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A Study of Training Needs Assessment of Doctors and Nurses in a Tertiary Care Hospital: A Cross Sectional Study in Punjab, India.

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ABSTRACT

Introduction: Training has a distinct role in the achievement of an organizational goal.. The present study aimed to identify the training needs of the doctors and nurses in the hospital and to prioritize these training needs.

Methods: The study was a cross sectional study which was conducted in Sri Guru Ram Das charitable Hospital Vallah, Amritsar, Punjab, India, among doctors and nurses from October to December 2019. A total of 100 doctors and nurses through Convenient Sampling were interviewed after taking informed consent. The World Health Organization–adopted Hennessy Hicks Training Needs Analysis Questionnaire, a self-reported close-ended structured questionnaire with a core set of 30 items was used. The data was analyzed using SPSS 20 version. Descriptive statistics mean (SD) were calculated for quantitative data and frequency (percentages) for qualitative data. Independent sample t-test was applied to compare importance and performance scores among doctors and nurses. pvalue less than 0.05 were considered significant.

Results: There is maximum training need in research activities (average difference score of 1.5) followed by the supervisory /managerial tasks (1.2) and clinical tasks (1.1). For research activities mean (SD) difference of average score for importance and performance was 2.0 (1.10) among doctors and 1.6 among nurses (0.72) while for administrative tasks it was 1.5 (1.10) and 0.6 (0.96) for doctors and nurses respectively. For supervisory tasks it was 1.4 (0.94) among doctors and 0.9 (0.78) among nurses. (p value for research activities, administrative tasks and supervisory task was .03, .000 and .003 respectively).

Conclusions: Among all the categories of activities, maximum training need was found for research activities followed by the supervisory /managerial tasks and clinical tasks.

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Introduction

Human resource is the backbone of every organization and it is also the main resource of the organization. So organizations invest huge amount on the human resource capital because the performance of human resource will ultimately increase the performance of the organization. Performance is a major multidimensional construct aimed to achieve results and has a strong link to strategic goals of an organization (1). Despite a busy and fast paced work environment, medical facilities need continuous training for employees. An effective training program spots individual areas of improvement in order to address them properly (2).

"Training" refers to a systematic approach to learning and development to improve individual, team, and organizational effectiveness (3) The healthcare industry is an ever-changing field that requires extensive skills and training. The development of a successful program is a key to employee retention, competency, and the balance of work and personal life. It's a vital tool when implementing new policies, equipment, and/or employees (4).

Training Needs Assessment (TNA) is the process of collecting information about an expressed or implied organizational need that could be met by conducting training. The need can be a performance that does not meet the current standard. The TNA process helps the trainer and the person requesting training to specify the training need or performance deficiency (5).

According to Judith Brown in order to develop an effective training programme, an assessment of the training needs must first be done. However, little or no effort has been directed towards TNA. One of the main reasons is lack of knowledge regarding needs assessment (6). Dierdoff & Surface also identified The Training Need Analysis as a significant first step in the successful designing and implementation of training programmes (7).

Barratt & Fulop conducted a survey to prioritize training needs among healthcare and public health staff and found that the three tasks with the largest training needs were managing multiple demands on time; learning about new research developments; and assessing the relevance of research (8).

A study conducted by Mahmud et al confirmed that conducting TNA in the organization played a significant role in improving the performance of the employees as expected (9).

TNA survey is widely used as a clinical practice and educational quality improvement tool across continents. Furthermore, it facilitates prioritization and allocation of limited educational resources based on the identified training needs. The TNA tool effectively addresses the "know-do" gap in global human resources for health by translating knowledge into action (10).

This shows that employee performance is important for the performance of the organization and training & development is beneficial for the employee to improve its performance. Thus the purpose of this study is to assess the training needs of the hospital employees and the approach to improve their performance.

So the present study was done to identify the training needs of the doctors and nurses in the hospital and to prioritize these training needs.

Methods

The study was a cross-sectional study conducted in Sri Guru Ram Das Charitable Hospital Vallah, Amritsar, Punjab. It was conducted among doctors and nurses of the Institute. Convenient sampling method was used to include 100 doctors and nurses (50 each) in the study. Doctors and nurses who worked as permanent staff in the hospital were included in the study after informed consent. . Those who were working at adhoc basis and were students (both nursing and medical) were excluded. The study was carried out from October 2019 to December 2019.

