

# RESEARCH PERSPECTIVES IN HOSPITAL MANAGEMENT

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## **Introduction**

Every profession is governed by certain laws or fundamentals. These laws form the basis for its practice by its constituent personnel. For instance, in physical sciences, Newton's laws of gravitational force lay the foundation for the methods of inquiry. Invariably, almost all the phenomena in world of physical sciences could be explained with the help of these laws.

On the other hand, to justify any profession as scientific, there is a need for such laws or fundamentals, besides a recognized body of knowledge. This calls for a controversial question "Are social sciences scientific?" Most of the popular literature on social sciences research have either grossly under-represented the laws of social world or have totally ignored the mention of such laws. Sometimes, it is surprising to note that social sciences researchers, in general, doubt whether such laws exist in the domain of their sciences. However, if such sciences are to be accepted reliable, there is a need for examining certain laws or methods of scientific inquiry, which forms the bases for the existence and continuance of social sciences.

In this paper, an attempt has been made to present the three fold views on various research issues relevant to hospital management which is as an emerging discipline. Firstly, it presents the 'canons of mill' which are being recognized as the Newton's laws in social sciences for inquiry into the social world phenomena. This is done to increase the confidence of the future researchers that social science research does employ logic in their research designs and the results of such research could be depended on for decision-making. Hospital management, being a mixture of social sciences and other sciences, these canons of mill are worth mentioning for a deeper understanding of the research perspectives on this rapidly emerging profession. Secondly, various research studies in hospital management field are reviewed and analyzed to arrive at a trend in which hospital management as a profession is progressing. Thirdly, implications for future research in hospital management are made so as to strengthen the managers to improve their problem-solving and decision-making skills, thereby increase the efficiency and effectiveness of their hospitals. All these issues are addressed from two perspectives. The first perspective specifies what should be the contribution of managers while doing research to their hospitals. Secondly, the use of research in improving their own profession while strengthening their effectiveness, efficiency and building the professional image. Lastly, the utility of research by consultants in hospital management is dealt with.

## **Canons of Mill**

The basic designs of logical proof were formulated by John Stuart Mill proposed four canons while justifying them for explaining the cause and effect relationships of social realities. The first canon is called *Method of Agreement*. Second the *Method of Difference*, and the third is *Method of Concomitant Variation*. Goode and Hatt (1986) gave a detailed note on the **Design of Logic** on the basis of the canons of mill. A basic aspect of research design is setting up the research so as to allow logical conclusions to be drawn. The basic designs of logical proof formulated by Mill still remain the foundations of scientific inquiry. Of all the four methods of scientific inquiry, Mill suggest that the *Method of Agreement* and the *Method of Difference* are the best possible canons in explaining the nature of inquiry. For a detailed note on these canons please refer to Goode and Hatt (1986)

Method of Agreement: When two or more cases of a given phenomenon have one and only one condition in common, then that condition may be regarded as the cause or effect of the phenomenon. More simply, if we can make observation 'Z' in every case that we find condition 'C', we can conclude that they are causally related. From figure 1, if it is known that all the conditions in two situations 'X' and 'Y' are described and designated by A, B, C, D, & E, and further if it is known that both sets of conditions result in observation 'Z' then it must be concluded that 'C' and 'Z' are related as cause and effect. Goode and Hatt (1986), for example, state "early and repeated emotional rejection in all primary relationships will be followed by adult neurosis".

Elements of Situation 'X'



Elements of Situation 'Y'



Figure 1

Method of Difference : If there are two or more cases, and in one of them observation 'Z' can be made, while in other it cannot; and if factor 'C' occurs observation 'Z' is made and does not occur when observation 'Z' is not made; then it can be asserted that there is a causal relationships between 'C' and 'Z'. To put it differently, when condition 'non-C' is found to be associated with observation 'non-Z', we may assert a causal relationship between C and Z.

Elements of Situation 'X'



Elements of Situation 'Y'



Figure 2

Though both the methods employed logic in explaining the causal relationships between the condition and observation, yet there are limitations in them. However, discussion over such issues are beyond the confines of this paper (for more information please see Goode and Hatt, 1986).

Method of Concomitant Variation : Because of limitations of earlier methods, Mill devised another canon called method of concomitant variation. This method holds that if a change in the amount of one variable is accompanied by a comparable change in the amount of another variable in two or more cases and the latter change does not occur in the absence of the first change, one change is the cause (or effect) of the other. For example, linear relationships (perfect negative, perfect positive, perfect curvilinear, very low correlation) come under this purview.

It is advocated that the researchers who study the facets of hospital administration need to keep in mind the canons of mill, while exploring the cause and effect relationships. Especially, these canons will be useful while conducting experiments in the facets of hospital management, more so in the intervention strategies that form the centrality of change programmes in the hospital. In the following sections, some of the research studies that were conducted under the aegis of Apollo Institute of Hospital Administration and some pertinent studies conducted elsewhere are reported to arrive at the trends that are prevailing in hospital management research.

