BARRIERS TO COMMUNICATION BETWEEN NURSES AND PATIENTS

AS PERCEIVED BY NURSES

by

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A thesis submitted to the faculty of the University
of Utah in partial fulfillment of the requirements
for the degree of

Master of Science

College of Nursing

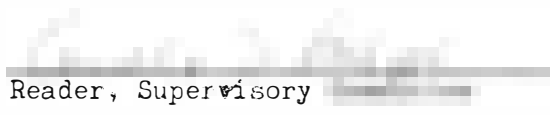University of Utah
June 1965

This Thesis for the M.S. Degree

by

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has been approved

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ACKNOWLEDGMENTS

My sincere thanks to the members of my committee: Dr. John Wolfer, Chairman; Miss Annetta Bilger; and Dr. William McPhee. Their guidance and advice has been most helpful.

My deepest appreciation also goes to my typist, Mrs. Joy Bemis; my friend and colleague, Mrs. Carol Davis; and my husband, Robert W. Knox. Without their understanding and moral support this thesis would never have been completed.

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CHAPTER I

INTRODUCTION

It may well be that the science of communication is more pertinent to nursing than the science of disease or pathology (Smith, 1964, p. 70). Anxiety and fear are part of the natural reaction of every human being when threats to his health appear. Anxiety can be intensified by lack of knowledge, and by social, economic, and cultural forces bearing directly on the individual.

It is imperative that the nurse have some understanding of the anxieties and fears of her patients. The signs of anxiety and fear are variable. Some patients may become noisy and demanding, some quiet and withdrawn. Sometimes marked physical signs such as perspiring hands, increased pulse and respiration rates, and dilated pupils denote anxiety and fear (Shafer, Sawyer, McCluskey & Beck, 1964, p. 5). Part of the nurse's work is to encourage the patient to express his fears and anxieties. She should provide opportunities for the patient to ventilate his feelings but should not probe. This allows the patient to verbalize his fears and reduce his anxiety.

Price (1954) stated "the relationship between nurse and patient is largely that of teacher-pupil...he [the patient] is dependent to a great extent, on the nurse for guidance and instruction. She imparts information that will help him adjust...and cooperate in accepting treatments necessary for his complete recovery of physical and mental health" (Price, 1954, p. 65).

In talking with patients the nurse should speak clearly and distinctly using language he can understand. She should be able to converse on many subjects but refrain from discussingpersonal affairs.

"Problem patients" are familiar to nurses. But are they "problem patients," or patients with a problem? These patients may arouse such emotions in the nurse as to make it difficult for her to do her work. These problem patients may be categorized as (a) the demanding patient, (b) the long-term or chronically ill patient, (c) the patient who gets too personal, (d) the patient whose age differs from that of the nurse, and (e) the patient whose socio-economic background is different from that of the nurse (Ujhely, 1963). Could many of the problems these patients present be resolved with good communication techniques with the nurses?

Nurses have become increasingly concerned about anxieties, tensions, fears, and frustrations that arise in and disrupt the relationships between them and their patients (Saunders, 1958, p. 541). These feelings of the patient can be discovered through talking with them if the nurse listens to what the patient is saying.

Communication is an essential part of good nursing. The personal communications of the nurse, the giving and sharing, the exchange of information, and participation with others are largely determined by the feelings, attitudes, beliefs, and values which are a part of the nurse's cultural heritage (Crawford, 1962, p. 28).

Several problems or barriers to communication have been identified by various writers. Ujhely (1963) mentioned socio-economic background, age differences, the demanding patient, the chronically ill patient, and socio-cultural differences such as race, religion, and language. Another major barrier to communication between patients and nurses was the patient's impression that the nursing staff was too busy and overworked, and some patients felt a status cleavage between themselves and nurses (Skipper, Mauksch, & Tagliacozzo, 1963, pp. 17-19). The patient was concerned with receiving information about his illness but often perceived the nurse as not having the authority to communicate this type of information (Skipper, Tagliacozzo, & Mauksch, 1964, p. 102). Abdellah (1957b) reported that patients stated they seldom saw a nurse and when they did she seldom stayed long enough to answer questions. Shortage of time and other pressures were often the cause of lack of communication. Similar needs were perceived by the nursing personnel--they had too much work, insufficient information was given about the patient's condition, and no time for nursing (Abdellah, 1957a).

