

CHAPTER 3

RESEARCH METHODOLOGY

3.1. RESEARCH QUESTIONS

Primary research question

What are the levels of quality of work life(QWL) of professional nurses in a big private hospital in Bangkok Metropolis?.

Secondary research question

What are the factors affecting the quality of work life(QWL) of professional nurses in a big private hospital in Bangkok Metropolis?

3.2. OBJECTIVES OF THIS STUDY

1. To determine the levels of QWL of professional nurses working in a big private hospital in Bangkok Metropolis.

2. To describe and identify the factors affecting the QWL of professional nurses in a big private hospital in Bangkok Metropolis.

3.3. ASSUMPTIONS

1. The professional nurses in a big private hospital was thought to represent the all professional nurses who were working in any private hospital in Bangkok Metropolis.

2. Any big private hospital having beds more than 500 and having modern technology and treatment was thought to represent the modern big private hospitals of Bangkok Metropolis.

3.4. RESEARCH DESIGN

To describe the characteristics of population and assess the inter relationship with different factors within that population at one time, Cross-sectional descriptive study[20] was chosen in this study.

Reasons for choosing this study design:

1. It would be difficult to get the sample subjects and keep them in this study, if chosen other type of study.

2. Limitation in getting sample from different types of hospital due to various administrative or other barrier.

3. It was easy and convenient to conduct for this investigator.

3.5. SAMPLE SPECIFICATION

Target population

Target population in this study are professional nurses who were working in a big private hospital. The sampled population were composed of all professional nurses in a big private hospital using the following criteria.

Eligibility Criteria

Inclusion criteria

1. Professional nurses who were working in a big private hospital on full time.
2. Those who agreed to participate and answer the questionnaire.

Exclusion criteria

1. Professional nurses who were on leave during the period of study and who worked on temporary contract.
2. Those who refused participate and answer the questionnaire.

3.6. SAMPLING TECHNIQUES

In this study sampling procedure was used in two phases. One was selection of a big private hospital, and the other was selection of professional nurses. The selection of big private hospital was made by purposive sampling technique. Only one big hospital was selected [for the feasibility of the study]. The selection of professional nurses was intended to

enroll all professional nurses working in that selected hospital who met the eligibility criteria by purposive sampling technique[20]. For this study, Piyavate hospital was selected by convenience of the time and hospital cooperation. There were one hundred and one(101) professional nurses who met the eligibility criteria and were asked to participate as sample group in order to measure the level of QWL and identify the variables affecting the QWL of professional nurses by purposive sampling technique.

3.7. SAMPLE SIZE

The sample was calculated mainly to answer the primary research question. To determine the proportion of QWL in private professional nurses in a cross-sectional study, $Z_{\alpha/2}$ was the standard normal deviate for a two tailed α , where $1-\alpha/2$ was the confidence level. Thus, the allowance for chance was 5% for a 95% confidence level, $Z_{1-\alpha/2}$ was 1.96.[21]

As this study was the first phase measuring the level of QWL of professional nurses in private hospital, the previous data could not be available to support. Thus, this study assumed that 50% of professional nurses getting the Poor QWL or Good QWL. P was set at 0.50.

d represent the absolute precision at 10 percentage points.

Formula used

$$n = Z^2_{1-\alpha/2} P(1-P) / d^2$$

$$n = (1.96)^2 0.50(1-0.50) / (0.10)^2$$

After calculation 96 cases were found as the appropriate sample size required for this study. For the sake of convenience and feasibility of the study and when considered some other limitations, all 101 professional nurses who were working in a selected big private hospital were requested to participate as the sample subject, which was a little higher than the calculated number.

3.8. OUTCOME MEASUREMENT

The dependent variable of this study was the levels of QWL of professional nurses which composed of job satisfaction and professional nurses needs in the hospital. This was measured by already previously developed scales[4].

The independent variables were the factors which affect the QWL of professional nurses. These outcomes were considered as age, marital status, education, experience, salary, working department, interpersonal relationship, work condition, hospital policy & administration, work advancement and work security.

