CHAPTER 3

Methodology

This chapter describes the methodology of this study included research design, population and sample, research setting, instrumentation, protection of human subjects, data collection procedure and data analysis procedure.

Research Design

A descriptive correlational research design was used to examine the level of core self-evaluation and subjective career success and to explore the relationship of these two variables among nurses at the People's Hospitals of Dali, the People's Republic of China.

Population and Sample

Population

The target population of this study included 719 nurses who have worked for at least one year of the two People's Hospitals of Dali, There were 497 nurses at 1st PHDL and 222 nurses at 2nd PHDL.

Inclusion criteria of population for this study were as follows:

1. Nurses who have worked in a clinical area at the People's Hospitals of Dali.
2. Nurses who were willing to participate in this study.

Exclusion criteria of population for this study were as follows:

1. Nurses who are in an administrative position.
2. Nurses who were away on vacation or were studying abroad.

Sample

The sample size of this study was calculated by using the formula of Yamane (1973):

$n=N/1+N\ (e)^{2}$

N= total number of population

n=sample size

e=the error in the sample defined as 5%

Sample size $n= 719 \div (1+ 719 \times 0.05^{2}) = 257$

According to the above formula, the sample size needed for this study was about 257 nurses. In consideration of possible loss of participants, 20% (51) of the sample size was added (Krejcie & Morgan, 1970) into the sample making for total of 308 nurses, 218 from the first PHDL and 90 from the second PHDL.

Sampling Technique

The proportional stratified random sampling method was used in this study, as follows:

1. The number of nurses needed from each hospital was calculated based on the proportion.

2. Proportional sampling method was used to determine the number of nurses in eight main departments from each hospital including Medical Department, Surgical Department, Obstetrics-Gynecology (OB-GYN) Department, Pediatric Department, Intensive Care Units (ICU), Operating Room (OR), Emergency Room (ER), and Out-Patient Department (OPD).

3. Randomly drawn sampling was used to select nurses from the name list of nurses who have worked at least one year at one of the departments. This process was used until the required number of nurses was obtained. Nurses participating in the

reliability testing were excluded on sample selection, to avoid bias due to repeated measurement.

4. The number of population and sample size in each department of hospitals distribution shown in Table 3-1:

Table 3-1

Number of Population and Sample Size in each Department of each Hospital

Department	1st PHDL		2nd PHDL		Total	Total
	Population	Sample	Population	Sample	population	sample
Medical	153	67	45	18	198	85
Surgical	118	52	68	28	186	80
OB-GYN	46	20	22	9	68	29
Pediatric	49	21	17	7	66	28
ICU	14	6	8	3	22	9
ER	28	12	14	6	42	18
OR	31	14	15	6	46	20
OPD	58	26	33	13	91	39
Total	497	218	222	90	719	308

Notes. 1st PHDL= the First People's Hospital of Dali; 2nd PHDL=the Second People's Hospital of Dali

Research Settings

Data were collected from nurses working in two hospitals of Dali, the People's Republic of China. They are the First People's Hospital of Dali (1st PHDL) and the Second People's Hospital of Dali (2nd PHDL).

Research Instruments

The instrument used in this study was a questionnaire consisting of three parts: (1) the demographic data form, (2) the Modified Core Self-Evaluation Scale, and (3) the Modified Subjective Career Success Scale.

Part I: Demographic Data Form

The Demographic Data Form was developed by the researcher. It consists of the items related to the variables including gender, age, marital status, educational level, professional title, employment status, working department, and number of years of work experience. The demographic information addressed personal characteristics which contained multiple-choices and filled-in the blank question items.

Part II: The Modified Core Self-Evaluation Scale

The Modified Core Self-Evaluation Scale, developed by Judge et al. (2003) and modified (two items were deleted) and translated into Chinese by Du et al. (2012). The modified version of Core Self-Evaluation Scale involves ten items self-reporting measure of core self-evaluation. It has four subscales including generalized self-efficacy (2 items), self-esteem (5 items), neuroticism (1 item), and locus of control (2 items). These items cover the content domains of the constituent core traits. Items are rated from 1 (strongly disagree) to 5 (strongly agree). Six of the ten items are reversed scores (item 2, 3, 5, 7, 8, and 10). The mean score is the sum and average of the items, the score range was from 1 to 5. Higher scores indicate a higher level of core self-evaluation. There was an acceptable construct validity and internal consistency reliability in Du et al. (2012) study. The possible levels of core self-evaluation was classified into three levels approved by Du et al. (2012) as follows:

Mean score	Level of core self-evaluation
1.00-2.33	Low
2.34-3.67	Moderate
3.68-5.00	High

Part III: Modified Subjective Career Success Scale

The Modified Subjective Career Success Scale based on the Subjective Career Success Scale of Gattiker and Larwood (1986), modified (deleted one item, and modified two words) and translated into Chinese by Yin (2012). The modified SCCS had 21 items with five subscales including job success (8 items), inter-personal success (4 items), financial success (2 items), hierarchical success (4 items), and life success (3 items).

