

CHAPTER 4

RESULT

This study investigated the levels of quality of work life(QWL) and described and identified the factors affecting the QWL of professional nurses in a big private hospital in Bangkok Metropolis. Data from 101 professional nurses who met the eligibility criteria were analyzed as the sample group of this study. The self administrated questionnaire which was borrowed and modified from organizational behavior science and psychology applied in organization management was used. The response rate was shown 100% and was satisfactory.

Table 4.1 Frequency and Percentage of Demographic data variables

Characteristics	n	%
Age groups		
20-29 years	62	61.4
30+	39	38.6
Marital Status		
Unmarried	80	79.2
Married	21	20.8
Widowed	-	-
Divorced	-	-
Education level		
Master degree in Nursing	1	1.0
Master degree in other field	1	1.0
Bachelor degree in Nursing	99	98.0

Table 4.1

Characteristics	n	%
Working Department		
Central Supply	1	1.0
Hemodialysis department	1	1.0
Special investigation	2	2.0
Labor Department	4	4.0
Nursing Service	3	3.0
Emergency department	8	7.9
Outpatient department	7	6.9
Pediatric department	10	9.9
Operating department	11	10.9
Obstetric department	12	11.9
Nursery department	12	11.9
Intensive Care Units	13	12.9
Medical-Surgical	17	16.2
Position		
Supervisor and Head nurse	11	10.9
Staff nurse	90	89.1
Salary (Baht/month)		
10,000-14,999	41	40.6
15,000-19,999	49	48.5
20,000+	11	10.9

* All professional nurses were female.

Table 4.1 showed the distribution of demographic variables. Two important findings were, 98% of the subjects had bachelor in nursing degree and about 90% of them were staff nurse in position. For distribution of age 61.4% were between 20-29 years and 38.6% on or above 30 years, of them 20.8% were currently married. Three educational level were represented; bachelor degree in nursing(98%), master degree in other field(1%) and master degree in nursing(1%). The working experience of them in private and public hospitals were 37% and 33% respectively. The distribution of working department revealed, in operating, medical-surgical, obstetric, nursery,

revealed, in operating, medical-surgical, obstetric, nursery, and in I.C.U more than 10% subjects in each department were working, while in rest of the departments less than 10% in each were working. Forty percent of nurses had income more than 10,000 Bahts, 48% had more than 15,000 Bahts and only 10%(10.9%) had income more than 20,000 Bahts. It was to be noted that the same proportion of nurses(10.9%) were in the position of supervisor or head nurse.

Table 4.2. Duration of work year of professional nurses

Duration of work in year	n	%
Previous working setting		
Public sector	31	30.7
Private sector	35	34.7
Both of sectors	16	15.8
No experience	19	18.8
Nursing experience		
Less than 10 years	81	80.2
More than 10 years	20	19.8
Duration of present work		
Less than 2 years	60	59.4
More than 2 years	41	40.6

Regarding nursing experience only 19.8% had more than 10 years experience while 15.8% had worked in both sectors. Fifty nine percent of professional nurses were working in this setting for less than 2 year, 18.8% nurses had no experience at all before joining this hospital. Although around 30% and 34% of the subjects had worked in public and private respectively. Fifteen percent of them had the experience to work in both sectors.

Table 4.3. Level of QWL of professional nurses

Level of QWL	n	%
Good	-	-
Fair	50	49.5
Poor	51	50.5
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Total	101	100.00%

When Job satisfaction and Humanneeds variables were sum scored, 50.5% of the professional nurses had scored to be at Poor categories and 49.5% were at Fair categories. There was no one in the Good categories.

Table 4.4. Distribution of working department in Fair and Poor QWL

Working department	Fair QWL		Poor QWL		Total	
	(n)	(%)	(n)	(%)	(n)	(%)
Operating department	4	36.36	7	63.64	11	100.00
Hemodialysis department	0	0.00	1	100.00	1	100.00
Special investigation	2	100.00	0	0.00	2	100.00
Medical-Surgical	7	41.18	10	58.82	17	100.00
Emergency department	4	50.00	4	50.00	8	100.00
Outpatient department	4	67.14	3	42.86	7	100.00
Obstetric department	4	33.33	8	66.67	12	100.00
Pediatric department	4	40.00	6	60.00	10	100.00
Nursery department	5	41.67	7	68.33	12	100.00
Intensive Care Units	10	76.92	3	23.08	13	100.00
Central Supply	1	100.00	0	-	1	100.00
Labor Department	3	75.00	1	25.00	4	100.00
Nursing Service	2	66.67	1	33.33	3	100.00
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Total	50	49.50	51	50.49	101	100.00

