Health Status of Nurses and Yoga

II : Subjects With and Without-Health Problems

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Abstract

In this ongoing I.C.M.R. enquiry 'Effect of Yoga on the Health of Nurses," subjects with-health and without-health problems are differentiated with the help of one psychological test (Cornell Medical Index). Out of the total population of nurses (451) under study, 169 (33.39%) were found to have significant health problems. Significant differences were also found on various psychological tests suggesting that subjects with-health problems have greater neuroticism, depression and role stress as compared to the subjects without-health problems. Health problems were found to increase with gain in age, number of years in service, number of children and are more in married subjects. But age of youngest child had no effect on the health of the subjects. This is the second in the series of three articles

Introduction

Nurses have important place in the overall health care of the population, but often they also need help when down with health problems. There is a need to find out the types of health problems they have, and even a greater need to find out who are the ones in need of help and their correlates (associated factors). it is with these issues, that the present article is concerned, which is the second communication on the health status of nurses, the first was of a more general nature (Walia, *et al*, 1988 : Previous issue of this journal).

Aims

The study was undertaken with the following objectives in mind:

(i) To find out the number of nurses having significant levels of health prablems.

(ii) To find out the associated psychological factors associated with it, if any.

To find out the associated socio-demographic variables with it, if any.

Hypothesis

Certain general hypotheses were formed through the review of literature which are described below, in null hypothesis form in order to avoid any subjective bias or personal involvement in the data collection. These are :

HO. 1

Nurses with-health problems will not differ from nurses without-health problems on any of the psychological variables given below :

.11 Neuroticism
.12 Depression
.13 Role Stress
.14 Any of the specific role stresses
.15 General Well-Being

HO. 2

Nurses with-health problems and those without-health problems will not differ on any socio-biographical variables given below :

.21 Age of patient
.22 Length of service
.23 Number of children
.24 Marital status of nurse
.25 Age of youngest child

Materials and Methods

The sample of the present study consisted of 452 nurses working in the Nehru Hospital, P.G.I., Chandigarh. All were adults, females, and excluding those on long leave, or, absent without leave or, not fully cooperating for the study (i e. 10% of the total nurses working in P.G.I. were thus excluded). (Details of the total sample have been described in an earlier paper—Walia *et. al* , 1988).

Five associated factors which affect health problems (socio-demographic variables), namely, age, number of years in service, marital status, number of children and age of youngest child were studied on a socio-demographic proforma In our earlier communication (Walia et al. 1988) five socio-demographic variables and six psychological tests described below are given in detail. Six psychological tests are :

1. Cornell Medical Index Health Questionnaire (Wig, Pershad and Verma, 1983).
2. PGI Health Questionnaire N_2 (Verma, 1978).
3. Amritsar Depressive Inventory (Singh, Verma and Verma, 1974).

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4. PGI Well Being Scale (Verma, Dube and Gupta, 1983).

5. PGI Yoga Attitude Scale (Grover, Verma, Pershad and Verma, 1983).

6. Organizational Role Stress Scale (Pareck, 1983).

Analysis Data

The data was analysed with the help of descriptive statistics, like percentages, means, standard deviations, range, etc. Tests of significance like chi square tests were also used. Means were compared using Z-statistics.

Observations and Discussion

The socio-demographic characteristics of the subjects with-health and without-health problems are given in Tables 1-5.

It is observed that with increasing age the percentage of subjects with health problems are increasing (Table-1), and conversly the percentage of subjects without-health problems is decreasing with increasing age. This relationship is statistically significant at $p<.01$. Similar results are noted when number of years in service of the subjects are considered (Table-2). It showed that as the number of years in service are increasing, the percentage of subjects with health problems are also increasing. This trend is statistically significant at $p<.05$.

Ratio of percentage of subjects (Table—3) with-health and without-health probems in married nurses is (42.6% : 57.4%) and in unmarried nurses it is (22.88% : 77.12%), which is statistically significant at $p<.01$. It showed that married nurses are more prone to health problems than unmarried nurses. However, age of youngest child of nurses did not effect the relationship of subjects with-health and without-health problems (Table—4) which is statistically insignificant ($p>.05$). But the number of children of nurses did affect the health problems; are increasing with increasing number of children (Table—5). Among nurses with no child, the ratio of percentage of subjects with health and without-health problems is (31.82% : 68.18%) whereas for nurses having two children the ratio is (50.66% : 49.34%).

It is statistically significant at $p<.05$.