Responses were rated by using the 5-point Likert Scaling from 1= strongly disagree to 5= strongly agree. The mean score is the sum and average of these items, the score ranged is from 1 to 5, the higher score, the higher the perception of subjective career success. According to Yin (2012), the possible levels of overall and each dimension of subjective career success was interpreted using these criteria:

Mean score 1.00-2.33 = low level of subjective career success
Mean score 2.34-3.67 = moderate level of subjective career success
Mean score 3.68-5.00 = high level of subjective career success

Validity of Instruments

For the modified version of CSES with a good construct validity in Du et al. (2012). For the modified version of SCSS, with a good Content Validity Index in Yin (2012). In this study, these two instruments was used in this study without any modifications.

Reliabilities of the Instrument

In this study, the Modified Core Self-Evaluation Scale and the Modified Subjective Career Success Scale were tested for the internal consistency reliabilities with 20 nurses working in the one People's Hospital of Dali who had similar characteristics as participants in this study. The reliability of the Modified Core Self-evaluation Scale was 0.80 while the reliability of the Modified Subjective Career Success Scale was 0.88, and the Cronbach's alpha coefficient of the subscales of job success, inter-personal success, financial success, hierarchical success, and life success were 0.70, 0.87, 0.89, 0.88, and 0.94, respectively.

Ethical Consideration/to Protect of Human Subjects

The research proposal was submitted to the Research Ethic Review committee in Faculty of Nursing Chiang Mai University, Thailand and approval was obtained before data collection. Participants were selected after getting permission from the Directors of the Hospitals and the Nursing Departments of Hospitals of Dali. In order to assure the protection of human rights, participants were informed about the purpose and methods of the study. An information sheet explaining the study and consent forms were sent to all

participants who were willing to participate in the study. The nurses were informed that participation in this study was entirely voluntary and they have right to refuse, stop or discontinue the study at any time without any negative consequences and/or punishment and/or loss of any benefits. A statement included in a cover letter to guarantee confidentiality and anonymity of the individual responses. Only code numbers was used for follow-up questionnaires in cases where there is no response from a participant. The informed consent forms which were signed by all participants were kept by the researcher, however, the information sheet remained with participants. Information provided by the participants will only be used for this study and will be kept confidential. The results of the study were presented as an overall group.

Data Collection Procedures

Data collection in this study was conducted from January to February 2017 at two People's Hospitals of Dali, the People's Republic of China. Data collection steps were as follows:

1. The researcher submitted the proposal and received the permission to collect data from Research Ethics Review Committee of the Faculty of Nursing, Chiang Mai University.

2. After receiving the approval letter from the Dean, Faculty of Nursing, the research proposal, application letter for permission to collect data, and the Chinese version of the data collection questionnaires were sent to the directors of the hospital and nursing department of the two hospitals for approval to collect data.

3. The researcher met the directors of the hospital and nursing department of each hospital to explain the purpose, method and the benefits of this study to get their permission and obtain the name list of nurses' from the nursing departments then undertake the work to list all the sampled subjects.

4. The researcher asked for one coordinator from the nursing department in each hospital. Before the coordinators distributed the questionnaires, the researcher trained them about research objectives, questionnaires, participant's right, data collection method and process.

5. The proportional stratified random sampling method was used to determine sample size from each hospital and each department. The researcher randomly selected sample names from the list of the nurses in the nursing units except those nurses who would participated in the reliability test.

6. The researcher prepared two open envelopes for all selected participants. One envelope contained the information sheet and the consent form, another envelope contained the questionnaire. The information sheet informed participants that their participation is entirely voluntary and they may withdraw at any time without any punishment.

7. The researcher and coordinator distributed 308 questionnaires along with the information sheet and consent form to all the participants. All the participants in the study were requested to complete the questionnaires in their private time and required to return the questionnaires and consent forms that have participants signature within two weeks in sealed envelopes, however, information sheet remained with participants.

8. The researchers prepared two boxes for consent forms and questionnaires to separately place in each hospital. All of the returned questionnaires were secured in the locked boxes in each hospital. The researcher laid these two boxes in front of the nursing departments after receiving permission from the two directors of nursing department to ensure only the researcher could open the locked boxes.

9. After two weeks, all questionnaires were collected by the researcher with the help of coordinator from the designated boxes and were checked for the completion. Incomplete questionnaires were excluded.

10. There were 294 questionnaires returned with the total response rate of 95.46% and 14.54% incomplete questionnaires were excluded of the calculated number. Among the returned questionnaires, 288 (93.51%) questionnaires were completed for data analysis.

Data Analysis Procedures

Data were analyzed by using the Statistical Package (SPSS 13.0). Both descriptive and inferential statistics were performed for data analysis in this study. Significant level (α) was set at 0.05 and the data analysis procedure was divided into three parts:

1. The demographic data were analyzed by using frequency, percentage, mean, and standard deviation.

2. The level of core self-evaluation and subjective career success were analyzed by mean score and standard deviation.

3. The data distributions of core self-evaluation and subjective career success were tested by Kolmogorov-Smirov statistic command. The data of subjective career success showed normal distribution, however, the data of core self-evaluation was not a normal distribution, thus, Spearman's Rank-order correlation coefficients was used to examine the relationship between core self-evaluation and each dimension of subjective career success. According to Grove, Burns, and Gray (2012) the r value represents the relationship among variables: $r < 0.30$ was considered a weak relationship; $0.30 \leq r \leq 0.50$ was considered a moderate relationship; $r > 0.50$ was considered a strong relationship.