Data collection Tool

The World Health Organization–adopted Hennessy Hicks Training Needs Analysis Questionnaire, a self-reported close-ended structured questionnaire with a core set of 30 items

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was used (11). The chronbach alpha value of the adapted tool was found to be 0.842. These items refer to tasks that are central to the role of health care professionals and are categorized into six superordinate categories: research/audit, communication/teamwork, clinical skills, administrative, managerial/supervisory, and continuing professional education. Each item in the questionnaire is rated along a 7-point scale in 4 different ways –

Rating A: How important a task is to the respondent's job

Rating B: How well the task is currently performed

Rating C: How far the respondent believes that the training need can be addressed by organizational changes

Rating D: How far the respondent believes that the training need can be addressed by a training course Interpretation of the ratings:

Rating A provides an index of how important the task is to the respondent's job, while Rating B provides an index of how well it is currently being performed. Averaged group scores for the ratings are calculated. Comparing the averaged group scores for importance/performance provides an assessment of where the greatest training needs lie. The greater the difference in scores, the greater the training need. The way in which a particular training need could best be addressed may be identified by the scores given to the relevance of organizational change and development (Rating C) and specific training courses (Rating D) for improving performance on that item. If a higher averaged group score has been given for organizational development than for a training course, then this would mean that the respondents think that this training need would be better managed through organizational development. If a higher averaged group score has been given to a training course than to organization development for the item, this means that the respondents believe that the training need would be better addressed by a specific training course.

Statistical tests: The data collected was compiled and statistical analysis was done by using SPSS 20. Descriptive statistics mean and Standard Deviation (SD) were calculated for quantitative data and frequencies and percentages were calculated for qualitative data. independent sample t-test was applied to compare importance and performance scores among doctors and nurses. p value less than 0.05 and 0.01 were considered significant and highly significant respectively.

Results

Out of total 100 respondents 65% were female and the rest were males. More number of females were there because a total of 50 nurses were interviewed making the number of females high. Among the doctors 70% were males and the remaining (30%) were females. Almost half (51%) of respondents were <40 years of age. Out of total 50 doctors 72% were from medical specialties and 28% from surgical. It was found that 34% of the respondents had work experience of >10 years. Out of the remaining same percentage (33%) of the respondents had work experience of <5 years and 5-10 years. (Table no. 1)

Communication Skills

Average score of importance of all the activities related to communication skills was 6.2 (SD 1.43) and average performance score was 5.2 (SD 1.28). So overall average score for need of training was found to be 1.0. Organizational change as a way to improve communication skills was given average score of 4.8 (SD 1.35) and training was given a score of 4.7 (SD 1.75).

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Table 1. Demographic characteristics of the respondents

Variable	Levels	N	%
Sex	Male	35	35
	Female	65	65
Age	<40 yrs	51	51
	40-50 yrs	29	29
	>50 yrs	21	21
Specialty	Medical	36	36
	Surgical	14	14
	Nursing	50	50
Experience in years	<5 yrs	33	33
	5-10 yrs	33	33
	>10 yrs	34	34

Research Activities

The maximum need of training is in the statistical analysis of data as the difference of average score between importance and performance was found to be 2.0 (SD 1.55) followed by designing a research study and critically evaluating published data. Training as an approach to improve the performance in research activities was given higher score by the respondents with 5.0 (SD 1.636) as an average score than the organizational development (average score 4.5 and SD 1.636).

Clinical Task

Average score for importance of clinical tasks was 6.2 (SD 1.25) and for performance the average score was 5.1 (SD 1.28). Among the clinical tasks the highest difference score (1.3) between the importance and performance was found to be for planning and organizing an individual patient's care followed by accessing relevant literature for clinical work and undertaking health promotion studies (average difference score of 1.2 each).

For improvement in performance in clinical tasks training was given higher score (average score of 4.8 and SD 1.61) than organizational change (average score of 4.5 and SD 1.71))

Administrative work

Difference in the average group score for importance and performance of administrative activities was found to be 1.0 (SD 1.53). Using technical equipment including computers was given higher importance score.

Supervisory/ Managerial Task

Difference in average score of importance and performance of supervisory activities was found to be 1.2 (SD 1.43). The priority need for improvement was identified as introducing new ideas at work. It was found that any approach can be used to improve the performance of the doctors and nurses in supervisory tasks (average score for both the approaches is almost same).Training needs in each category of task.

As shown in figure no. 1 there is maximum training need in research activities (average difference score of 1.5) followed by the supervisory /managerial tasks (1.2) and clinical tasks (1.1). So priority should be given to train the staff in research activities. For improvement in performance of research activities, training was given higher average score of 5.0 than organizational change (4.5).