### **Some Areas of Research in Hospital Management**

As stated elsewhere, the research perspectives in hospital management needs to be specified on two counts. Firstly, the utilities of hospital management research for the benefit of the hospital itself. Secondly, the contributions of research to the effectiveness of hospital managers, while bringing about professionalism this emerging discipline in the years to come. Thus, the following sections are delineated to these two issues of research in hospital management.

### **Research in Functional areas of Hospital Management**

#### **Finance Management**

Finances act as life blood in the hospitals as almost all of them are owner driven. Its management is an art and merits special attention. The financial function of management in hospital is to i) ensure fair return on investment, ii) generate and build-up surplus and reserves for growth and iii) plan, direct and control the utilization of finances so as to insure the maximum efficiency of operations and build a proper relationship with chemists, staff and consultants.

Some of the significant areas of research in healthcare financial management are the estimation of the cost of a hospital project. Secondly, break-even analysis is another area where research could be conducted. This will enable the organizations to monitoring whether they are making profits or loosing revenue from their operations.

One of the most important issues that warrant the attention of the hospital managers is the source of payments to hospitals. Currently, the major source of payment differs from the type of ownership of the hospitals. For government hospitals it is the government revenue, For trust hospitals, it is the philanthropists and organized donors who are inspired by egalitarian motives. For private hospitals, it is the patient community.

In the west most people are covered by some form of health insurance. One of the research works published in US report that in 1978 an estimated 90% of the population had some form of health insurance and that this insurance covered approximately 86% of all services provided by hospitals (Health Insurance Institute, 1982).

In the days to come, health care will be very expensive for the payers. Therefore, participation by the insurance agencies may be encouraged. This will demand meticulous analysis on the part of hospital managers to come with solutions to the problems of sources of payments. Designing proposals, contacting third party payers i.e., the government and insurance will predominate the jobs of the managers. On the other hand, in the competitive economic environment one of the serious problems underlying these hospitals is the optimum utilization of limited funds available to them.

A study was conducted by Chowdhary (1997) on financial planning practices of 12 small scale hospitals in two major cities of Jaipur and Jodhpur, Rajasthan. He collected the information primarily in the descriptive form rather than the quantitative form of financial aspects. Further, he classified the hospitals into two categories as A (<51 beds) and B (51-125 beds). With regard to both categories of hospitals, he found that 1) owners capital is by and large, the most popular source of capital. Friends and relatives are the second most important source of finance for smaller (category A) hospitals while secured loans are the second in importance for category B hospitals. Preference capital and equity were also among the sources of finance for category B hospitals while smaller hospitals (category a) never resorted to this mode of financing.

Only 30 % of the hospitals (both categories) are satisfied with their capital structures. Almost all the hospitals in category B hospital would like to increase the debt component and also go for public subscription.

The reasons for category 'A' hospitals are

- i) they want to go public,
- ii) reduce the proportion of owners capital due to loss of opportunity cost involved in it. Market as such is still not confident about the business acumen of the hospital managers.
- iii) Ward of interest burden as early as possible.

Working capital requirements of almost all the hospitals consist of salaries to staff, hospital consumables, interest repayment, research and development, training, promotional expenses, etc. Working capital requirements are fulfilled from income accruals from routine hospital business and personal sources. In case of category B hospitals apportionment from profits is an additional source.

As per the central theme of the study, Chowdhary (1997) found that financial planning has not been all that prominent in small scale hospitals. The reasons found were

- i) lack of sufficient appreciation for the financial planning by the owner-manager who predominantly is a medical professional and lack business acumen. Majority of them (69.2% in category A) opined that financial planning is not required.
- ii) The major emphasis is on technical expertise while business/managerial expertise is ignored.
- iii) Survival is considered important than the growth.  
Lack of duly qualified finance professionals
- iv) Financial audit is not compulsory/statutory.

From the above sections, it is learnt that studies are not available in significant number to authenticate the kind of status financial management has so far in the hospitals. Secondly, most of the hospitals do not wish to divulge the information pertaining to their financial aspects as that area is treated most confidential. This hinders the assessment of methods and practices of hospitals as regard to their finances. Nevertheless, attempts have been made to conduct research in this sensitive area of hospitals in the country.

### **Materials Management**

The objective of materials management is to ensure regular supply of materials to maintain continuity of production/services and thus contribute towards excellence in productivity (Ojha, 1997).

