Assessing the Health of a Hospital in Kolkata: A Process State Approach

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The present study was made to assess the organizational health of a public hospital in Calcutta using the process state approach. A Likert-type five point rating scale was prepared for assessment of the physical, mental and social wellbeing of the hospital. Stratified random sampling was followed to collect data from 18 physicians and 39 nurses. The results revealed no significant differences between physicians and nurses is perceiving the state of wellbeing of the hospital. It was noted that less than 50% of the respondents perceived a high state of physical, mental and social wellbeing in the hospital. Some organizational change strategies are discussed to improve the health of the hospital.

There has been considerable interest in studying ways to assess the health of organizations. Two approaches have been used - the endstate and the process state approach. The endstate approach (Sood, 1987; Bidani & Mitra, 1983) places emphasis on the assessment of economic parameters like profit or cash loss of the current and previous years; whereas the process state approach gives importance to behavioural parameters like motivational and leadership processes. An organizational health assessment is a prelude to any serious organizational change or organizational intervention. Thus Bennis (1966). Miles (1971), Pareek and Rao (1977), suggest that OD consultants should make an organizational health assessment with a process state approach before prescribing any changes in the organization. This is because the organizational health data obtained will serve as a mirror for the organization from which the needed changes will become evident.

Previous studies have been done on organizational health patterns for schools (Miles, 1971), universities (Pareek and Rao 1977), and manufacturing organizations

(Dutta Roy, 1989, 1991, 1992, 2004). But no studies on organizational health assessment have been conducted for hospitals. This is possibly due to the unavailability of a suitable questionnaire to assess the physical, mental and social well being of a hospital with a process state approach. Hence it was necessary to devise an appropriate organizational health scale.

Organization Health of a Hospital

Drawing an analogy from human health, organizational health can be defined as a quasi-enduring state of physical, mental and social well being of an organization. It is not directly linked to the presence or absence of strikes and lockouts. (Dutta Roy, 1989). Thus, physical health in a hospital would refer to adequate illumination, noise control, airy work places (Stone, 1988), adequate equipment and safe passage ways in the institution. The mental health of a hospital was conceived in terms of eight characteristics namely organizational awareness (OA), autonomy (AU), creativity and participation in decision making (CR), evaluation (EV), trust (TR), coping (COP), organizational satisfaction (OS) and involvement (OI). Several authors suggest the above eight parameters as indicators of health for organizations of different kinds. Thus for example, the organizational awareness parameter is suggested by Emery and Trist (1963), Trust by Likert (1967), Haney (1967), Litchman (1970), the Autonomy parameter by Burke (1970), Levine and Katzell (1971), Argyris (1971), Creativity is mentioned by Miles (1971), Coping by Miles (1971), Chaney and Ted (1972), Adam (1975), Organizational Involvement and Organizational Satisfaction by Peters and Waterman (1982), Dwivedi (1983), Khandwalla (1984), Iacocca (1984).

Social health refers to the awareness of the task environment (EA) and a satisfactory interaction between the organization and its task environment (ES). Cyert and March (1963) and Bennis (1966) suggest awareness of the task environment as an indicator of organizational health. Litwak and Lydia (1962), Stigler (1971) and Hirsch (1975) stressed a meaningful interaction between an organization and its task environment.

The mental health and social health characteristics of an organization were conceived of in terms of the personality characteristics of healthy individuals (Adler, 1930; Maslow, 1954; Rogers, 1961; Cangemy and Englander, 1974) observing the

adequacy of the physical environment (physical health). The mental health and the organization's relationship with its task agents its (social health), people are able to derive some idea of the state of the organization's wellbeing. Dutta Roy (1991, 1992) and Chatterjee and Dutta Roy (199]) noted a significant relationship between the perception of an organization's wellbeing and the quality of the working life within the organization.

In a hospital, physicians and nurses are the key people. For a hospital to be effective, their perception of its organizational health is particularly important. The greater their perception of the physical working condition as adequate and safe, the better the care they will provide. Such personnel will experience greater meaning in their lives, when they perceive the mental and social wellbeing.of the hospital to be high. For these reasons, the present study emphasized the assessment of the hospital's health profile as perceived by the physicians and nurses. It was also hypothesized that there would be no significant difference in the perception of the hospital's physical, mental and social wellbeing by the physicians and by the nurses, since both work at the same work site as a team.

Method Sample

Data were collected from 18 Physicians and 39 Nurses of a public, post-graduate, teaching hospital in Calcutta. Initially, the names of all the physicians and nurses were collected from the directory of the hospital. These names were computer randomized. A stratified random sampling procedure was followed during the collection of the data. Respondents were approached individually and were requested to fill out the questionnaire according to the instructions given. They were told that the collection of data was only for research purposes and that their individual identities would not be revealed.