The purpose of the present investigation was to determine what kinds of communication barriers were most frequently mentioned by a sample of nurses and if nurses with varied backgrounds of preparation identified the same barriers. A communication barrier was defined as anything which hindered or obstructed verbal communication between the nurse and the patient. For example, a demanding patient, the nurse's lack of authority to answer the patient's question, an

excessive work load so the nurse didn't have time to talk, socio-cultural and socio-economic factors such as religion and income, were all identified as barriers to communication.

For the purpose of this paper communication was defined as an exchange of words between a patient and a nurse in a medical-surgical hospital setting. This exchange had to consist of more than two sentences and included small talk, informing the patient of hospital procedures, giving the patient information about his illness, talking about the patient's personal problems, and allaying the patient's fears.

An attempt was made to answer two questions. First, does the educational preparation received by the nurse in a two year associate degree program, a three year diploma program, a four year baccalaureate program, or post baccalaureate education make her more or less cognizant of barriers to communication between nurses and patients? It was expected that nurses with varying backgrounds of educational preparation would perceive different communication barriers, and that those nurses with the least education would have more problems with communication than the nurses with more education. Second, does the general atmosphere of the hospital, such as governmental or private, economic level of the patients, and general upkeep of the institution, influence the number and kinds of communication barriers perceived by nurses? Nurses in one hospital may admit more communication barriers than those from another hospital.

It was anticipated the results of this study would have implications for curriculum development. If the findings show one educational group to have significantly fewer communication barriers than the other groups, the faculties in these programs might well critically study their curriculums as to what changes could be made to overcome these weaknesses. A study of curriculum would also be indicated if one educational group had significantly more communication barriers than the others. No significant differences among the various educational groups would also imply a need for a critical evaluation of curriculum. The findings could be used for inservice education, particularly those areas that are considered as definite barriers to communication.

CHAPTER II

METHOD

A questionnaire was made up of 37 items identified as barriers
to communication. Fifteen were identified by such writers as
Skipper (1962 and 1963), Abdellah (1957a and b), Ujhely (1963), and
Crawford (1962), and twenty-two were suggestions made by the author
and colleagues. These items covered the following areas: (a) socio-
cultural influences, (b) patient attitudes, (c) language, and (d) the
nurse's role. Each item was to be checked under the appropriate
column that indicated the percentage of time it was a barrier to
communication with patients. The columns were 1-20%, 21-40%, 41-60%,
61-80%, and 81-100%. See Appendix A for the complete questionnaire.

Sample

The questionnaire was given to registered nurses selected from
the medical-surgical floors of two hospitals. One hospital, the
Latter Day Saints Hospital in Salt Lake City, privately owned and
operated, is a large, relatively new hospital with modern equipment.
It has 444 beds of which 361 are allocated to medical-surgical pa-
tients. The individual patient rooms all have a television, an
intercommunication system with the nurses' desk, and are kept clean
and painted in soft pastel colors. The majority of the patients
are from the middle economic class or higher.

The other hospital was the Salt Lake County General Hospital.
It is an old hospital soon to be abandoned for a newer building.

The rooms are all the same beige color and in need of paint. The halls are narrow and dark and much of the equipment is old. Seventy per cent of the patients were charity patients. There were 120 beds allocated to medical-surgical patients out of the 314 beds in the hospital.

Both hospitals are teaching hospitals for student nurses and interns, but the Salt Lake County General Hospital is also the main teaching hospital for the College of Medicine of the University of Utah. These two hospitals were selected because they were both teaching hospitals, were about the same size and both had medical-surgical patients besides obstetrics, pediatrics, and psychiatric patients. However, the physical appearance of the hospital and the socio-economic status of the patients in each hospital is quite different.

