realization (4, 5). Most of hospital (as a most important institution of health care presenting in health systems) problems is from lack of manpower or inappropriate distribution. Major part of hospitals manpower is made by nurses, that has fundamental role in care quality and health promotion and it dedicates a big occupational source (62% from all personnel) and 36% of entire hospital costs (6). No health caring organization can make it without efficient nursing units (7). Justly resource distribution in every field especially manpower is considered as first priority of every administrative system, because suitable distribution of professionals and practical support, health system performance will be provided. Even in superficial assessment the devices requirement especially in professional manpower it will reveal itself (8). In manpower subject, Matter of lack of balance always shows off. Unbalance in sanitary manpower is an unpleasant and complicated phenomenon that can be done unequally from number, quality and distribution (geographical, occupational, professional, organizational and sexual). It's natural if sanitary personnel educating is wasting public charges more than estimated need of country (9). Huber thinks providing manpower and planning are activities that can effect on job, situation, work volume, personal life and nurses' spirit. Manpower is one of the most important resources and investments of hospital and its shortage and excess can be effective in presenting service quality reduction. Most of hospitals problems are from manpower shortage or unsuitable distribution (10-12). Based on study results of Arab and et al (1388) studying hospitals were facing manpower shortage and they didn't have correct management and planning. Also different researches have been done which refers

to nurses' dissatisfaction matter in hospital that major reason is related to shortage in nurse personnel (13, 14).

It must be noted that medical and paramedical personnel have more than 70% of hospital manpower and from hospital current costs dedicate them about 65% to 70%. It's more important that based on reports from Ministry of Health, bed occupancy rate in Iranian hospital about active beds doesn't exceed 60% (15). Manpower planning, predicts distribution and future requirement of organization for staff regularly. By assurance of number and types of personnel who is required, human resource unit can predicts attraction, selection, education, occupational planning and the other activities better. If organization wouldn't be equipped by suitable number and types of manpower appropriately, organizations program may lead to failure. Executive managers realized that main success key of program is human resources because eligible people, make successful performance of program easier (16). Final purpose of human resource activities is believe and providing appropriate number of eligible personnel who are working out to provide requirements of patients under the care in hospital. Hospital needs to certain eligible people to make sure of his mission achievement and take care of patients under the care. In this total estimation of man power will be occurred through personnel work volume. This way has been determined based on work volume for hospital personnel. This indexes include number of hospitalized people to number of surgeries, number of parturitions, number of hospitalized people, number of outpatient clinics, personnel educating, house visit and Each mentioned indexes are defined in activities standards. These standards are time consuming ration for each activity (11). Main goal of this study is to estimating required hospitals manpower based on suggested pattern of Health Ministry so that doing this research is a high step to way of adaptation with hospital personnel standards, and by making this true, shortage and excess of required manpower Tehran

Medical Science University Hospital reveals and it will be determined that these shortage and excess are based on what job row; eventually it may be turn out how much is each hospital far away Health Ministry personnel standards.

MATERIALS AND METHODS

This study is kind of sanitary system management study and it has done descriptive analytically. Studying society in this study includes entire units nursing group personnel (Nurse, Paramedic and Nurse Aid) in Emam Khomeini (may rest in peace) Hospital During 2013-14. Data gathering has been done by using self-made forms by getting help from previous studies that are designed for this reason; in current study three kinds of data gathering forms had been used:

1. Form Num.1: Related to clinical unit authorities and by using that current situation of human personnel of these units become distinguished.
2. Form Num.2: Related to medical documents units that is used for determining units bed occupancy percentage, number of active beds and average staying length of patient in clinical units.
3. Form Num.3: For determining current situation of human personnel studying personnel structure which has been completed by hospital authorities of human resources.

After gathering required data, shortages and excesses in nursing in separation of occupational classes in different units of studying hospitals were distinguished and required nursing staff had been estimated. Data has been analyzed by using of EXCEL software, descriptive statistics indexes Health Ministry suggested standards guidance.