Instrument

On the basis of Dutta Roy's (1989) general organizational health scale, a hospital health scale was prepared with 56 items to measure the physical, mental and social well-being of the hospital. Items were framed with hospital issues in mind, as these were identified from initial interviews with physicians and nurses. After item-total

correlation, 13 items were rejected. The response patterns of the hospital health scale were of the Likert five point type. The scale covered the following areas: adequate physical environment (PH), awareness of the organization (OA), autonomy in making decisions (AU), participation in problem solving (CR), evaluation of organizational performance (EV), interpersonal trust among different hierarchies (TR), organizational involvement (OI), coping with environmental uncertainty (COP), organizational need satisfaction (OS), awareness of changes in the task environment and its effect on the organization (EA), satisfactory relationships with task agents (ES). The sum of all the areas reflects the total organizational health (TOH) score of the hospital. The sum of the eight areas OA, AU, CR, EV, TR, OI, COP, OS reflects its social health. A high score (above 3) on the organizational health scale indicates greater organizational wellbeing.The reliability and construct validity were. estimated with Chronbach's alpha scale. The alpha value ranged from 0.50 to 0.84.

Analysis of Data

First, the frequencies of responces with scores more than 3 on the item response scale were estimated. Those frequencies were converted into proportions. The hypothesis was tested by using the z-test for the proportions. The critical ratio of each health characteristic is given in Table 1, the proportions being converted into percentages in order to describe the data.

Results and Discussion

Using the z-test for proportions, no significant differences were noted between the physicians and nurses in their perception of the overall physical ($Z = 0.68$, NS), mental ($Z = 1.57$, NS) and social ($Z = 0.64$, NS) well-being of the hospital (Table 1). This is probably due to similar experiences by poth groups in their work environment in the hospital.

Physical Health

The physical environment of an organization guides and controls the behaviour of the personnel working in it. (Heath, 1982; Rapaport, 1982). Zalesney et al. (1985) noted that factors such as adequate illumination, low noise levels, quality of equipment

accounted for a significant variance in the job satisfaction experienced by personnel. Tables 1 and 3 show that as a whole, very few physicians and nurses perceived high physical wellbeing (23.98%) in the hospital. Specifically, 76.02% of the respondents reported poor physical working conditions. A detailed examination of the responses to the different items measuring physical health revealed that the respondents reported disturbances in patient care due to inadequate machines (94.74%) a high level of noise (92.98%), discomfort in the handling of tools and equipment (91.23%).

Table 1 : Organizational health profile as perceived by physicians and nurses

Organizational health.	All	Physicians	Nurses	z
Physical health	23.98	14.45	29.49	0.68
Mental health	44.38	28.89	51.94	1.57
Awareness (OA)	48.24	27.77	57.69	2.18*
Autonomy (AU)	23.98	24.08	23.93	0.98
Creativity (CR)	52.63	27.78	64.10	2.55*
Evaluation (EV)	43.86	33.33	48.72	1.08
Satisfaction (OS)	42.54	27.78	45.14	1.31
Involvement (OD	49.47	33.34	56.92	0.90
Coping (COP)	24.56	11.11	30.77	1.60
Trust (TR)	45.03	33.33	50.43	1.26
Social health	42.76	38.09	45.51	0.64
Environment awareness (EA)	56.14	38.89	64.10	0.85
Environment satisfaction (ES)	30.26	30.55	30.13	0.95

Mental Health

Of the eight parameters of mental health, significant differences between doctors and nurses were found in two parameters - organizational awareness (OA) and creativity (CR). After examining the items measuring organizational awareness (Table 2), it was noted that a greater number of nurses felt an awareness of the hospital's objectives (84.62%), the nature and sources of the drugs prescribed for patient care (43.59%), the departmental goals (66.67%),.their job responsibilities (56.41 %),the patient care processes (56.41 %), the reasons for disturbances in patient care (79.49%), safety rules and regulations (61.54%). This may be due to the difference in the amount of information possessed by the two groups. For example, only 5.56% of the physicians thought that they were aware of safety rules and regulations, whereas 61.24% of the nurses reported personal safety awareness. Besides, the safety information provided in the hospital is not perceived as adequate by the doctors, whereas the nurseslfelt the information provided is satisfactory. Perhaps this is because the doctors know more than the nurses about safety needs.