Only registered nurses working 7 A.M.-3 P.M. or 3 P.M.-11 P.M. were chosen to participate. The writer believed the nurses working the 11 P.M.-7 A.M. hours had communication problems unique to that shift as the patients are usually sleeping at that time.

Twenty eight nurses, the entire registered nurse population on the medical-surgical floors of the Salt Lake County General Hospital at the time of the study were given the questionnaire. Thirty three nurses at the Latter Day Saints Hospital, approximately 50% of the nurses on the medical-surgical floors, were selected at random. Both part time and full time personnel were used in the survey. An attempt was made to select nurses from the associate degree, diploma,

baccalaureate, and post-baccalaureate programs at each hospital. This was impossible because there was only one associate degree graduate at the Salt Lake County General Hospital. As a check on the possibility that nurses might be more frank in their responses, half the nurses at each hospital were told that the writer was a nurse and the other half were told that she was a sociologist or non-nurse.

It was decided to study the barriers to communication in relation to the four variables: (a) educational preparation, (b) hospital where employed, (c) subject's perception of the writer as a nurse or non-nurse, and (d) length of employment. A breakdown of the participants from each hospital with respect to marital status, educational preparation, length of employment, employment status, and perception of the researcher can be found in Appendix E.

Procedure

The writer went to each of the two hospitals on four or five different days during both the 7 A.M.-3 P.M. and 3 P.M.-11 P.M. shifts. Each participant was given the questionnaire, asked to read the directions explaining what was meant by communication, and told to check each item in the column that indicated the percentage of time the nurse believed it was a barrier to her in communicating with patients. The participant was to answer the questionnaire from personal experience and to consider communication with patients as a whole and not individual patients. The questionnaire was

completed while the nurse was on duty and collected the same day by the writer.

Each participant was given an individual score. This was done by scoring each item marked in the 1-20% column as 1, giving each item marked in the 21-40% column a score of 2, those marked in the 41-60% column were scored as 3, those in the 61-80% column were scored as 4, and those marked in the 81-100% column were scored as 5. The scores for each of the 37 items were tabulated to give the subject's total score.

The lowest possible score, if each item was marked, would be 37 and the highest possible score would be 185. The total score represents the degree of communication difficulty the nurse experienced.

CHAPTER III

RESULTS AND DISCUSSION

The participants were divided into eight groups: .

Group A: those employed at the Latter Day Saints Hospital.

Group B: those employed at Salt Lake County General Hospital.

Group C: those who were told the writer was a non-nurse.

Group D: those who were told that the writer was a nurse.

Group E: graduates from an associate degree program.

Group F: graduates from a diploma program.

Group G: graduates from a baccalaureate program.

Group H: those nurses with education beyond baccalaureate level.

The number of nurses (N), the mean scores, standard deviations, and range of scores for the nurses in each group is shown in Table 1.

Table 1

Number of Nurses, Mean Scores, Standard Deviations, Range of

Scores of Individual Participants in Each Group

Group	A	B	C	D	E	F	G	H
N.*	33	28	30	31	7	27	18	7
Mean	48.1	45.3	46.8	47.6	54.1	46.0	48.1	45.2
S.D.	9.11	3.60	9.79	10.58	12.28	18.24	8.71	3.31
Range	33-71	17-68	34-71	17-68	40-71	17-70	37-68	40-49

*Two participants did not give their educational preparation.

T tests were used to determine if there were significant dif-
ferences in total communication barrier scores between the two types
of hospitals (group A vs. group B); between those nurses who per-
ceived the author as a non-nurse and those who perceived the author
as a nurse (group C vs. group D); and between the groups with varying
professional preparation (group E vs. group F, E vs. G, E vs. H,
F vs. G, F vs. H, and G vs. H). These data are shown in Table 2.
The t ratio was not statistically significant at the .05 level for
any of the comparisons. Therefore there were no reliable differences
in mean communication barrier scores.