Work department was noted to affect the QWL of professional nurses. When analyzed department wise it was found that, out of total work force in each department, more

than 50% who scored in fair QWL were in 'special investigation', 'OPD', 'I.C.U.' 'central supply' 'labor' and 'nursing service' departments. Less than 50% response in fair QWL resulted in more than 50% response in poor QWL group as in 'operating', 'hemodialysis', 'medical-surgical', 'obstetric', 'paediatrics' and 'nursery' departments. Equal response (50% in each) was observed in emergency department. A 100% response was recorded in fair QWL group in 'central supply' and 'special investigation' department, while in poor QWL group in 'hemodialysis' department.

Table 4.5. Distribution of age/sex/duration of present work between two groups.

Variables	Fair QWL	Poor QWL	<i>p-value</i>
1. Sex	All female		
2. Age in year			
Max-Min	22-47	23-43	0.0012 [*]
Average	31.20±6.12	27.59±4.67	
3. Duration of present work			
Max-Min	1-3	1-2	0.0507 [*]
Average	1.55±0.59	1.31±0.55	

^{*}Mann-Whitney test

All professional nurses working in this private hospital were female. They differ in respect of age in both groups. Subjects' average age of Fair QWL was 31.20±6.12 years and 27.59±4.67 years for Poor QWL; the average length of service in this present hospital of Fair QWL and Poor QWL groups were 1.55±0.59 years and 1.31±0.55 years respectively.

Table 4.6. Distribution of demographic variables (Univariate Analysis)

Variables	QWL		χ^2	p-value
	Poor n(%)	Fair n(%)		
1.Marital Status				
Single	39(76.5)	41(82.0)	0.46872	0.49358
Married	12(23.5)	9(18.0)		
2.Position				
Supervisor&Head nurse	1(1.96)	10(20.0)	8.46568	0.00362
Staff nurse	50(98.03)	40(80.0)		
3.Age				
20-29 years	38(74.5)	24(48.0)	7.4854	0.00622
30-HI years	13(25.5)	26(52.0)		
4.Duration of present work				
Less than 2 years	36(70.6)	24(48.0)	5.34184	0.02082
More than 2 years	15(29.4)	26(52.0)		
5.Salary (Baht/month)				
10,000-14,999	21(41.2)	20(40.0)	5.46957	0.06491
15,000-19,999	28(54.9)	21(42.0)		
More than 20,000	2(03.9)	9(18.0)		
6.Previous working setting				
No experience	12(23.5)	7(14.0)	4.42637	0.21695
Public sector	11(21.6)	20(40.0)		
Private sector	19(37.3)	16(32.0)		
Both of sectors	9(17.6)	7(14.0)		
7. Nursing experience				
Less than 10 years	46(90.2)	35(70.0)	6.48456	0.01088
More than 10 years	5(09.8)	15(30.0)		

There was no significant difference between two groups of poor and fair QWL in regard of marital status, salary and previous working settings. These variables were evenly distributed stratawise between two groups. Significant difference was shown in variables; age, position, duration of present work and nursing experience, of which age and present position were highly significant. (Table 4.6)

Table 4.7. Distribution of Job environment variables

Variables	QWL		χ^2	p-value
	Poor n(%)	Fair n(%)		
1.Satisfied with present job				
Group A.	34(66.7)	5(10.0)		
Group B.	17(33.3)	45(90.0)	34.2027	0.00000
2.Interesting job				
Group A.	43(84.3)	9(18.0)		
Group B.	8(15.7)	41(82.0)	44.4972	0.00000
3.Dislike job				
Group A.	34(66.7)	1(02.0)		
Group B.	17(33.4)	49(98.0)	46.6241	0.00000
4.Unwilling to work				
Group A.	29(56.9)	49(98.0)		
Group B.	22(43.1)	1(02.0)	24.2946	0.00000
5.Uninteresting job				
Group A.	21(41.2)	2(04.0)		
Group B.	30(58.8)	48(86.0)	19.8415	0.00001
6.Happy in work				
Group A.	5(09.8)	24(48.0)		
Group B.	46(90.2)	26(52.0)	17.9957	0.00002
7.Disappointed in job				
Group A.	36(70.6)	50(100.0)		
Group B.	15(29.4)	0(0.0)	17.2708	0.00003
8.Satisfied with job for the time being				
Group A.	26(50.9)	7(14.0)		
Group B.	25(49.01)	43(86.0)	15.6957	0.00007