Research in material management is conducted basically to continuously streamline materials and supplies for providing proper service to patients. There are numerous types of material that are required for running a hospital. The larger the size of the hospital, the greater is the number of items of materials needed. Research on the cost and utility of materials is imperative. Therefore, the hospital material items need to be classified into medical and non-medical. Under medical classification, i) medicines, ii) medical and surgical supplies, iii) X-rays supplies and iv) laboratory supplies are dealt with. Under non-medical items, i) linen and bedding laundry supplies, iii) house keeping supplies, iv) dietary supplies, v) maintenance and repair materials, and vi) stationary and office supplies etc. Material costs play a vital role in the overall productivity of a hospital. Thus, research could be carried out in this field with the help of material control techniques like, i) fixation of stock levels, ii) order cycle method, iii) economic order quantity, iv) ABC analysis, vi) VED (vital, essential and desirable) analysis, vii) SAP (scarce, available, plenty) analysis, viii) cost-criticality-availability analysis, ix) ESN analysis, x) inventory performance index, xi) pilferage and wastage control, etc.

### **Human Resources Management**

A constant monitoring of the status of human resources in the healthcare and hospital settings is a pre-requisite for strategically positioning the organizations in the competing environment. This also seems reasonable from the point of view that human resources is one of the most important resources, without which the other factors of production/service will remain static. Thus, assessing the total organizational climate and its impact on the membership variables is need of the hour. Such assessment enables the management to strengthen the individual-organizational interface so that managers may not often question themselves: "I wish I had a highly motivated, competent staff working for me".

In an attempt to assess individual-organizational interface, Chandrasekhar (1995) examined corporate hospital climate and its effects on certain variables like, job satisfaction, job motivation, job commitment and interpersonal relations. Firstly, it was found that the corporate hospital employees, which included all the types of job incumbents, perceived organizational climate viz. scope for advancement, grievance handling, monetary benefits, participative management, objectivity and rationality, recognition and appreciation, safety and security, training and education, and welfare facilities.

Further, it was found that organizational climate was positively and significantly correlated with job satisfaction, job motivation, job commitment and interpersonal relations, indicating that the existing corporate hospital climate has positive influence on certain job related attitudes of the employees, which further reveals that employees feel this hospital to be a better place to work.

With regard to job motivation in the hospitals, a Job diagnostic survey of 23 corporate hospital job incumbents was made to find out as to whose jobs are having greater motivational potential (Chandrasekhar and Ramesh, 1998). With the help of Hackman and Oldham's (1975) methodology of assessing motivational potential score of the jobs, it was found that mean scores for 19 hospital job incumbents on skill variety, task identity, task significance, autonomy, feedback and motivating potential score were computed. With regard to skill variety, it was found that hospital engineering staff scored higher mean score (22.33) followed technicians and physicians (21.50), assistants (20.64) and executives (20.16). The waiters have scored the least on skill variety (11.00). Thus, it could be said that the jobs of these people require a variety of different activities to be performed. On task identity, cooks scored highest mean score (11.66) followed by dietitian and ambulance driver (11.00), front officers and assistants (10.20). Interestingly, the engineers scored the least (8.00). This means, the total jobs of these people need to be completed by them only, whereas it is not so in case of engineers' jobs. With regard to task significance, dietitians scored the highest mean score of 14.50 followed by stenographers (13.72), supervisors and data entry operators and physicians with a mean score of 13.00. On autonomy dimension, stenographers scored the highest mean (24.25) followed by physicians and cashier (23.50), assistants (23.00) and technicians (22.25). Surprisingly, front officers and ambulance drivers scored the least. On feedback, maintenance staff scored highest mean of 8.66 followed by stenographers (8.25), assistants (8.10), physicians (8.00) and dietitians (8.00). Waiters and front officers scored the least.

Lastly, with regard to motivating potential of the jobs, it was interesting to note that the top five jobs of doctors, nurses, technicians, assistants, and executives jobs have greater motivating potential than the other 14 jobs in the hospital. The last five with least motivating potential are waiters, cooks, data entry operators, drivers and dietitians,

On the other hand, job stress and psychosomatic problems of doctors and non-doctors at emergency department in a teaching hospital were studied by Chandrasekhar (1998a). This was conducted with an assumption that employees in emergency department suffer from stress more than the employees in other departments. Interestingly, he found that doctors experienced more stress (mean=47.53, S.D=10.30) than the non-doctors (mean=39.86, SD=7.66) in the department. With regard to psychosomatic problems, both clinicians and non-clinicians have global experiences. However, correlation analysis reveals that among clinicians, psychosomatic problems like P4 ( $r=$ ,  $P=$ ), P5 ( $r=$ ,  $P=$ ) and P6 ( $r=$ ,  $P=$ ) were positively and significantly correlated with stress, while among non-clinicians, psychosomatic problems like P1, P3, and P5 are positively and significantly correlated with stress. indicating that as stress increases, these three psychosomatic problems also increase significantly. Lastly implications were drawn for the effective coping of stress in emergency department by the individual employees and the organizational support to counter the deleterious effects of stress and stress-reactions.