As can be seen from Table 1 the variability in scores is quite
different from one group to another. In order to determine if there
was homogeneity of variance for the various group comparisons made,
F tests were calculated. The results of these tests indicated that
there were significant differences in variance at or beyond the .02
level for the following comparisons: group A vs. group B, E vs. H,
F vs. G, F vs. H, and G vs. H. This indicated that the t tests for
these comparisons were not statistically legitimate because the
assumption of homogeneity of variance was not met. The main reason
for this lack of comparable variances in the groups was the very
small number of nurses in groups E and H. A larger sample of nurses
is necessary for meaningful comparisons.

As the sample was so small the results are not surprising, even
though it was expected that the baccalaureate and post baccalaureate
groups (G and H) would score lower than the other two groups (E and F).

Table 2

T test Results for Comparison of Means of Total

Communication Barrier Scores

Groups	df	t ratio
A and B	59	.33
C and D	59	.32
E and F	32	1.12
E and G	23	1.39
E and H	12	1.97
F and G	43	.50
F and H	29	.11
G and H	23	.85

The questionnaire did not discriminate between the groups with varying professional preparation in relation to the extent of their communication problems. There was no difference in perception of communication barriers from one hospital to the other. This may indicate that neither educational preparation nor hospital environment alter the nurse's perception of communication barriers.

The author believes that most of the nurses chose the socially acceptable response to the items by marking the 0-20% column most of the time. The mean scores, all below the theoretical midpoint score of 71, also reflect this tendency. This indicated the items were usually not considered barriers to communication. Appendix C shows that the majority of the responses were in the 0-20% column. This suggests a need for changing the scoring categories on the questionnaire.

A correlation was calculated between length of employment in months and the mean communication barrier score for each individual. The correlation was .08 which indicated there was no relationship between length of employment and degree of communication difficulty.

An item analysis was made to determine how the various groups rated each item. These data are shown in Appendix C. The item analysis indicated how many participants rated each item in each of the five different columns. The mean score was computed for each item for the individual sub groups and then for the total group of nurses. These means are shown in Appendix D. These data show which items were considered the biggest barriers to communication

by the sub groups and the total group. The higher the mean score
the more often the item was considered to be a barrier to communica-
tion with patients. The mean for the total group of mean item
scores was 1.31, the standard deviation was .17. Again, this re-
flected the general tendency to not endorse most items as com-
munication barriers.

The items that received the highest mean scores for the indi-
vidual sub groups and the total group are shown in Table 3. Seven
to nine items with the highest scores were selected from each group
and ranked in order from 1 to 7. The item with the highest score
was given a rank of 1 and the lowest of the top nine items was
ranked seventh. In some groups two or more items received the same
mean score and were given the same rank. One item that ranked high
was excessive work load (item 12). All the groups except E (asso-
ciate degree) indicated this was a definite barrier to communication.
This was expected due to the shortage of nurses in each area of
professional preparation. It was interesting to note that the
associate degree group did not perceive an excessive work load as
a barrier to communication. The fact that excessive work load was
considered a barrier to communication by the majority of the partic-
ipants indicated a need for more nurses and also for nurses to use
their time more wisely. Communication was thought of as relatively
unimportant as other duties, probably clerical duties such as
charting, came first as was evidenced by the score of item 9
(talking with patients took me away from my other duties). This

Table 3

Highest Ranking Items According to Mean Scores

for Each Sub Group and the Total Group

Group	A	B	C	D	E	F	G	H	Total
Ranking 1st	7	12 14	7 12	12	35	34	7 12	8 12 36	7
2nd	12	30	3	9	27	7	14	7 9 14 17 25 28	12
3rd	3	7	14 36	7	11	9 30	5 10		9
4th	9 34	3	9	11	7 8 25 36	3 12	9 21		3
5th	10	8	10	3		36	3		36
6th	36	27	34	23		14	28		14
7th	11	9	37	36		37			10

item was considered the third biggest barrier to communication by the total group. This indicates a need to stress the importance of communication and the role it plays in the general welfare of the patient. Item 10, I didn't have time to talk to patients, was rated 7th in importance by the total group. This pointed up the fact that the nurse recognized the importance of communicating with the patient, but that this nurse-patient relationship is hampered by the pressure of time.