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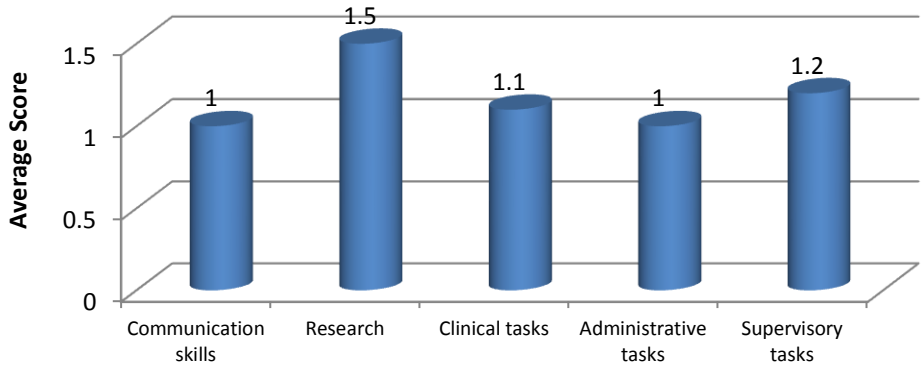

Figure 1. Training Need for each category of task

Importance and performance of different tasks by the respondents

As seen in figure no. 2 the average group scores regarding importance for all categories of activities was higher for doctors than for nurses. It means that doctors perceived these activities more important for successful performance of their job.

Performance scores of the above activities were higher for doctors in communication, research and administrative and supervisory tasks. (Figure no.3). There was a significant difference between the average group score of importance and performance scores among doctors and nurses. (p value for research activities, administrative tasks and supervisory task was .03, .000 and .003 respectively) (Table No. 2).

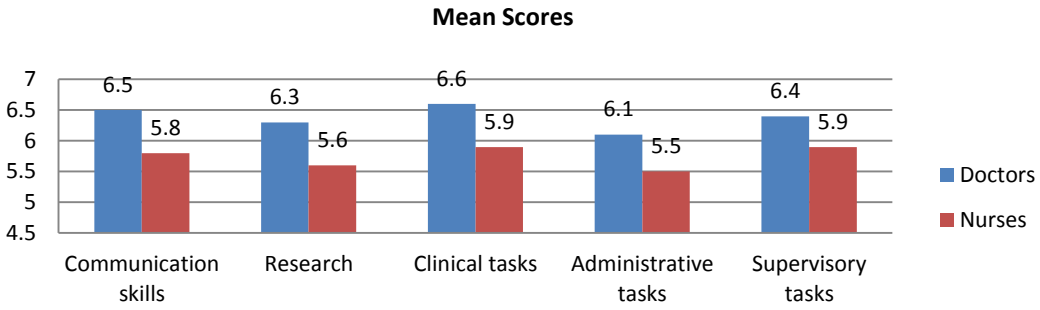

Figure 2. Importance of different tasks as perceived by the respondents

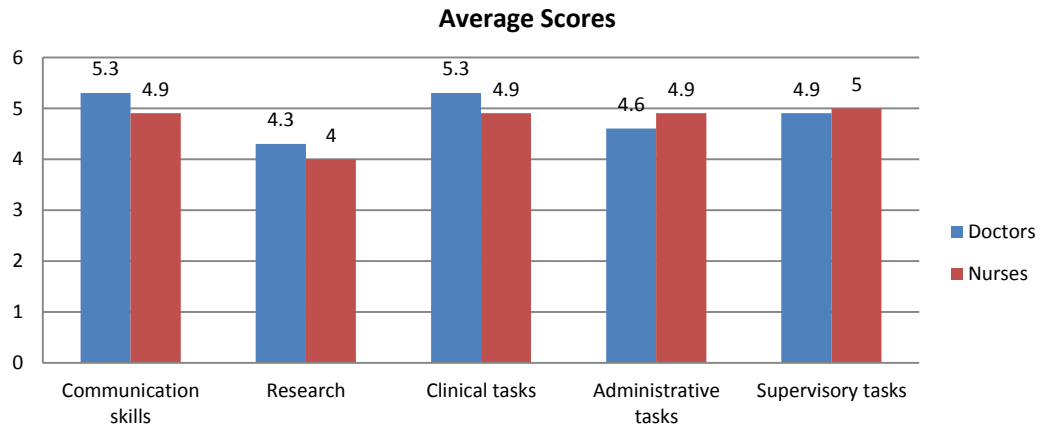

Figure 3. Performance level of the respondents in different tas.