Table 4.7

Variables	QWL		χ^2	p-value
	Poor n(%)	Fair n(%)		
9. Getting bored				
Group A.	18(35.3)	2(04.0)		
Group B.	33(64.7)	48(96.0)	15.5694	0.00008
10. Enjoy to work				
Group A.	16(31.4)	4(08.0)		
Group B.	35(68.6)	46(92.0)	8.6847	0.00321
11. Like job				
Group A.	40(78.4)	30(60.0)		
Group B.	11(21.6)	20(40.0)	4.0319	0.04465

Group A. = The person who were undecided to strongly disagree.

Group B. = The person who were agree to strongly agree.

All the job environment variables shown highly significant relation on univariate analysis. The number and percentage of agree to strongly agree (Group B) much more in poor QWL group in 'uninteresting job', 'happy in work', 'disappointed in job', 'getting bored' and 'enjoy to work' variables of Table 4.7. This was reverse in the rest five categories. In fair QWL group some particular responses were observed. Very few subjects disagreed (Group.A) in variables 'Satisfied with job', 'dislike job', 'uninteresting job', 'getting bored' and 'enjoy to work'. There was no response in (Group.B) in the variable 'disappointed in job'. Overall the presence of more responses in the negative aspects of the job environment was marked.

Table 4.8. Distribution of Relatedness needs variables

Variables	QWL		p-value
	Poor n(%)	Fair n(%)	
1. Openness and honesty with colleague			
Group A.	6(11.8)	3(06.0)	0.48740 [†]
Group B.	45(88.2)	47(94.0)	
2. Cooperative relations with colleague			
Group A.	1(01.96)	2(04.0)	0.61746 [†]
Group B.	50(98.04)	48(96.0)	
3. Being accepted by others			
Group A.	4(07.8)	2(04.0)	0.67793 [†]
Group B.	47(98.04)	48(96.0)	
4. Opportunity to develop close friendship at work			
Group A.	6(11.8)	4(04.0)	0.74094 [†]
Group B.	45(88.2)	46(92.0)	

Group A. = The person who had accepted it not important to undecided.
Group B. = The person who had accepted it very important to extremely important.

*Fisher exact 2-tailed p-value

Contrary of these results, none of the factors in the category of relatedness needs (Table 4.8) showed any significant results. Although presence of less than 10% group A response was observed in some cells.

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Table 4.9. Distribution of Growth needs variables

Variables	QWL		χ^2	p-value
	Poor n(%)	Fair n(%)		
1.Opportunity for independent thought and action				
Group A.	-	-		
Group B.	51(100)	50(100)	-	-
2.Opportunity for personal growth and development				
Group A.	7(13.7)	5(10.0)		
Group B.	44(86.3)	45(90.0)	0.3347	0.5629
3.A sense of self-esteem				
Group A.	3(05.9)	1(02.0)		
Group B.	48(94.1)	49(98.0)	-	0.61746 [†]
4.Development new skills and Knowledge at work				
Group A.	1(01.96)	1(02.0)		
Group B.	50(98.04)	49(98.0)	-	0.9887 [†]

Group A. = The person who had accepted it not important to undecided.
Group B. = The person who had accepted it very important to extremely important.

[†]Fisher exact 2-tailed p-value

Similarly variables related with growth needs also failed to establish any relation with quality of work life. Here was also the chi-square values were very low and corresponding p-values high. In the category of 'opportunity for independent thought and action', there was no group A response in either group, and overall group A response was less than or around 10% in rest of the cells. Group A response was meant for, the person who had accepted it, as important to moderately important. Table 4.9 summarized the results.

Table 4.10. Distribution of Existence needs variables

Variables	QWL		χ^2	p-value
	Poor n(%)	Fair n(%)		
1.A sense of security from bodily harm				
Group A.	-	-		
Group B.	51(100.0)	50(100.0)	-	-
2.A complete fringe benefit				
Group A.	4(07.8)	0(0.0)		
Group B.	47(92.2)	50(100.0)		0.11761 [†]
3.Frequent raises in pay				
Group A.	12(23.5)	17(34.0)		
Group B.	33(76.5)	39(66.0)	1.3523	0.2448
4.Good pay for my work				
Group A.	10(19.6)	10(20.0)		
Group B.	41(80.4)	40(80.0)	0.0024	0.9605

Group A. = The person had accepted it not important to undecided.