The demanding patient was considered the biggest barrier to communication (item 7--the patient was very demanding). The total group gave this item the highest score. The patient's attitude (item 3, the patient seemed indifferent) placed 4th among the top seven items presenting the biggest barriers to communication by the total group. Education should be able to help the nurse surmount this barrier by increasing her understanding of herself and the patient. The patient may be demanding or indifferent because he is anxious. Talking with patients may relieve this anxiety and allow the patient to become less demanding. Illness extended over a long period of hospitalization or the chronically ill patient (item 36) was 6th in importance as a barrier to communication for the total group. While patient attitudes and length of illness were considered among the top seven barriers to communication by nurses, patients did not rate the nurse's attitude among the top seven barriers to communication (Davis, 1965).

Davis' study (1965) also showed that patients did agree with nurses that nurses were too busy and they seldom saw a nurse.

Another important barrier listed by patients was the nurse's lack of authority to answer their questions and the nurse's evading responses to their questions. Nurses seemed to feel they do have the authority to answer the patient's questions, and also that they have sufficient knowledge about the patient's illness and about procedures (Items 13, 15, and 16). These three items were not considered as being barriers to communication according to nurses. It is interesting to note that patients and nurses rate the nurse's authority to answer the patient's questions so differently. Perhaps they each perceive authority differently.

Because there were no significant differences between the educational groups and because there were no apparent differences in mean item scores, there are no obvious implications for curriculum development.

To make this study more meaningful a larger sample should be selected. Other assessment and scoring techniques should be tried to assure that the results do not simply reflect nurses' tendency to give socially desirable answers.

CHAPTER IV

SUMMARY

The purpose of the present investigation was to determine the kinds of communication barriers most frequently mentioned by a sample of nurses and if nurses with varied backgrounds of preparation identified the same barriers.

A questionnaire compiled of 37 items considered barriers to communication with patients was given to 61 registered nurses. These nurses were employed in two different hospitals, one being privately owned and the other a governmental institution. The participants represented four kinds of professional nursing preparation: the associate degree, diploma program, baccalaureate, and post baccalaureate education. Each nurse was asked to check each item according to the percentage of time she believed the item was a barrier to her in communicating with patients.

The participants were placed into eight groups according to educational preparation, where employed, and their perception of the author as a nurse or non-nurse. Mean total communication barrier scores were computed for each group. T tests were used to determine if there were significant differences in total communication barrier scores between the two hospitals, the four educational levels, and those nurses who perceived the author as a nurse and those who perceived the author as a non-nurse. The t ratio was not statistically significant at the .05 level for any of these

comparisons. Therefore there were no reliable differences in mean
communication barrier scores.

A correlation of .08 between length of employment and total
communication barrier score indicated no relationship between
length of employment and degree of communication difficulty.

An item analysis was made to determine which barriers to com-
munication were the most important to the total group and to the
individual sub groups.

The four items ranked as the most important barriers by mean
score for the total group were (a) the patient was very demanding,
(b) my work load kept me too busy, (c) talking with patients kept
me away from my other duties, and (d) the patient seemed indif-
ferent. There were no major differences in the items selected by
any of the different groups. Each group selected essentially the
same items, but not always in the same order of importance.

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APPENDIXES

APPENDIX A

Questionnaire Given to the Nurses

on Barriers to Communication

	1-20%	21-40%	41-60%	61-80%	81-100%
1. I find myself not really listening to the patient.					
2. The patient made me feel inferior.					
3. The patient seemed indifferent.					
4. The patient was sarcastic.					
5. The patient depressed me.					
6. The patient acted superior.					
7. The patient was very demanding.					
8. The patient had a poor sense of humor.					
9. Talking with patients took me away from my other duties.					
10. I didn't have the time to talk to patients.					
11. The patient kept talking and I couldn't get away.					
12. My work load kept me too busy.					
13. I didn't have the authority to answer the patient's questions.					
14. There were other patients in the room.					
15. I lacked knowledge about the present illness.					
16. I felt unsure about some procedure.					
17. The patient kept changing the subject.					