3.9. INSTRUMENTATION

The instrument used in this study was "Self-administered standardized questionnaire". This instrument was borrowed and modified from organizational behavioral science and psychology applied in organization management [4,22] which based on basic theory of Herzberg. Herzberg theory primary looked for the social, psychological and personal needs of person and if those were satisfied to a certain extent was supposed to have a good QWL.

Thus, self-administered questionnaire which was used in this study was divided into two parts. (See appendix 1)

Part 1. "Demographic data" includes the general information on socioeconomic, education, background, working unit, and other demographic components.

Part 2. "The Quality of work life scale". This was measured by measuring job satisfaction and professional needs in hospital setting. Thus it was again divided into 2 subparts.

Subpart 1. "Job satisfaction of professional nurses". It was composed of 18 items which measured the job environment by using the likert scoring system. For question 1, 2, 5, 7, 9, 12, 13, 15, and 17, scoring was as follows: strongly agree = 5; Agree = 4; Undecided = 3; Disagree = 2; strongly disagree = 1. The remaining question were scored in the reverse manner: Strongly agree = 1; Agree = 2; and so forth. Finally

the scores were summed up for the eighteen items on the questionnaire. The larger the total score the higher the job satisfaction. This question had been administered to individuals in a wide variety of job, including manager, civil service office employees, clerical workers, taxi drivers, nurses and part time graduate students. The cut of point of this scale followed the recommendation of previous studies; eleven different studies in the United States of America found the range of mean scores to between 56.72 and 76.51, with the mean of the means at 64.32[4].

Subpart 2. "Professional nurses needs in hospital".
This subpart was composed of 12 items measuring in growth needs, relatedness needs and existence needs. The likert scoring system was used to weight each items.

- * Growth needs are items 2, 5, 8, 11
- * Relatedness needs are items 1, 4, 7, 10
- * Existence needs are items 3, 6, 9, 12

Summation of the scores of each set would represent the need total of all three sets. The maximum score in each set could be 20, with a median 10. Any score lower than 10, meant as, that need to be important and substantially satisfied for that respondent. Score higher than 10, would turn the scale towards dissatisfaction. The assumption behind this logic was everyone had these needs. So the cut off point 30, the median of three sets, for as a whole of Human needs[4], would be considered as substantially satisfied need

of that respondent in this study. Of course there were probabilities to have some abnormal scoring like very high e.g, 20 in one set and as low as 2 in another, which could distort the assumption of this study. So it was proposed that if such a score was encountered, would be dealt separately.

Combining scores from above two measuring scales which followed the lower scheme would describe the levels of QWL of professional nurses in this study.

Job satisfaction scores	Human needs scores	Levels of QWL
More than equal 64.32	Less than or equal 30	Good QWL
Less than 64.32	Less than or equal 30	Fair QWL
More than or equal 64.32	More than 30	Fair QWL
Less than 64.32	More than 30	Poor QWL

The likert scale was again divided into two groups taking positive responses in one and negatives in another, in order to examine their effects upon the calculated levels of work life. For example responses obtained in job environment category, undecided to strongly disagree were grouped into Group A and all agreements were grouped into Group B. In each variable the responses were stratified into these two groups and their relation with levels of QWL were calculated.

VALIDITY AND RELIABILITY OF THE INSTRUMENT

Since the questionnaire used in this study was a new one, and borrowed from another inventory, it required enough reliability to measure QWL accurately. Thus, before gathering the data, a plan to improve the questionnaire was considered in four steps as following;

1. Content validity was assessed by the opinion of experts. Two content experts in nursing management and three in human resource management were asked to comment on the content completeness. After critical discussion with experts, some questionnaire were adjusted to ensure the content completeness.