In the hospital, nurses were able to send their representatives to the higher authorities to discuss decisions related to the functioning of the hospital. Possibly for this reason, 64.10% of the nurses reported that they could solve problems of the hospital through their representatives. On the other hand, only 27.78% physicians agreed to this (Table 2).

Considering, the other parameters of mental health, comparatively fewer respondents perceived any high autonomy accorded to them (23.98%). They found little freedom in making decisions concerning equipment and in setting patient care targets. 24.56% of the subjects thought the hospital had an ability to cope with uncertainties; 42.54% experienced satisfaction in their work, and were happy with the ongoing modernization programme (75.44%) and with the prevalent leadership style (64.91 %). A satisfactory financial growth of the hospital was perceived by only 22.81 % of the respondents; 43.86%, reported regular reviews of hospital performance. High interpersonal trust was seen to exist by 45.03% of the respondents while almost half (49.47%) of them reported personal involvement in the hospital and its work. 85.96% of the respondents felt a sense of pride owing to its role in the community. Yet 26.32% thought the hospital was not able to give remarkable patient care, and

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hence they were a little ambivalent in their attitude towards the hospital. A high number of people in the hospital 91.23% fails to look on the hospital's problems as their own.

Table 2 : Percentage of physicians and nurses who gave high score on items of Organisational awarness and creativity measures

	Physicians (n=18)	Nurses (n=37)	Total (n=57)
Organizational awareness			
1. Objectives	44.44	84.62	71.93
2. Raw materials	16.67	43.59	35.09
3. Departmental goals	33.33	66.67	56.14
4. Job responsibilities	33.33	56.41	49.12
5. Patient care	33.33	56.41	49.12
6. Departmental linkage	33.33	56.41	49.12
7. Profit and loss	11.11	0.00	3.51
8. Reasons for disturbance	55.56	79.49	71.93
9. Safety rules	5.56	61.54	43.86
10. Reasons for patient demand variations	11.11	71.79	52.63
Creativity			
Problem solving opportunity	27.78	64.10	52.63

Regarding the social health of the institution, 56.14% of the respondents though there was high awareness among organizational task agents; though few (30.26%) perceived a satisfactory relationship between the hospital and its task agents. 89.47% of the respondents were dissatisfied with the hospital's suppliers. Possibly, for this reason, a large number of respondents (94.74%) found the machines and equipment in the hospital to be inadequate.

Table 3 : Percentage of respondents who gave high score on items of physical mental and social health of the hospital

	Total (n=57)
Physical health	
1. Noise	7.02
2. Adequate illumination	26.32
3. Airy workplace	42.11
4. Comfort in handling tools	8.77
5. Machines	5.26
6. Passageways	**54.39**
Autonomy	
1. Patient care target- setting	17.54
2. Defending self before disciplinary actions	40.35
3. Recommendation of equipment Evaluation	**14.04**
Evaluation	
1. Own performance	43.86
2. Departmental progress	**43.86**
Organizational satisfaction	
1. Financial growth	22.81
2. Theft	7.02
3. Leadership style	64.91
4. Modernization programme	**75.44**
Organizational involvement	
1. Organizational problem as if own	8.77
2. Remarkable patient care in hospital	26.32
3. Organization's interest is above	52.63
4. Sense of pride in hospital	73.68
5. Hospital role in community	**85.96**
Coping	
1. Unavailability of machines and equipments	24.56

Trust	
1. Received constructive criticisms	47.37
2. Confidence on superiors	61.40
3. Getting support from superiors	26.32
Awarness of task environment	
1. Change in disease pattern in society	49.12
2. Patient demand variations	57.89
3. Patient care policies of the government	59.65
4. Technological change	54.39
5. World economic and social aspects	59.65
Satisfactory relation with task environment	
1. Local hospitals	75.44
2. Government policies	29.82
3. Suppliers	10.53

Note: Separate data of physicians and of nurses were omitted as there was no significant difference between them.

Suggestions

The following suggestions are given to improve the organizational health of the hospital.

1. Quality circles may be introduced, in order to develop internal motivation for efficient housekeeping and for the maintenance of a safe and comfortable physical environment.

2. Sensitivity training programmes are necessary to reduce interpersonal conflicts among the physicians and among the nurses.

3. Better communication, formal and informal is necessary across different hierarchies for better growth in the hospital.

4. Vendor development programmes should be introduced to enable the hospital to collect quality equipment and tools from various suppliers.