Comparison of the mean scores on the psychological tests of the subjects with-health and without-health problems have been giveen in Table-6. The mean score on the Cornell Medical Index (CMI) of subjects with-health problem is 34.00 ($\pm$14.15), whereas it is 9.67 ($\pm$5.87) in the subjects without-health problems. This difference is statistically significant at $p<.01$. The mean scores of two sub-sections of CMI of subjects with health problem are (AL=22.62$\pm$10.98) and (MR=11.21$\pm$7.40), whereas it is (AL=6.44$\pm$3.97) and (MR=3.13$\pm$2.75) in case of subject without-health problems. The differences for the two sub-sections are statistically significant at $p<.01$ between the two groups.

The mean score of sub-section (N) of PGI Health Questionnaire—N_2 is (8.75$\pm$6.84) in the subject with-health problems and it is (3.24$\pm$3.01) in subjects without-health problems. The difference is statistically significant at $p<.01$ between the two groups. The means score of sub-section (L) of PGI Health Questionnaire N_2 is (3.11$\pm$2.7) in subjects with-health problems and it is (2.89$\pm$2.96) in subjects without-health problems. The difference is statistically insignificant.

Amritsar Depressive Inventory (ADI) have mean scores of (6.49$\pm$5.35) in subjects wtth-health problems and (3.11$\pm$3.46) in subjects without-health problems. The difference is statistically significant at $p<.01$ between the two groups. The scores on PGI Well Being Scale is the subjects without-health problems. The difference in scores is statistically significant at $p<01$.

P.G.I. Yoga Attitude Scale (YAS) have mean scores of (39.00$\pm$7.00) in subjects with-health problems and (37.21$\pm$7.45) in subjects without-health problems. The difference between the two groups is statistically significant at $p<.05$. The mean scores of Organizational Role Stress Scale (ORS) is 74.25$\pm$28.80) in subjects with-health problem and (63.34$\pm$26.61) in subjects without-health problem. The difference between the two groups is statistically significant at $p<.01$. The mean score of ten different sub-sections of ORS is given in (Table-7). The difference between the subjects with-health and without-health problems as statistically significant at $p<.01$ in five sub-sections of ORS and one sub-sections of ORS and one sub-section has significant difference at $p<.05$. In the remaining four sub-sections of ORS, the differences between the two groups, were however statistically insignificant.

To sum up, the subjects with-health problems have greater neuroticism, depression and organizational role stress as compared to the subjects without-health problems. General Well Being is greater in subjects without-health problems as compared to that in the subects with-health problems. Aptitude towards yoga is more favourable in subjects with-health problems as compared to the subjects without-health problems.

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Table-1

Distribution of age of subjects with-health and without-health problems

Age groups	With-health problems N	%	Without-health problems N	%	Total N
(i) 20-29	55	30.05	128	69.95	183
(ii) 30-39	78	39.00	122	61.00	200
(iii) 40-49	32	50.79	31	49.21	63
(iv) 50	4	66.66	2	33.34	6
TOTAL	169	37.39	283	62.61	452
MEAN	33.99		31.67		

$X^2=10.85$ $P<.01$
df=2

Note : Rows (iii) and (iv) were combined for calculation of X^2, due to low cell frequency in row (iv).

Table-2

Distribution of number of years of service of subjects with-health and without-healh problems

No. of years in services	With-health problems N	%	Without-health problems N	%	Total N
(i) 1-5	34	29.56	81	70.43	115
(ii) 6-10	43	34.95	80	65.05	123
(iii) 11-15	32	37.64	53	62.36	85
(iv) 16-20	36	40.45	53	59.55	89
(v) 21	24	60	16	40	40
TOTAL	169		283		452
MEAN	11.91		10.11		

$X^2=12.39$ $P<.05$
df=4

Table-3

Distribution of marital status of subjects with-health and without-health problems

Marital status	With-health problems N	%	Without-health problems N	%	Total N
(i) Married	141	42.60	190	57.4	331
(ii) Single	27	22.88	91	77.12	118
(iii) Separated	1	50.00	1	50.00	2
(iv) Widow	0	0	1	100	1
TOTAL	169		283		452

$X^2=14.31$ $P<.01$
df=1

Note : Rows (ii), (iii) and (iv) were combined for calculation of X^2, due to low cell frequency in rows (iii) and (iv).

Table-4

Distribution of age of youngest child of subjects with-health and without-health problems

Age of youngest child	With-health problems N	%	Without-health problems N	%	Total N
(i) 1-5	62	38.50	99	61.50	161
(ii) 6-10	42	47.73	46	52.27	88
(iii) 11-15	20	55.55	16	44-45	36
(iv) 16-20	3	75.0	1	25.0	4
(v) 21	1	100.00	0	0	1
TOTAL	128		162		290
MEAN	6.69		5.5		

$X^2=5.889$ $P>.05$
df=2

Note : Rows (iii), (iv) and (v) were combined for calculations of X^2, due to low cell frequency in rows (iv) and (v).