FINDINGS

Studying general and educational health care hospitals, number of current human nursing staff and number of required cases based on Health Ministry suggested pattern for studying hospitals has been determined that its results has been mentioned in Table 1. In Emam Khomeini Hospital (MRIP) there were 346 occupied jobs opportunity that based on Health Ministry Standards should have hired 356 nursing staff. From 11 studying units of this hospital based on Health Ministry suggested pattern 4 unit has extra nursing staff, one unit matches the pattern and the others have shortage in nursing personnel. Based on Health Ministry suggested pattern the most shortage was in orthopedic unit (10 people) and the least one was in nursing office unit which matches pattern. The most surplus was in internal unit (8 people) and the least one was in general surgery unit (1 person). Totally, that situation was far away to Health Ministry suggested pattern (HMSP) as many as 30 people (Tab 1).

Table 1: Studying hospital personnel situation based on HMSP

	Unit	bed occupancy rate	Active beds number	Currant Nursing force	Nurse based on HMSP	Situational distance from HMSP
mam Khomeini Hospital (MRIP)	Kidney and urinary tract surgery	76.2	18	24	17	-7
	Orthopedic	76.2	42	28	38	10
	Internal	98.2	24	21	13	8-
	Digestive	94.8	27	18	22	4
	Infectious	75.8	27	43	42	1
	Pulmonary	94.8	18	14	15	1
	CCU	65.9	23	35	41	6
	ICU	73.2	18	49	57	8
	General surgery	84.1	66	60	59	1-
	Cardiac surgery	87.1	40	43	36	7-
	Nursing office	-	-	11	11	0
	Total	-	303	346	351	30

CONCLUSION AND DISCUSSION

At this moment, third world countries dedicate their part of treatment and sanitary about 60% – 80% to hospitals, whereas this ratio in developing country is almost 38% for hospitals. Because of this in countries it's especially important to calculate hospital personnel (17). Based on results from estimation in studying hospital and comparing to current situation we know that nurse personnel distribution is unbalanced in different units of hospital and it doesn't follow the current standards. Manpower distribution in units of Emam Khomeini Hospital (MRIP) is a kind of difference, as comparing to HMSP four hospital units were short on personnel, 6 units have more and eventually one unit could match that. Checking nursing personnel in this current study and comparing it with others indicates a shortage in studying hospital nursing staff. Study results of Akbari and et al show among 92 units of Lorestan Medical Sciences University studying hospitals only 18 units were fit to HMSP and 16 were better from determined criterion and other units of society (58%) were far away from current criterion (18). In Mostafaiee study which has taken place in Tehran Medical Science University hospitals, 85.1% were less than standards, 5.31% were a way more than them and 9.57% had matching nurses personnel to HMSP (19). In ICU that they are responsible to take care of patients in danger, in studying hospital there was a lack of nursing staff. Even Abrisham Kar emphasized in his study that ICU is short of nursing staff. And no correct planning management human personnel (20). Nurses' office is another unit that number of its manpower from quality and quantity has a great importance because it has supervising duty and hospitalization unit's activities controlling in hospital. In studying hospital there were no shortage based on HMSP, and it can be considered from studying hospital strength point. Results of this study show that studying hospital was facing a lack of nursing staff. Planning to recover personnel shortage and putting hospital units in personnel standard level and also essential

education to unit authorities in relationship by correct management and planning of units' manpower cause to increase in efficiency and effectiveness of hospital activities (21). Based on statistical reports about hospitals under cover Health Ministry, bed occupancy rate in Iranian hospitals just about active beds doesn't exceed 60%. It's obvious that this ration in hospital constant beds is less than 50%. So, huge charges that Human Resource in Hospital Affairs Office and the other health care center dedicated to itself, makes the need for scientific scrutiny and attention to this vital kingdom, essential (17).

Comparative survey about human personnel index and its distribution rate to in hospital for Ministry of Health that is taken place by Doctor Ebrahim Sedghiani indicates this fact that in developed country hospitals, in spite of high techs which caused to personnel reduction, educationally, none educationally and one expert hospitals, Commonly 3-4 people are considered as personnel. It must be noted that this number of personnel not based on hunch or guess, but depend on work measurement and timing methods services and cares are done. There's an important point that Health Ministry hospitals at the moment for determining number and arrangement of their personnel, common standards that they have belongs to Health ministry. Generally, in hospitals of entire country and especially hospitals that didn't use their hospitalization bed capacity appropriately and average of hospital beds occupancy is low like studying hospital, hospital management uses less number of personnel and often unsuitable arrangement that cause irreparable hurt on body of country health system and most of hospitals facility and capacity that has been made on a massive investment, remains untouchable (1, 10, 17).