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Table 2. Comparison of difference in importance and performance scores among doctors and nurses

		Mean difference in average score of A & B	SD	t value	p*
Communication skills	Doctors	1.2	0.70	2.19	0.03*
	Nurses	0.9	0.67		
Research activity	Doctors	2.0	1.10	2.15	0.03*
	Nurses	1.6	0.72		
Clinical tasks	Doctors	1.3	0.92	1.76	0.08
	Nurses	1.0	0.76		
Administrative tasks	Doctors	1.5	1.10	4.35	<0.001*
	Nurses	0.6	0.96		
Supervisory tasks	Doctors	1.4	0.94	2.89	0.003*
	Nurses	0.9	0.78		

* independent sample student t-test
*Significant at 0.05 level

Discussion

The present study was conducted among doctors and nurses to assess their training needs and to identify the best approach to improve their performance. It was found that out of total 100 respondents 65% were female and the rest were males. Among the doctors 70% were males and the remaining i.e 30% were females. Similarly, Gaspard and Yang found that in their study most respondents were nurses (56.1%) because they tend to be more receptive to answering and assisting in data collection and participating in programs (12) Maximum number of respondents were <40 years of age. Out of the remaining 29% were in the age group of 40-50 years and 20% were >50 years old. Out of total 50 doctors 72% were from medical specialties and 28% from surgical. It was found that 34% of the respondents had work experience of >10 years and an equal percentage of respondents i.e.,33% had work experience of <5 years and 5-10 years.

On assessing the training needs in communication skills, it was found that average score of importance of all the activities related to communication skills was 6.2 (SD 1.43) and average performance score was 5.2 (SD 1.28). In a study done among nursing personnel at Super Specialty Tertiary Care Hospital in Northern India 87.85% of the nurses and doctors (79.10%) rates communication skills from very important to critical important for the successful performance of nurses' job (13). Out of all the activities related to communication skills maximum need of training was found in establishing a relationship with the patients (Rating A-Rating B=1.2). Organizational change as a way to improve communication skills was given average score of 4.8 (SD 1.63) and training was given a score of 4.7 (SD 1.63).

Among the clinical tasks the highest difference score (1.3) between the importance and performance was found to be for planning and organizing an individual patient's care followed by accessing relevant literature for clinical work and undertaking health promotion studies. For improvement in performance in clinical tasks training was given higher average score. Kristensen et al in their study found that in relation to describing, searching for, remaining updated on, and evaluating the relevance of new research knowledge within various areas, no well-defined assignments, roles or responsibilities emerged in the experience of translating research results into clinical practice (14).

Average difference in the importance and performance score of administrative activities was found to be 1.0. Using technical equipment including computers was given higher importance score.

Regarding supervisory/managerial skills difference in average score of importance and

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performance of was found to be 1.2. The priority training need was identified as introducing new ideas at work. Dehghani et al in their study revealed that clinical supervisor has a very important role in ensuring the quality of care, and improves patient care and follows personal professional development of staff nurses. They also concluded that the chief nursing officers should provide training readiness and application practice-based teaching to supervisors for performing the supervisory role in an excellent way (15).

On assessment of training needs of doctors and nurses it was found that there is maximum training need in research activities (average difference score of 1.5) followed by the supervisory / managerial tasks (1.2) and clinical tasks (1.1). Yousif et al in their study on Training need analysis also found that there was highest need of training in research activities (16). Gaspard & Yang in their study identified that continuous Professional Education (CPE) had the highest average difference score, closely followed by research/audit activities, management/supervisory skills, clinical tasks, communication and teamwork, and administration (12). Similarly in a study conducted by Byamugisha et al among health care professional in Uganda "research and audit" domain was identified as the priority area for training interventions to improve oncology services (17). A study conducted in a Tertiary hospital in China concluded that nurses' scientific research participation and self-rated research ability were below the optimal despite that they had relatively high research-training needs. Nurses should be provided further research training with tailored content to their characteristics and capacity (18).

The average group scores regarding importance for all categories of activities were high for doctors than for nurses. It means that doctors perceived these activities more important for successful performance of their job. Similarly average performance scores for all the categories of activities were also higher among doctors.

Strengths: The study successfully identified the training needs of the doctors and nurses. Despite of number of trainings conducted in the institution there was gap between the importance and performance of certain important research and communication activities. The importance of training needs assessment before imparting any training is highlighted in the present study to decrease the gap.

Limitations: Indepth interviews or Focused group discussion could have been conducted to get more information about their training needs.

Conclusions

Importance of assessing the needs before providing training is vital, particularly in developing countries where resources are extremely limited. Among all the categories of activities, maximum training need was found for research activities followed by the supervisory /managerial tasks and clinical tasks. Doctors and nurses should be trained in research activities to fill the evidence practice gaps. As there is perceived lack of importance of research activities among nurses, they should be educated about the importance of research activities. Clinical skills are to be updated regularly through trainings to provide quality care to the patients.

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Conflict of interest

None

Authors' contributions

K.A designed the study and collected the data. K.A and S.J analysed the data, wrote the manuscript. K.A edited and reviewed the mauscript.

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