2. The language used in the questionnaire was important because the same word may mean different things to different people. So testing for language clarity was done for this step. The professional nurses from Bumrungraj hospital were asked to read the questionnaire, question by question, and to explain their understanding to the researcher. Most of them understood deviate from original meaning, some were given more details and explanation about the original meaning of each question. After that, they were asked to rewrite appropriate question. The comments from these nurses were used to rewrite the culturally appropriate questionnaire.

3. The third step was to assess the instrumental reliability emphasizing internal consistency by Cronbach's alpha statistics which assess the correlation among items in a scale of part 2[23].

For this instrument, thirty professional nurses from Bumrungraj hospital were taken as samples for testing the reliability of the instrument. Test-retest reliability refers a second measurement taken sometime later. A six week apart test-retest was done. The result showed the coefficient of reliability for job satisfaction was 0.6328 to 0.7220 and for human needs 0.7058 to 0.7362. They were all acceptable.

3.10. DATA COLLECTION

1. The investigator posted the permission letter to three big private hospitals which had explained the operational definition; Vatesawat hospital, Piyavate hospital and Vetethanee hospital. Two private hospitals (Piyavate and Vetesawat hospital) had permitted to collect data. But for the sake of convenience of the time and other constraint, Piyavate hospital was chosen as the setting for data collection.

2. The nursing director of Piyavate hospital was contacted by formal meeting in order to explain all detail how to collect the data and was asked for her assistance in distributing the research instruments to professional nurses. The questionnaire subsequently were distributed with directions of administration. The professional nurses were

requested to respond and complete the questionnaire to the best of their response and to deposit filled up questionnaire in sealed enveloped, in nursing department. Thus confidentiality was ensured.

3.11. DATA ANALYSIS

All of the data collected were recorded in the data recording sheet. The researcher entered these data into computer using the computer program for data entry by Epi Info (Version 5) and then they were converted to analyze by SPSS PC⁺ program.

1. Initially analysis of the data collected started with summarization, which provided on idea of the nature of the data collected, and their distribution. So accordingly at the beginning some frequency tables were created.

2. Summation of scores of Human needs and Job satisfaction was done which gave the level and distribution of QWL.

3. Different factors affecting the QWL and how they were related to levels of QWL was calculated by 2x2 tables and chi-square test. Any result p-value < .05 was considered significant(24).

4. For continuous variables significant was further tested by t-test and Man Whitney test was considered in case of non-normal distribution.

5. For proportion OR were calculated with 95% CI of them were recorded and finally multivariate analysis was done by fitting the factors in a multiple logistic regression model to see the individual effect of the variables.

3.12. ETHICAL CONSIDERATION

This study involved two levels of cooperation: hospital level and individual level. At private hospitals level, the authorities had the right to refuse to cooperate at the beginning of the project. Also, individual participants had the right to cancel their cooperation. Moreover, they were allowed to resign from this study at any time. Thus, written informed consent in this study was not required. But it was ensured that the results obtained from this study would be described in general terms without mentioning any name or revealing any identity.

3.13. LIMITATION

1. The instrument "Self-administered questionnaire" might not cover the total aspects of QWL of professional nurses, which was to large a study and require lot of time, manpower and fund.

2. The result of this study might not be cover the field which were applicable for the general big private hospital or other setting. However in the mean time, the researcher hoped that the result of this study could act as

the baseline data of QWL of the professional nurses for further study which would involve in QWL, and could give more benefits for other researchers who would be interested in this issue, particularly evaluation of hospital productivity and patient satisfaction.

3.14. EXPECTED BENEFIT OF STUDY

1. The result of this study can act as a baseline data of QWL of the professional nurses for the further study which involve in QWL and can give more benefits for other researchers who will be interested in this issue.

2. Hospital administrators in private hospitals gain their understanding on nursing perspective in relation to needs and circumstances. This is one strategy among others for employee motivation and employee maintenance.

3. The patients will receive indirect benefit because of the hospitals improve work quality.

4. QWL of professional nurses will be increased since their felt needs will be fulfilled. And this will solve their problems on job security and other job related problems.