Group B. = The person had accepted it very important to extremely important.

[†]Fisher exact 2-tailed p-value

In Table 4.10, factors associated with existence needs were shown. In factor one, there was no group A. response and in factor two, there was no group A. response in Fair QWL group. However none of the result were significant or had any valid chi-square results.

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Table 4.11 Variables which were entered to multiple logistic regression

1. Age
20-29 years
30-HI years
2. Duration of present work
Less than 2 years
More than 2 years
3. Position
Supervisor and Head nurse
Staff nurse
4. Nursing experience
Less than 10 years
More than 10 years
5. Satisfied with present job
6. Interesting job
7. Satisfied with job for the time being
8. Enjoy to work
9. Like job
10. Happy in work
11. Unwilling to work
12. Uninteresting job
13. Getting bored
14. Disappointed in job

No.5 to 14 were classified in two categories(Group.A and Group. B) where; Group A means "the person who were undecided to strongly disagree" and Group B means "the person who were agree to strongly agree" to each variables.

Variables shown significant results in univariate analysis were fitted in a multiple logistic regression model to single out their individual effect and to control the potential confounders. Forward stepwise(LR) method was found to fit the model and equation acceptably.

Table 4.12. Variables which affecting the QWL of professional nurses

Variables in the Equation					
Variables	B	S.E	df	Sig	Exp(B)
Interest	4.0661	1.1288	1	0.0003	58.3285
Satisbe	2.5082	1.2062	1	0.0376	12.2826
Dislike	4.5171	1.4610	1	0.0020	91.5667
Disappoint	11.1477	32.1268	1	0.7286	69401.37
Constant	-4.1049	1.0866	1	0.0002	

Interest = Interesting job

Satisbe = Satisfied with job for the time being

Dislike = Dislike job

Disappoint = Disappointed in job

A total of significant fourteen variables obtained from chi-square value were fitted into the equation and out of which three variables in job environment category shown significant OR and one variable was not statistically significant yet, demonstrated highly impressive OR. All these four variables (1.Interesting job, 2.Satisfied with job for the time being 3.Dislike job and 4.Disappointed in job) were in the category of job environment which were related to the present situation with the job. The first one measuring whether the job was interesting to professional nurses or not, 84.% and 18.0% in Poor and Fair QWL respectively strongly disagreed, while the 15.7% and 82.0% in Poor and Fair QWL of who strongly agreed with this proposition. The odds ratio was 58.32 (95%CI 6.35-528.47) which meant that they had 58 times chances to produce Poor QWL unless the job was interesting job. The second variable, measured the job satisfaction at the present time of professional nurses. Their perception of them were shown as 50.9% and 14.0% in Poor and Fair QWL, who strongly disagreed while 49.01% and 86.0% in Poor and Fair

QWL, who strongly agreed with proposition. This shown 12 times chances become the Poor QWL if they were unsatisfied with job at the present time(95%CI 1.15-131.63). The third, Dislike job was also important variable because it could affect the QWL 91.56 times to produce Poor QWL if professional nurses dislike their job(95%CI 5.20-1587.6). The last variable which showed the maximum affecting ability on QWL by multiple logistic regression was "Disappointed in job". The exp(B) or OR had crossed the level of thousand though not statistically significant. This variable might have very influencing effect on other variable concerned. Because on multiple logistic regression model, this factor was entered at the last step, and the magnitude of other significant factors increased after the inclusion, although they maintained their significance. Moreover only 15% of sample were exposed to this factor in Poor QWL and there was no answer in the Fair QWL group(Table 4.7). The higher odds ratio and confidence might indicated, its key role in producing Poor QWL in professional nurses.

In Forward stepwise model when likelihood Ratio(LR) is used to select a variable, the significance can be tested by the model chi-square results. It also indicates how well the model fit the equation. If with addition of the last variable the LR do not change much and chi-square value remained significant, we can conclude that model fits well for this equation.

TABLE 4.13. Goodness of fit of Fstep(LR) model

Term Removed	Log likelihood	-2 Log LR	df	Significance of Log LR
Interest	-34.646	26.532	1	0.0000
Satisbe	-24.273	5.786	1	0.0162
Dislike	-30.934	19.107	1	0.0000
Disappoi	-27.703	12.646	1	0.0004

In this calculation, Table 4.13 showed how well this model fitted with the equation used. The model chi-square value was always significant from the 1st entry to the last one.



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