APPENDIX A (cont'd)

	1-20%	21-40%	41-60%	61-80%	81-100%
18. The patient preferred to talk about me rather than himself.					
19. I couldn't talk on the patient's level.					
20. The patient had annoying mannerisms.					
21. The patient was untidy.					
22. The patient exposed himself unnecessarily.					
23. There was an unpleasant odor about the patient.					
24. The patient was of a different race.					
25. The patient was older than I.					
26. The patient was younger than I.					
27. The patient was of the opposite sex.					
28. The patient was of the same sex as I.					
29. The patient was of a higher economic status than I.					
30. The patient was of a lower economic status than I.					
31. The patient was of a different religion than I.					
32. The patient was single.					
33. The patient was deformed.					
34. The patient was married.					
35. The patient cried easily.					
36. The patient was chronically ill.					
37. The patient was acutely ill.					

APPENDIX B

Individual Raw Scores for Each Sub Group

Group	A		B	C	D		E	F	G	H
	33	63	17	34 70	17	63	37	17	35	40
	37	63	34	35	33	68	40	34	37	43
	37	71	35	36	37		52	36	38	43
	37		36	37	37		55	37	38	46
	37		37	37	37		61	37	40	48
	38		37	38	37		63	37	42	48
	38		39	38	39		71	37	47	49
	40		40	40	40			39	48	
	40		40	40	40			40	48	
	40		41	40	41			40	50	
	41		42	41	43			41	51	
	42		43	42	44			41	51	
	44		43	42	44			44	51	
	48		44	43	49			44	51	
	48		45	46	49			45	55	
	49		46	46	47			49	55	
	49		47	48	50			49	61	
	50		48	48	51			52	68	
	51		48	48	51			52		
	51		49	48	51			52		
	52		51	49	52			54		
	52		51	51	52			55		
	52		54	52	55			56		
	52		60	52	55			60		
	52		61	54	55			61		
	55		61	55	56			63		
	55		68	61	60			70		
	56		70	63	61					
	61			70	61					

APPENDIX C

Tabulation of Item Scores for Each Sub Group

Item	Group A 0-20%	21-40%	41-60%	61-80%	81-100%	Group B 0-20%	21-40%	41-60%	61-80%	81-100%	Group C 0-20%	21-40%	41-60%	61-80%	81-100%	Group D 0-20%	21-40%	41-60%	61-80%	81-100%	Group E 0-20%	21-40%	41-60%	61-80%	81-100%	Group F 0-20%	21-40%	41-60%	61-80%	81-100%	Group G 0-20%	21-40%	41-60%	61-80%	81-100%	Group H 0-20%	21-40%	41-60%	61-80%	81-100%
1	27	4	1	1		26	1				27	1			1	26	4	1			5	1			1	25	1				15	3				6	1			
2	30	2			1	25	2				27	1			1	28	3				6				1	24	1				17	1				5	2			
3	20	11		1	2	16	8	4			18	8	2	1	1	17	11	2		1	4	3				13	8	3	1	1	10	6	1		1	5	2			
4	25	6	1		1	20	6	2			23	5	2			20	6	2			4	3				20	5	1		1	13	4	1			6		1		
5	27	4	1			20	7				22	7	1			25	4				6	1				24	2				17	6	1			5	2			
6	25	5	1		1	25		1			26	2	1			24	3	1		1	5	2				22	3			1	15	1	2	0		7				
7	14	14	3	1	1	13	11	2	1		12	13	3	1		14	12	2	1	1	3	2	2			11	10	1	1	1	6	10	1	1		4	3			
8	28	2	3			16	9	3			21	6	3			23	5	3			4	1	1	1		21	5				15	1	2			3	3	1		
9	19	5	6	2	1	18	7	2	1		20	4	3	1	1	16	8	5	2		5			1	1	14	6	5	1		11	4	1	1	1	5	1	1		
10	21	3	5	1	1	23	4	2			22	2	4	1	1	23	5	3			5	1	1			21	3	2			10	3	4		1	6		1		
11	23	4	5	1		23	3	1			24	4	2			22	3	4	1		4		2	1		18	4	2	1		13	2	3			7				
12	21	4	4	3	1	11	11	3	3		16	7	3	3		16	8	4	3		7					14	7	4	1		9	5	1	2	1	4	2			1
13	27	5	1			21	5	1			26	3				21	7	2			7					21	5				11	5	2			7				
14	28	4				15	18	1	2	2	18	9	1	1	1	25	3		1	2	5	2				21	2	1	1	1	11	4		1	2	4	3			
15	25	7		1		21	6				20	9		1		26	4				5	2				21	4				13	4		1		5	2			
16	29	4				24	3				26	4				27	3				3	4				26					16	2				6	1			
17	32	1				17	8	2			19	5	1			25	4	1			7					20	4		1		15	2	1			4	3			
18	29	2	2			25	2				27	2	1			27	2	1			5	1	1			24	1				15	2	1			7				
19	31	2				25	1				29					27	3				7					24					16	2				7				
20	28	3	1	1		22	5				23	6	1			27	2		1		5	1	1			23	1				14	3		1		5	2			