In these days, there is a misnomer that private healthcare professionals seem to lack service orientation. Thus, in a yet another study, Chandrasekhar (1998b) examined the relationship between service orientation attitude of and the continuance in the current job by the corporate hospital employees representing certain specialized services. It was argued that service orientation as a helpful, thoughtful, considerate, co-operative, and sacrificial disposition is an important attitude needed in all varieties of jobs that involve dealing with people. It is more important in service organizations than in manufacturing organizations. Further, it is of more prominence in all service organizations in general and hospitals in specific where the question is of life and death.

It was quite surprising to note from the study that technicians scored highest mean scores of 79.50 on service orientation scale, followed by physiotherapists (mean=76.50), dietitians (74.00), cashiers (74.00)

and doctors (73.15). Surprisingly, the doctors scored 5<sup>th</sup> highest mean score, followed by executives who scored 10<sup>th</sup> (mean=68.33) and nurses 11<sup>th</sup> (mean=66.78). Interestingly, the service orientation attitude yielded a positive and significant correlation with continuance in the present job, indicating that hospital employees express their wish to work and stay with the organization as a normative response evoked by their sense of service orientation.

## **Marketing Management**

Marketing management in hospitals is concerned with the conceptualization of services, pricing, promotion and distribution of such services in the light of the environment which is always changing. Though marketing of hospital services is yet to emerge as a distinct hospital function, marketing-orientated hospital is the one whose actions are based upon the recognition that the patient is the *raison d'être* of the organization.

In the recent times, both practitioners and academicians have almost completely turned their focus from facilities planning to marketing planning (Richard, C.I, 1977). One aspect of marketing of particular interest has been that of hospital marketing research.

Gourley and Sehon (1996) in their classic review of research studies in hospital marketing identified that large percent (43.6%) of hospitals are involved in marketing research and only 7.6 % are not involved in it. With regard to types of marketing research, they found that most frequently performed research (76.8%) was patient needs and/or satisfaction studies. Additionally, over 66% had done consumer attitude/preference studies, while over 55% had done consumer awareness studies, competitive assessment studies and/or doctor needs/satisfaction studies, and just a little under 50% had engaged in product/service development studies. Apart from the study of demographic data in relation to marketing strategy, four variables seem to have the most impact on marketing research in hospitals. These are the bed size of the hospital, the population size of the service area, who performs the marketing functions in the hospital, and if the hospital has an internal marketing research person. To a lesser extent, the hospital's average daily occupancy, its classification, and if it's a part of a system, and the ownership arrangement seem to also influence a hospital's involvement in marketing research.

From the review of Gourley and Sehon (1996) mentioned above, it could be said that there is a need for hospitals to perform marketing research to provide administrators with information for both the planning function and as a basis for their routine marketing decision making (Larry and Brown, 1996). Some of the significant researches done recently are related to quality of services, patient satisfaction, assessment of marketing strategy, doctor-relations etc. are mentioned in the following sections.

Chaskar (1997) In his study of satisfaction levels of patients visiting a private hospital reported that out of 200 patients studied, a little over one third (36 %) of them were satisfied with the care provided. However, 38% of them reported that the hospital was very congested and overcrowding, 16 % said that they were subjected to excessive delay at registration counter and laboratory, 39% reported that more than the required number of investigations were done, 35% said the time required for completing check-ups is long but acceptable, however 27% did not accept that long, majority (72%) of them were satisfied with the cleanliness of rooms and wards, 21% were of the view that other facilities like drinking water, seating arrangement, toilets, fans, etc, are less than sufficient, whereas 19% were of the opinion that these arrangements were not well maintained. Most of these findings could be seen in some government, trust and private hospitals too.

On the other hand, mathematical theory of waiting-lines/queues has received a great deal of attention from academic researchers, and their results and insights have been successfully applied in a variety of settings. However, most of this work is concerned with the objective reality of various "queue management" techniques: for example, the effects upon waiting times of adding servers, altering "queue discipline" (the order in which customers are served), speeding up serving times, and so on (Maister, 1984).

For instance, a recent study of waiting time in a trust-owned eye care hospital, Anand and Vijaya (1997) revealed that the average time spent by an out-patient in the system was a maximum of three hours and forty five minutes and a minimum of thirty minutes- both in the pre and post dilation phase of their check up. They also found that the patient's arrival rate varied from three to eight patients per hour. The service rate was at 1.5 patients per hour. The average number of patients in the system were a maximum of nine and a minimum of 2 patients. The average number of patients in the queue are between 1 and 6 ½. The time taken in the system varied from about 4 minutes to 3 and 45 minutes. The average time in the queue varied from three minutes to two hours thirty minutes. It was concluded that with the exception for two or three consultants less time is spent both in the system and in the queue for follow up patients. Only two or three consultants have longer waiting times for the queue and the system. Finally, to bring down the waiting time in general increasing a server for each specialty clinic was considered.

