

# THE CONSEQUENCES OF VIGILANCE IN SUBNORMALITY AND PSYCHIATRIC HOSPITALS

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## INTRODUCTION

It has been accepted for some time now that the physical environment of certain institutional settings should as far as possible be "normalised" in order to maximise rehabilitation. Size has been one factor which has been considered to adversely effect the living environment. There seems to be little empirical basis for this assumption, as Balla (1976) points out. "Even if size were found to be associated with quality of care, the question would remain as to what factors actually contributed to the more or less adequate care. The range of possibilities is large. In addition, many persons experienced in the field have observed that there are excellent large institutions and inadequate community based facilities. The crucial question, then, is whether there are structural aspects of large institutions that, on the average, coerce practices leading to poor quality of care. Complicating the matter still further is the fact that the correlation of institution size and other institutional demographic variables (e.g. cost per patient per day, number of aides per resident, employee turnover rate) has been largely unexplored."

In two hospitals, it was noted that two wards for severely mentally handicapped adults which are similar in respect to size, type of patient, staffing ratios, etc. were grossly discrepant in physical environment and organisation. One difference was that there were more patients including young active and aggressive ones remaining in the ward during the day.

The reasons for the patients not attending Occupational Therapy, Industrial Therapy, going out to work or recreational functions were that they were disruptive, infirm, unwilling or too handicapped. Stimulating or controlling these patients would demand a disproportionate amount of staff time.

The differing physical environment and organisation was reflected by the different scores the wards obtained on the 39 Steps (Gunzburg, 1973). This is a check list which contrasts normal and institutional living practices e.g.

Bathrooms have

(a) mixing valves ..... —

(b) hot and cold taps ..... +

Furniture of bedrooms

(a) is of the same pattern throughout (e.g. lockers) ..... —

(b) shows available domestic variety ..... +

One ward had 12 "normal" living practices, the other 22. To account for this difference, May (1976) suggested that there was a difference in the degree of vigilance. "Vigilance" in the experimental psychology sense (Broadbent, 1964) is the name given to human performance in settings where a faint and infrequent signal has been detected at an uncertain time. In wards for severely mentally handicapped adults the nurse has to keep an ear tuned or an eye open continuously to monitor the unpredictable. Patients who may wander off, injure themselves or injure other patients demand not continual attention or supervision, for there are periods when the patient may be absorbed and quiet, but some other mechanism of attention. Vigilance seems the most appropriate term.

May's suggestion is that if vigilance can be reduced by, for example, getting more patients out of the ward during the day then the nurses will have time to make the ward more homely. The times 9.30 - 11.30 a.m. and 2.00 - 4.00 p.m. on week-days were considered crucial for only at those times would the staff have the opportunity to improve amenities. At other times either essential duties would pre-occupy them or a full complement of staff would be unavailable and support services (e.g. O.T., Supplies, Administration) would be closed. If at these crucial times there is a small number of nurses looking after a large number of patients, the demand for vigilance will reduce the opportunity for the nurses to improve the organisation and physical environment of the ward.

The experimental hypothesis to test this was that the lower the patient : staff ratio at the crucial times, the greater the 39 Steps score i.e. a negative correlation.

Additional hypotheses tested were (a) that the number of beds in each ward would be negatively correlated with the 39 Steps score. (b) that the size of the hospital would be negatively correlated with the average 39 Steps score of the hospital's wards.

## PROCEDURE

Twenty-eight wards for severely mentally handicapped adults in 5 hospitals were visited and the following information was obtained from the member of staff in charge of each ward.

1. The overall number of occupied beds.
2. The number of patients usually remaining in the ward between 9.30 and 11.30 a.m. and 2.00 and 4.00 p.m. on week-days.
3. The number of staff regularly on the ward (on average) between the times mentioned above including domestic, occupational therapists and other specialists.
4. The 39 Steps score. The nurse in charge of the ward read each item, and if the practice in the ward was a normal one a score of one was credited; if both normal and institutional practices prevailed a half score was credited; institutional practices were not credited.

These details are summarised in Table 1.

TABLE 1.  
SUMMARY OF MEANS AND STANDARD DEVIATIONS

	MEAN	S.D.
Patient : Staff Ratio (at crucial times)	2.4	1.4
No. of beds per ward	24.3	7.9
No. of beds per hospital	430.2	167.5
39 Steps Score	14.4	4.6

## RESULTS

There is a highly significant negative correlation between the patient : staff ratio at the crucial times and the 39 Steps score, (Table 2.) supporting the experimental hypothesis. There was no significant evidence that 39 Steps score was related to ward or hospital size.

TABLE 2.  
SUMMARY OF SPEARMAN RANK ORDER  
CORRELATION CO-EFFICIENTS

	CORRELATION WITH 39 STEPS	N
Patient : Staff Ratio (at crucial times)	-0.52 *	28
No. of beds per ward	0.20	28
No. of beds per hospital	0.10	5

\*  $p < .01$  for a one tailed test.

## PART II

To check the reliability of the 39 Steps and to see if our hypothesis generalised to other settings the study was repeated in a psychiatric hospital. The hospital has 500 beds, 20 wards, and provides a service to half the county. It is considered a typical psychiatric hospital.

Each ward was visited twice. On the first occasion a psychologist would go through the 39 Steps and supplementary questions with the nurse who knew the ward well (usually the Sister or Charge Nurse). Within a fortnight another psychologist repeated the exercise with a different nurse who knew the ward well (e.g. deputy charge-nurse or staff nurse).

## RESULTS

The correlation between the two assessments of the ward using the 39 Steps was +.59. This was comparatively low for a reliability coefficient although significant beyond the .01 level, so the independent assessments were combined to examine the experimental hypothesis.

The correlation between the combined 39 Steps score and the patient : staff ratio at the crucial times was -.67  $p < .01$ . In other words the more 'homely' the ward was the less patients to staff at the crucial times. This confirms the finding in the mental handicap hospitals. Unlike the mental handicap hospitals, however, there was a correlation of -.48,  $p < .05$  between the combined 39 Steps score and the number of occupied beds for each ward.

## DISCUSSION

The low inter-rater reliability of the 39 Steps casts some doubt on the validity of the experimental result. As this result has been found on two occasions in different settings it seems worthwhile repeating the study using a different inventory such as the Resident-Care Management Inventory (King *et al* 1971).

The number of beds in each ward was shown to be significantly related to 39 Steps score in the psychiatric hospital but not in the mental handicap where the relationship though positive was small. These results support the common assumption that large wards are difficult to make homely (Morris, 1969).

Taken together the results of the present study suggest that improvement in the ward and its management take place not only when the size is reduced, but more importantly when the staff : patient ratio is improved at certain times. One way of doing this would be to increase the number of staff at these times. Another solution is to have more patients out of the wards at those times. As a recent D.H.S.S. circular asserts "It is important also for the patients to leave the ward during the course of each day either for special group activities or preferably to take part in a day's activities separate from the residential areas" (D.H.S.S. 1976). This study suggests that it is not only desirable to take patients off the ward for their own benefit but so that the nurses can improve the ward environment and organisation.

## SUMMARY

This study hypothesised that vigilance, an experimental psychology concept, has relevance in nursing the mentally handicapped. Ward management and physical environment as measured by Gunzburg's 39 Steps were found to be significantly correlated with the need for vigilance. This finding was also found to occur in wards for the mentally ill.

## References

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