Table-5

Distribution of number of children of subjects with-health and without-health problems

No. of children	With-health problems N	%	Without-health problems N	%	Total N
(i) 0	14	31.82	30	68.18	14
(ii) 1	39	37.14	66	62.86	105
(iii) 2	76	50.66	74	49.35	150
(iv) 3	13	40.62	19	59.38	32
(v) 4	0	0	3	100	3
TOTAL	142		192		334
MEAN	1.62		1.47		

$X^2=7.886$ $P<.05$
df=3

Note : Rows (iv) and (v) were combined together for calculation of X^2, due to low cell frequency in row (v).

Table-6

Comparison of mean scores of psychological test subjects with-health and without-health problems

Psychometric tools		With-health problems N—869	Without-health problems N—283	Z
1. Cornell Medical Index				
(A) A-L (Physical problems)	Mean	22.62	6.44	18.47**
	SD	10.98	3.97	
(B) M-R (Emotional problems)	Mean	11.21	3.13	13.64**
	SD	7.40	2.75	

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Quality Nursing

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before. A basic nursing education must provide not only technical skills but depth of understanding so that nurses can deal with ever changing and increasingly complex responsibilities.

Inspite of improvements in the recent past in nursing supply and education, the profession is not keeping abreast of fast changing health care needs, due to the following reasons :

Too few hospital based nursing schools which are really fully equipped to prepare nurses who can provide quality nursing.

Due to political interference it is not always possible to recruit young capable people in the profession.

Too few college bound students are entering the nursing field.

More nursing schools needed within colleges and universities.

The continuing lag in the social and economic status of nurses discourages people from entering the field and remaining active in it.

Available nursing personnel are not being utilised for effective patient care, including supervision and teaching as well as clinical care.

Too little research is being conducted on the advancement of nursing practice.

These are the principal problems for which solutions must be found. Many basic questions need to be answered. What kind of nurses and how many are needed to alleviate present shortage of personnel as well as to meet future requirement? How can the profession of nursing be made more attractive to potential recruits? What are the implications for nursing education of developments in medical science and in methods of organising medical care? How can the best use be made of our limited number of nurses ? What additional leadership does nursing need and how can it be developed ? In what areas is research in nursing likely to be most effective and productive? Although definitive answers are not yet available for these questions, enough is known to enable us to move rapidly forward towards meeting quality nursing needs. The time is long over due for a planned integrated programme for the future of nursing education which should be of concern not only to the nursing profession but to the general public at large.

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	(A) A-R (Total)	Mean SD	34.00 14.15	9,68 5.87	21.34**
2.	P.G.I. Health Qustionnarie N-2	Mean	8.75	3.24	10.31**
	(N)	SD	6.84	3.01	
	(L)	Mean	3.11	2.89	.79
		SD	2.7	2.96	N.S
3.	Amritsar Depressive Inventory	Mean SD	6.49 5.35	3.11 3.46	6.77**
4.	P.G.I. Well Being Scale	Mean SD	13.37 5.65	15.21 4.91	3.52**
5.	Yoga Attitude Scale	Mean SD	39.00 7.00	37.21 7.45	2.56**
6.	Organi-zation Role Stress	Mean SD	74.25 28.80	63,34 26,61	4,01**

*P<.05 **P<.01

Table-7

Difference of score in various sections of organization roll stress scale betwecn problematic and non-problematic nurses

/			n=169 Problematic	n=283 Non-Problematic	Z
1.	IRD	Mean	8.16	6.73	3.49**
		SD	4.25	4.22	
2.	RS	Mean	8.10	6.34	3.70**
		SD	4.05	3.56	
3.	REC	Mean	6.75	5.89	2.60**
		SD	3.44	3.49	
5.	RE	Mean	7.6	6.99	ns
		SD	3.83	3.43	
5.	RD	Mean	7.95	6.39	3.93**
		SD	4.43	3.46	
6.	RI	Mean	7.59	6,88	ns
		SD	3.87	3.77	
7.	PI	Mean	7.53	6.92	ns
		SD	4.19	4.03	
8.	SRD	Mean	8.01	5.86	4 50**
		SD	4.23	5.9	
9.	RA	Mean	5.23	4.34	2.54*
		SD	3.71	3 6	
10.	RIN	Mean	7.56	6.85	ns
		SD	4.21	3.66	

*p<.05 **p.<01