From this it could be said that what has been relatively neglected is much substantive discussion (at least in management literature) of the experience of waiting. Depending on the context, a wait of ten minutes can feel like nothing at all, or it can feel like "forever." Accordingly, if managers are to concern themselves with how long their customers or patients wait in lines for service, then they must pay attention not only to the actual wait times, but also to how these are perceived. They must learn how to influence how the customer feels while waiting.

Thus, the psychology of waiting lines/queues is another dimension that needs to be focused from a research perspective. Partly, in this direction, Anand (1997) reported results of his study at a trust hospital that there existed a negative and significant relationship between waiting period for appointment and patient satisfaction scores ( $r = -.2914$ ,  $p < 0.002$ ) and waiting period for complete evaluation (time) and patient satisfaction scores ( $r = -.2018$ ,  $p < .003$ ). In other words, it means that as waiting time increases, the patient's satisfaction decreases significantly. In conclusion, it could be said that there is further need to understand the relationships between expectations, perceptions and satisfactions of the patient community in relation to the type of services, ownership of the hospitals and many other structural properties of the hospitals. These studies may aid the decision-makers in a much scientific manner for designing and re-designing more satisfactory services in their hospitals.

Another research dimension of patient satisfaction is quality. The essence of any total quality initiation is to effect a cultural change in the organization so that it involves every one, improves communication, creates team spirit and self confidence of employees. The traditional view of quality as a defensive mechanism aimed at preventing defects and customer complaints has to yield place to the proactive concepts of making products and providing services, which satisfy the customer. Thus the quality focus must shift from "Things gone wrong" to "things done right".

In recent times, the importance of the quality of relations between patients and healthcare organizations is a growing issue of concern for policy makers, health professional, but perhaps above all for the general public. The root of the problem can be traced to the needs to : (i) define better health procedures in general; (ii) better assess the quality and safety of technology; (iii) introduce or improve measurement systems to evaluate the performance of health professionals delivering services; and (iv) assure the reliability of safety norms (Elfant, 1996). Thus, healthcare organizations are making efforts to introduce total quality-oriented system in order to assure quality services to the patient community. However, the main principle behind the implementation of total quality systems is to surpass the limits imposed by quality assurance systems. But, Reddy and Sravanthy (1998) argue that before implementation of total quality management project, there is a need to assess the climate conducive for commissioning the project. They brought to light in their study that the perceived TQM climate, in corporate and teaching hospitals, with dimensions like patient satisfaction climate, leadership climate, information and analysis climate, strategic planning climate, human resources utilization climate, quality assurance climate, quality results climate, continuous improvement climate, general climate for TQM climate, was better and beyond the expected standard. However, the corporate hospital employees perceived the climate to be much better than that of their counterparts, indicating that both the hospitals could initiate the project of TQM.

One of the most important researches in hospital marketing domain is the assessment of the effectiveness of advertisements. Advertisement approaches are utilized to promote the hospital image distinctly from the other hospitals in the neighborhood. Though direct advertisement is not in vogue, the future healthcare scenario will create the need for advertising approaches. Another reason for advertisement is that there will be an increasing pressure on hospitals, in coming times, to differentiate themselves from their neighbours in order to direct new business to their facilities.

One such effort has been made by Gombeski et.al (1996) to develop an approach to improving hospital advertising. In this study, 132 ads by 182 hospitals (128 advertising and 54 non-advertising hospitals) in were reviewed and rated by four marketers/advertisers for their effectiveness. The advertisements were categorized as event ads (describe open houses, nursing, etc) and marketing ads (channel strategies, targeting strategies, program features, benefits desired, differentiation strategies). The findings of this study are as follows:

- i) it was found that there were significant differences between the two groups of hospitals (hospitals that advertised had more beds, higher number of admissions and higher occupancy rates than the non-advertising hospitals).
- ii) The advertisements were rated poorly in a number of areas. While 18% and 28% of the ads were rated as needing major improvement or total rework for understanding the message and sponsor identification respectively, higher percentage of ads were rated this way for gaining attention (42%), perceive the benefits (52%), and motivation for action (70%).
- iii) With regard to how obvious the elements of marketing strategy were in the ads, channel strategies were most obvious being rated explicit 61% of time, followed by targeting strategies (53% explicit), programme features (46% explicit), benefits desired (35% explicit), whereas differentiation strategies were judged to be explicit only 6% of the time. The greatest need for improvement was judged to be in the area of differentiation; this factor was felt to be undetectable in 34% of the advertisements.
- iv) With regard to relationship between evidence of a marketing strategy in the advertisement and overall ad effectiveness, ads which had more elements of a marketing strategy explicitly evident were generally more likely to generate higher advertising effectiveness scores than ads where the marketing elements were only implicitly detected. Examples of the four highest-rated advertisements, rated 81 to 85, are included to show that there as significant variance in style, use of art, cleverness, graphics, typeface, layout, and use of headlines. However, all four ads were rated extremely high on all five dimensions of the marketing execution form. And lastly,
- v) Hospitals with ad effectiveness scores in middle (scores of 37-62) or high (scores of 63-85) ranges had significantly higher occupancy and lower mortality rates than those in low (scores of 37-51) range.

What is evident from this study is that hospital advertisements can be significantly improved in terms of content and execution. This study also premonitions the healthcare managers of future that health care marketers can no longer leave advertising as a fad, they need to develop more effective ads for attracting the customers for future growth and survival of their hospitals in the times to come.

While these studies do not answer all the questions one might have about marketing research in hospitals today, it does provide practitioners and researchers with some baseline information into an area that has been often discussed but seldom explored. Future research should focus on such topics as the money spent, the uses made, effectiveness of marketing strategies which includes service strategy, pricing strategy, promotional strategy, service delivery strategy etc. and the level of satisfaction hospital administrators place on the marketing research done in the hospitals.

### **Other Research avenues in Hospital Management**

It would be an incomplete effort in discussing the research issues of hospital management, ignoring the need for research into effectiveness of other support services that include, management of Linen, Waste, F&B, front office, etc. Since these services influence the overall effectiveness of each department in general and the hospital in specific, research initiatives could be made into the management of all the concerned departments.

Interestingly, in a comparative study of ICUs' at a corporate and a military hospitals, taking medical, surgical, cardiac, post operative cardio thoracic and intermediary ICUs and the NICU, Rajaram et.al (1998) chosen five parameters like design and structural planning of ICUs, efficiency in the ICUs, utilization of the ICUs, infection control in the ICUs and medical audit in ICUs were examined. They found the following results.

*Design and structural planning of ICUs* : ventilation, zonalisation, A/C consideration, cleaning of floors and equipment etc, were suggested to be designed according to the standards stipulated. Except for one hospital, other could not subscribe to the general principles of design and structural planning.

*Efficiency in the ICUs* : This was measured with productivity and utilization ratios. ALS, BOR, BTI, Net death rate, Bed:nurse ratios, bed:floor space, bed:equipment, bed:doctor ratios etc. The study hospitals were quite different in their ratios.

*Utilization of the ICUs* : Here, the equipment utilization and the nurse utilization were assessed for seven days. This was done to arrive at the rate at which these resources were utilized. Again the results were partly contradictory in all the hospitals.

*Infection control in the ICUs* : The source of infection broadly from environment, the equipment, procedures and from people were suggested to be conducted and on the bases of observations, it suggested that minimum standards to be laid down and maintained in the ICUs.

*Medical audit* : It was found that though medical audit was not practiced in its entirety in both hospitals,

### **Utilization of Research for managerial effectiveness in hospital**

The topic managerial effectiveness, while always important, has been thrust to the forefront during the past decade. The issues of productivity and quality of working life and the dynamics of foreign competition, increased environmental uncertainty, and the changing nature of the work force have all put the manager in the spotlight in one way or the other. As a manager, keen interest in one's own effectiveness as well as in the effectiveness of one's subordinate managers is warranted. Thus, in the following sections, attention is directed towards existing research related to improving managerial effectiveness and highlighting the knowledge and skills that make it possible.

There are four areas that are clearly related to managerial effectiveness: managerial thinking, managerial roles/style, goal setting and performance evaluation and conflict management.

### **Managerial Effectiveness**

There is less than complete agreement on the definition of managerial effectiveness. Drucker (1961) emphasized the process of getting better and meeting higher standards as central to effectiveness. Literature in accounting and finance continually stress various financial measures as elements of effectiveness. Further, it considers development and implementation of plans to increase profit as a measure, while others focuses on the accomplishment of enterprise goals. The literature on managerial effectiveness began to deal with specific behaviours. Mintzberg (1975) stated that managerial positions can be defined in terms of ten roles : Three are interpersonal, three are informational, and four are decisional. In this context, effectiveness is the feasibility of filling the roles, depending upon the particular situation at hand. According to this approach, managers are effective in different ways at different times.