Item	Group A 0-20%	21-40%	41-60%	61-80%	81-100%	Group B 0-20%	21-40%	41-60%	61-80%	81-100%	Group C 0-20%	21-40%	41-60%	61-80%	81-100%	Group D 0-20%	21-40%	41-60%	61-80%	81-100%	Group E 0-20%	21-40%	41-60%	61-80%	81-100%	Group F 0-20%	21-40%	41-60%	61-80%	81-100%	Group G 0-20%	21-40%	41-60%	61-80%	81-100%	Group H 0-20%	21-40%	41-60%	61-80%	81-100%
21	27	4	1		1	21	4		1	1	24	5				24	3	1	1	2	6	1				19	3	1			14	2		1	2	6	1			
22	26	3	3			21	4		1		26	2				21	6	3	1		5	2				21	1	2			13	3	1	1		7				
23	28	3	2			18	7	1	1		25	3				21	6	3	1		5	2				18	4	2			15	1	1	1		5	2			
24	29	3	1			20	2				26	1				23	4	1			7					21	1	1			16	2				6				
25	22	8	2	1		20	3	2	1		21	6	2	1		22	5	2	1		3	3		1		17	3	3	1		13	4	1			5	1	1		
26	31	1	1			21	3	1			24	2	2			28	2				6	1				21		2			15	3				7				
27	26	4	2		1	20		3	1	1	22	2	3	1		24	2	2	1	1	4	1			2	18	1	4	1		14	2	1		1	6	1			
28	27	4	2			17	3	2			19	5	2			25	2	2			5	2				18	4	1			15		3			5	1	1		
29	29	3	1			21	3		1		24	3		1		25	3	1			7					20	2	1	1		15	3				6	1			
30	27	3	1	2		18	1	1	2	2	21	3	1	1	1	25	1	1	3	1	5	1			1	17		2	3	1	15	1		2		5	2			
31	27	5	1			22	2		2		25	2	1	1		24	5		1		5	1	1			18	3		2		15	3				7				
32	30	3				23	2				23	3				28	2				6	1				21	2				16	2				7				
33	28	3	2			24	1				27	1				25	3	2			6	1				22	2				15	2	1			7				
34	25	2	1	3	2	22	1	1	1		23	2	1	3	1	25		1	2	1	6	1				17	1	1	3	2	17				1	6				
35	23	7	3			21	4				22	6	2			23	5	1		1	2	2	2		1	18	4	1			13	5				7				
36	20	7	5	1		16	5	4			15	8	5			21	4	4	1		4		3			15	5	2	2		13	5	1			4	1	2		
37	24	4	4	1		17	5	2			18	6	3			23	3	3	1		4	1	2			16	3	3	1		13	3	2			5	2			