REFERENCE:

1. Sadaghyani E. Hospital standards and health care management. Tehran: Moein Publications; 1998. 41 p.
2. Zarrin S. Exploring the manpower condition in hospital of Hormozgan University of medical

- sciences. *Hormozgan Uni Med Sci Public*. 2003;2:1-8.
3. Akbari F, Kokabi F, Yousefian S. Determining nursing manpower needed in a sample hospital. *J Hosp*. 2011;9:69-76.
 4. Dehghan N, Nazari A, Salsali M, Ahmadi F. To assess role of staffing in nursing productivity: a qualitative research. *Hayat*. 2006;12:5-15.
 5. Kazemi M, Mohammadi M, Shafapey F, Aabadi MSC, Akbarzadeh A, Baqney PJ, et al. Studying Level of Performing Accreditation of Nourishment Unit in Educational Medical Centers of Kermansham Province During Years 2012-2013. *Research Journal of Medical Sciences*. 2015;9(3):49-52.
 6. Eastaugh S. Hospital nurse productivity. *J Health Care Finance*. 2002;29:14-22.
 7. Helmer T, Suver jy. Pictures of performance: the key to improved nursing productivit. *Health Care Manage Rev*. 1988;13:65-70.
 8. Mosavizadeh A, Hatampour M. Studing the manpower distribution of specialist physician in Kohkilooye and Boyer Ahmad Provinces in term of Township. *Stat Unit Rev*. 2008;29:13-9.
 9. Education ICfGM. The Report in connection with requires specialist number in Iran. Tehran: Ministry of Health and Medical Education; 1999.
 10. Sadaghyani E. Hospital management and organization. Tehran: Pub of Jahan Rayane; 1998. 47-8 p.
 11. Dehghan_Nayeri N, Nazari A, Salsali M, Ahmadi F. Iranian Staff Nurses' Views of Their Productivity and Human Resource Factors Improving and Impeding It: A Qualitative Study. *Human Resources for Health*. 2005;3(9):1-11.
 12. Mohammadi E, Zaebi Y, Hoda_Mousavi S, Mahboubi M, Mohammadi M, Zangeneh A, et al. Emergency Department Performance Evaluation Indicators in Pre and Post-Health Care Reform in Kermanshah Public Hospitals. *Research Journal of Medical Sciences*. 2016;10(2):54-9.
 13. Tschannen D, Kalisch BJ. The Effect of Variations in Nurse Staffing on Patient length of Stay in the Acute Care Setting. *Western Journal of Nursing Research*. 2009;31:153- 70.
 14. Arab M, Yousefi M. Estimating the number of needed personnel in admission department of Children's Medical Center affiliated with Tehran University of medical sciences using work and time Measurement. *Hospital*. 2010;8(3):19-26.
 15. Sha-Mohammadi Z, Ghahramani F, Mahboubi M, Jalilian F, Shahri MN, Mohammadi M. Prevalence of Enterobius Vermicularis (pinworm) in Kermanshah city nurseries, using Graham: 2014. *Journal of Biology and Today's World*. 2014;3(1):15-7.
 16. Beardwell J, Claydon T. Human resource management: a contemporary approach: Pearson Education 2007.
 17. Sadaghyani E, Amerion A. Hospital standards. Tehran 2006. 92-4 p.
 18. Akbari F, Arab M, Momeni K, Rahimi A, Bahadori M. Situation of the Necessary Human Resources for hospitals of Lorestan Province in Accordance with Proposed Model by the Iran's Ministry of Health. *Rev Glob Medicine Healthcare Res*. 2012;3(2):135-43.
 19. Mustafai D. Estimation of the Necessary Manpower for the Hospitals of Tehran University of Medical Sciences in Accordance with the Personnel Criteria and Standards of the Ministry of Health: Tehran University of Medical Sciences; 2003.
 20. Abrishamcar S, Abedinzadeh MR, Arti HR, Hoshmand F. Survey of Inpatient Cases and Mortality Rate in ICU in Ayatallah Kashani Hospital of Sharehkord. *Journal of Sharehkord University of Medical Science*. 2003:73-8.
 21. Sadeghifar J, Pourreza A, Ahmadi B, Zeraati H, Arab M. Assessment of Necessary Staff for Hospitals of Ilam University of Medical Sciences in Accordance With Personnel Criteria and Standards of Iranian Health Ministry. *Scientific Journal of Ilam University of Medical Sciences*. 2011;19(1):24-31.