Interestingly, a major research was conducted on the roles of hospital administrators in 82 hospitals (Brandt, Broyles, & Falcone, 1996) . This study examined the allocation of interpersonal, informational, decisional and treatment roles among executive, administrative and clinical directors. The following are the results

- i) relative to administrative and clinical directors, executive directors commit more time and energy to the development of external relations.
- ii) The level of responsibility for the decisional role and the development of organizational plans is highest among executive directors.
- iii) Clinical directors assume more responsibility for managing human resources than do the administrative directors who assume more responsibility for this function than executive directors.
- iv) Executive and clinical directors were with highest level of responsibility for informational role.

- v) On decisional role, executive and clinical directors expressed highest level of responsibility, followed by clinical and administrative directors.
- vi) Clinical and administrative directors expressed to have highest level of responsibility for treatment role or patient care.

This research has made a significant contribution to the understanding of the roles performed by the hospital administrators and to the scope for improving managerial effectiveness.

There is also need for research to study the factors of managerial effectiveness like : managing the organization's environment and resources, organizing and coordinating, information handling, providing growth and development, motivating and handling conflict, and strategic problem solving. All these could contribute to the knowledge about managerial effectiveness from a situational approach.

Managerial thinking : Several publications have stressed the importance and relevance of the way managers think and what they think vis-à-vis managerial effectiveness. Much of what has been written relates to people and values, management style, collaboration, expectations, satisfaction etc. Yet another interesting area is to focus on the reasoning and behaviour of executives faced with difficult and threatening problems. It is known that many managers unknowingly suppress negative feelings and strive for rationality and control. This behaviour leads to miscommunications and errors and obstructing problems in a manner based upon openness, free choice, and valid information. Lastly, there is a need to know how managerial thinking can lead to an atmosphere of mistrust and further to know new ways of thinking lead to a more effective management of organizational trust. All these could be subjected to research that makes the manager aware of the way he or she thinks about various organizational processes and dynamics that are critical to his effectiveness.

Managerial style : Currently, hospitals are facing increasing challenges in the competitive environment and growing organizational complexity. Thus, the effective functioning of the hospitals depend, in part, on the style of senior members of the administrative hierarchy. Managerial style has long been a central element of the concept of managerial effectiveness. Literally hundreds of studies have been done which examine the relationship between management style and outcomes, such as productivity, satisfaction, turnover and absenteeism. A wealth of information is available to help managers improve their effectiveness. Unfortunately, the research is not always conclusive, and the messages are sometimes contradictory. Thus, there is a need to have fresh evidence of the assessment of managerial style and its influence on the expected health care outcomes in the sector.

Goal Setting and Performance Evaluation : The establishment of performance expectations and the assessment and correction of performance are key factors in enhancing managerial effectiveness. Goal setting can be instrumental in improving effectiveness. It can be a stand-alone technique or part of a larger management by objectives system. It clarifies expectations, stresses accomplishment, facilitates problem-solving, and can contribute to improved coordination.

Evidence show that specific, challenging goals consistently lead to higher performance than vague goals. In addition, participative goal setting is described as leading to higher goals. Compared to other elements of the management literature, the prescriptions provided by the theory and research on goal setting and performance evaluation are quite consistent and, in most cases, readily applicable. However, it is cautioned that there is no concrete evidence of these aspects in hospital setting. Thus, there is a need to study then in large number of hospitals for concrete and comparative evidences.

Conflict Management : The role of manager vis-à-vis conflict has been subject to significant change during the past 50 years. The classical approach to management viewed conflict as negative and believed that it could be eliminated by proper organization design and management practice.

An important element of the conflict literature for the manager relates to styles of conflict management. These styles are normally described in terms of degree of assertiveness and degree of cooperativeness. Combination of assertiveness and cooperativeness result in five styles :avoiding, competing, collaborating, accommodating, and collaborating

Research regarding conflict management in the hospitals deserves special attention since, hospitals are the places where employees represent several professions which eventually could cause conflicts that emerge from team work designs. Thus, research should focus on the extent to which managers recognize the value of functional conflict and the effective resolution strategies needed therein.

Managing Behaviour : Managing behaviour at workplace is clearly as essential element of managerial effectiveness and can be considered as element of leadership. There is a need to understand the motivational strategies that managers adopt in stimulating their employees in the hospitals. It could also be known whether rewards really match to the needs while expecting motivation to occur. There are many behavioural theories like expectancy theory, social-learning theory, behavioural modification theory, attribution theory, etc could be utilized in exploring the knowledge about the employee behaviour in the hospital organizations.

From the above sections, it could be said that since there are not concrete evidences of research on the issues related to the managerial effectiveness in hospital settings, there is an immediate need to initiate such efforts in order to build upon the literature for hospital management. The purpose of this presentation is to encourage the mangers to inject some realism at a time when too many simplistic prescriptions are spewing forth from the popular press. This is possible when organized research on his own profession is initiated.