References

1. Adam, E E Jr. (1975) Behaviour modification in quality control, Academy of Management Journal, 18,4, 662-679.

2. Adler, A (1930) Problem of neurosis, New York: Farrer and Rinehart.

3. Argyris, C (1971) Management and Organization Development. NY: McGraw Hill.

4. Bennis, W G (1966) Changing Organizations, Bombay: Tata McGraw Hill Publishing Co. Ltd.

5. Bidani, S N & Mitra, P K (1983) Industrial Sickness Identification and Rehabilitation, New Ddhi: Vision Book.

6. Burke, R J (1970) Methods of resolving.superior subordinate conflict: Organizational Behaviour and Human Performance. 5,4,393-411.

7. Cangemi, J and Englander, M (1974) From Self-awareness to Self-actualization, College Student Journal, 8,3, 88-92.

8. Chancy, F Band Teel, K S (1972) Participative Management - A Practical Experience, Personnel, 8-19.

9. Chatterjee, A and Dutta Roy D (1991) A wareness of external environment, environmental satisfaction and mental health, Indian Journal of Applied Psychology, 29,2, 74-77.

10. Cyert, R M and March J G (1963) A Behavioural Theory of the Firm, Englewood Cliffs, N.J.: Prentice Hall.

11. Dutta Roy, 0 (1989)A Study of Organizational health and its effect on Quality of Working Life, Unpublished Doctoral Dissertation, Indian Institute of Technology, Kharagpur.

12. Dutta Roy, 0 (1991) A model of change in Organizational Health to Improve Quality of Life, Social Science International, 16,4, 189-191.

13. Dutta Roy, D(1992)Organizational health and Life Satisfaction: A path - analytic model, Managerial Psychology, 51-62.

14. Dutta Roy, D.(2004) Organizational Health Survey, Productivity,(Paper accepted for publication).

15. Dwivedi, R S (1983) Management by Trust: A conceptual Model. Group and organization Studies, 8,4, 375-405.

16. Emery,F E and Trist, E L (1963) The Causal Texture of Organizational Environments, Human Relations, 18, 20-26.

17. Haney, W V (1967) Communication and Organizational Behaviour: ContingencyViews, Homewood, I L Irwin.

18. Heath, T (1982) Design in the Organizational Setting: Managing Communication and Conflict. Paper presented at the 13th International Conference of the environmental design research association, College Park, M.D. (April)

19. Hirsch, P M (1975) Organizational effectiveness and the institutional environmental. Administrative Science Quarterly, 18, 449-461.

20. Iacocca, L (1984) Iacocca: An Autobiography.

21. Khandwalla, P N 0984) Fourth Eye, Allahabad: A H Wheeler and Co., Private Limited.

22. Levine, ELand Katzell, R A (1971) Effects of Variations in Control Structure on Group Performance and Satisfaction: A Laboratory Study. Proceedings of the Annual Convention of the American Psychological Association, 6,1,475-476.

23. Lichtman, C M (1970) Some Interpersonal Response Correlates of Organizational Rank, Journal of Applied Psychology, 54,1,77-80..

24. Likert, R (1967) The Human Organization: Its Management and Value, N Y: McGraw Hill.

25. Litwak, E and Lydia F H 0962) Interorganizational Analysis: A Hypothesis on Coordinating Agencies, Administrative Science Quarterly, 6, 328-334.

26. Maslow, A (1954) Motivation and Personality, N Y: Harper and Brothers.

27. Meltzer, H and Nord,W R(1981)Making Organizations Humane and Productive: A Handbook of Practitioners,NY., John Wiley and Sons.

28. Miles, M B (1971) Planned Change and Organizational Health: Figure and Ground. In Francis, M Trusty (ed). Administering Human Resources, Berkeley: McCut Chan Publishing Corporation.

29. Pareek, U and Rao, T V (1977) A Conceptual Model of Decision Making in the University System, In R J Matthai, U Pareek and T V Rao (eds), op.cit. 38-52, New Delhi, Oxford and IBH.

30. Peters, T J and Waterman R H, Jr (1982) In Search of Excellence, N Y: Harper and Row Publishers.

31. Rapaport, A 0982) The meaning of the Built Environment, Beverly Hills, California, Sage Publications.

32. Rogers, C R (1961) Client Centered Therapy, NY: Houghton Miffin.

33. Sood, G.5. (1978) Rehabilitating the sick industrial units, Yojana, Vol. 31, No.17, 24-29.

34. Stigler, G J (1971) The Theory of Economic Regulation, Bell Journal of Economic and Management Science, 2, 3-21.

35. Stone, J E Capt (1988) Hospital Organization and Management, London, Faber and Faber.

36. Zalesney, Mary D, Farace, RV and Kurchner, H R (1985) Determinants of Employee Work Perceptions and Attitudes. Environment and Behaviour, 5,557-592.