Supply and demand of nursing manpower in Kerala up to 2030

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ABSTRACT
Manpower planning is the approach to the management of human resources based on an anticipation of the future needs of an organisation and the behavioural patterns of individuals within it. The present study was intended to assess the supply and demand of nursing manpower in Kerala up to 2030 and analyze the job performance of the different categories of nursing personnel in the government sector.

Objectives
- To assess the availability (supply) of nursing personnel in Government and Private Hospitals of Kerala.
- To estimate the present requirements (demand) for nursing manpower in Kerala.
- To estimate the number of nursing personnel required in relation to various categories up to 2030.
- To analyze the job performed in the work setting of different nursing categories in Government hospitals.

Research methodology
An evaluative survey design was used for the study. For the estimation of supply and demand of nursing manpower, the population consisted of all the government and private hospitals in Kerala. Out of 1,107 hospitals, a sample of 111 hospitals were selected for the study by a proportionate stratified random sampling technique. For analyzing the job performance of the nursing personnel the study population consisted of staff nurses and head nurses working in the general wards of six primary, one secondary and one tertiary level hospital in government sector in Kottayam district. Out of that two primary and the only one secondary and tertiary level hospitals were selected on a simple random basis. Sample consisted of 100 staff nurses and 20 head nurses working in general wards of the selected hospitals. An interview schedule was used for collecting the data on the supply of nursing manpower from the hospital administrators. INC norms for the nursing service were used to estimate the cadre wise demand of nursing manpower for each hospital. Personal data sheet and observation check list were used for collecting the data on job performance of the staff nurses and head nurses.

Results
The findings of the study revealed that the total nursing manpower available (supply) in the nursing service department in Kerala state during the year 2012 was 54,829 where as the requirement (demand) as per the INC norms was 1,09,707 with a short fall of 54,878 (50%). In the setting of job performance analysis, total nursing
manpower supply in the primary level hospital was 30 in comparison to the required number of 182 with a short fall of 142 (78.02%). Total nursing manpower supplied in the secondary level hospital was 92 and the demand was 229 with a short fall of 137 (59.82%). In the tertiary level hospital total nursing manpower supplied was 350 in comparison to the required number of 931 with a short fall of 581 (62.44%). In future projections it was seen that there is a gap between the supply and demand of total nursing manpower which is increasing as the years pass with a demand short fall of 71,991 (51.24%) in the year 2030.

With regard to the job performance of the staff nurses, out of their total duty time 360 minutes, 60.25% of the time was spent in direct patient care. Personal affairs and non nursing functions took 5.28 and 3.13 percentage of time respectively. Head nurses spent 42.5% of their time for direct patient care activities. They also spent 42% of the time for administrative functions. Personal affairs and non nursing activities took 6.2% and 7.83% of their time respectively.

**Key words:** Supply, demand, nursing manpower, job performance