## **Research Utility by Consultants in Hospital Management**

Consulting profession in the hospital (technical and management fields) is a fast growing area. This is partly due to the operation of hospitals like business organizations in the current competitive environment. Opportunities are yet to be explored in this field. But, what will be their contribution to this emerging field could be understood from what their profile is and what activities are they involved in. Recently, Heffernan and Hermens (1998) reported results of a research conducted on 30 consultants, which are as follows.

- i) They found that a large majority of them (93.3%) practice management consulting on a full time basis.
- ii) They come from a diverse range of functional backgrounds and have extensive work experience prior to entering their present firm.
- iii) Majority indicated that they had spent more time in non-consulting work than in consulting work suggesting that they have a sound knowledge and practical experience in 'real life organizations
- iv) None of the indicated a functional background in the area of corporate strategy, 80% specialized in more than one management area.
- v) Majority of firms (63.3%) classified their work as 'traditional management consultants', and
- vi) None of them describe their business as pure strategy advisers.

The general findings are that these consultants are involved in activities associated with high level organizational goals and objectives and long term organizational performance. This is evident from the high incidence of repeat business, high level of organizational involvement of the employees, of both client and consultant in evaluating project outcomes, high incidence of 'process' consultation and the fundamental objectives of the projects as major change efforts rather than the provision of information or advice.

What is evident from this study is that importance of research or utilization of research by consultants has not been examined. However, the role of research in consulting work is immense. How is it useful? In hospitals and healthcare sector, some of the probable areas of consulting work are systems interventions, strategic management, organizational change, quality assurances, etc. There is the evidence of organization development consultants contributing their expertise to the effectiveness of the hospitals. These consultants use research in most of their work that involves, diagnosing the organizational health, survey feedback, measuring effectiveness of change interventions in the structural and functional aspects of the hospitals. Since most of the consulting work is undertaken for a stipulated period of time, longitudinal research designs could be adopted by the consultants.

## **Future of Research in Hospital Management**

From the preceding sections, what could be learnt? Research in hospital management does not imply any specific trend to state since, most of the studies are sparse, varied, and are not based on a standard approach. Partly, on the bases of the reported studies, it could be said that most of the research issues are centered on medical than management aspects. Secondly, there seems to lack systematic research design in many of them.

Thus, here is a need to have an attitude towards management research in hospitals. In one of the researches, comparing attitudes towards research of management and management developers revealed that managers believed research was initiated by academic researchers often insufficiently familiar with the managerial culture and so lacking credibility. For the most part managers seemed to believe that management research was not only not-cost effective but also, more critically, largely irrelevant to the problems they faced. Many managers confessed, however, that they did not know how to use research findings and that clearly utilizable research would be more helpful to them (Bennett and Gill, 1978). All these could be attributed to the state of research that has adopted a naïve and unreflecting empiricism. Thus, what is required is the means to free researchers from lay concepts and problem formulations and to provide them with a more sophisticated understanding of the epistemological and sociological sciences (Gill and Johnson, 1991).

It is suggested that healthcare managers be equipped to act as researchers in their own organizations by building upon what effective managers actually do in practice. The facets of effectiveness like managerial thinking, managerial roles/style, goal setting and performance evaluation and conflict management could be immediately subjected to research for a fresh understanding of this facet in hospitals. If in some way

this paper has facilitated this, particularly by suggesting a broad scope for potential research avenues, this work will have been worth while.

Consultants in hospital organizations and their utility of research have been dealt with in order to examine the scope of their work in future. What is evident from the current trends is that though hospitals have been working like business organizations due to their competitive environment, it is evident that consulting work has not much progressed. Importance of research for consultants in hospital organization has been suggested for their breakthrough in this domain. The future of research in hospital management needs to be directed towards the benefit of the hospitals in terms of their operations while searching for growth opportunities in a competitive environment. This is possible when the researchers are permitted to go beyond the unresolved question "Is management an art or science?" And also when social sciences interplay in the management research, and contribute to the understanding of the patients expectations on one hand and the employees' on the other,

In concluding, with the belief that management research is useful not only in itself in sustaining problem-solving but also, though the process of engagement in research as a means of management development. The future health care managers cope with uncertainty, complexity, instability and uniqueness and seem to conduct a pattern of reflection in action.

It is clear that managers do sometimes reflect in action. Beginning with questions like, What do customers really see in our products/services/? What 's really going on underneath the sings of trouble in our organizations? Or what can be learned from our encounters with the competition? Managers try to make sense of the unique phenomena before them. They surface their intuitive understandings, and in order to test their new interpretations, they undertake on-the-spot experiments. Their experiments may yield surprising results that cause them to reformulate their questions. They engage in reflective conversations with their situations. Now, all that we can do is expect managers to undertake research that generates literature to design strategies for the future of healthcare scenario in this country.

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