APPENDIX D

Mean Item Scores for Each Group

and for the Total Sample

Group	A	B	C	D	E	F	G	H	TOTAL
Item									
1	1.27	1.03	1.13	1.19	1.71	1.07	1.13	1.14	1.16
2	1.18	1.08	1.17	1.09	1.57	1.04	1.13	1.28	1.13
3	1.69	1.57	1.63	1.64	1.42	1.69	1.66	1.28	1.61
4	1.36	1.21	1.30	1.35	1.42	1.40	1.33	1.28	1.22
5	1.18	1.25	1.23	1.13	1.14	1.23	1.77	1.28	1.22
6	1.34	1.07	1.22	1.31	1.25	1.26	1.27	1.00	1.12
7	1.81	1.66	1.75	1.76	1.85	1.79	1.94	1.42	1.72
8	1.24	1.53	1.40	1.35	1.85	1.19	1.33	1.71	1.42
9	1.66	1.50	1.58	1.77	1.71	1.73	1.72	1.42	1.66
10	1.62	1.32	1.56	1.35	1.42	1.26	1.77	1.28	1.50
11	1.51	1.18	1.26	1.66	2.00	1.44	1.33	1.10	1.36
12	1.75	1.85	1.75	1.80	1.00	1.69	1.94	1.71	1.67
13	1.21	1.25	1.42	1.00	1.00	1.19	1.33	1.00	1.23
14	1.24	1.85	1.60	1.51	1.25	1.57	1.87	1.42	1.52
15	1.30	1.32	1.40	1.13	1.25	1.16	1.38	1.28	1.26
16	1.12	1.11	1.13	1.10	1.57	1.00	1.05	1.14	1.11
17	1.03	1.44	1.28	1.20	1.00	1.23	1.27	1.42	1.23
18	1.18	1.07	1.13	1.13	1.42	1.04	1.17	1.00	1.13
19	1.06	1.03	1.00	1.07	1.00	1.00	1.11	1.00	1.05
20	1.24	1.18	1.26	1.16	1.42	1.04	1.33	1.28	1.23
21	1.30	1.40	1.17	1.51	1.14	1.21	1.72	1.14	1.35
22	1.28	1.26	1.10	1.48	1.25	1.33	1.33	1.28	1.31
23	1.21	1.25	1.39	1.58	1.25	1.33	1.33	1.28	1.31
24	1.15	1.09	1.03	1.21	1.00	1.13	1.11	1.00	1.12
25	1.48	1.38	1.43	1.40	1.85	1.50	1.22	1.42	1.41

APPENDIX D (cont'd)

Group Item	A	B	C	D	E	F	G	H	TOTAL
26	1.09	1.20	1.22	1.06	1.14	1.17	1.11	1.00	1.12
27	1.39	1.52	1.42	1.43	2.28	1.50	1.16	1.14	1.44
28	1.24	1.31	1.34	1.20	1.25	1.26	1.61	1.42	1.27
29	1.15	1.24	1.21	1.17	1.00	1.29	1.33	1.14	1.18
30	1.36	1.70	1.44	1.51	1.71	1.73	1.22	1.28	1.47
31	1.21	1.30	1.34	1.40	1.42	1.39	1.00	1.00	1.25
32	1.09	1.08	1.11	1.06	1.14	1.08	1.05	1.00	1.08
33	1.21	1.04	1.03	1.23	1.25	1.08	1.16	1.00	1.13
34	1.66	1.24	1.51	1.41	1.14	1.83	1.16	1.28	1.46
35	1.42	1.26	1.36	1.36	2.42	1.21	1.16	1.00	1.33
36	1.60	1.36	1.60	1.52	1.85	1.62	1.44	1.71	1.56
37	1.39	1.37	1.44	1.40	1.71	1.52	1.22	1.28	1.38

APPENDIX E

Description of Sample

	Latter Day Saints Hospital	Salt Lake County General Hospital
Total Nurses	33	28
Married	16	18
Single	14	8
Divorced	2	2
Widowed	1	0
Associate degree	6	1
Diploma	15	12
Baccalaureate	10	8
Post baccalaureate	2	5
Mean length of employment	16 mos.	18 mos.
Full time personnel	26	18
Part time personnel	7	10
Believed writer to be nurse	16	15
Believed writer to be non-nurse	17	13