

Causal Relationship Model of Factors Affecting Workplace Happiness among Head Nurses' of Secondary Hospital at Northern Region, Thailand

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ABSTRACT

Introduction: There is a growing recognition for workplace happiness worldwide. If employees work in an unfavorable atmosphere, this may lead to boredom, discouragement and disengagement as well as alienation from colleagues; thereby becoming unhealthy for both employees and organisations.

Aim: To develop a causal relationship model of factors affecting workplace happiness among head nurses and test the model with empirical data collected with the chosen research sample.

Materials and Methods: This research uses the causal relationship research method. A five point Likert scale questionnaire about factors affecting workplace happiness was administered to 196 head nurses at secondary hospitals, northern Thailand. It included six latent variables: 1) leader characteristics; 2) work satisfaction; 3) awareness of the professional values; 4) organisational climate; 5) social support; and 6) workplace happiness. Analysis instruments were descriptive statistics i.e., frequency, percentage, average, standard deviation, Pearson product moment correlation, and linear structural relationship model.

Results: Based on the causal relationship model, the following factors were identified as influencing workplace happiness among the head nurses: social support, work satisfaction, organisational climate, leader characteristics and awareness of the professional values, respectively. After adjustment as alternative model, the causal relationship model of workplace happiness fit the empirical data, with Chi-square (χ^2)=238.098, df=205, Comparative Fit Index (CFI)=0.99, Root Mean Squares Error of Approximation (RMSEA)=0.02, Tucker-Lewis Index (TLI)=0.98, Standardised Root Mean Square Residual (SRMR)=0.04. This means that the variables in the model can explain the variance of workplace happiness by 46.6%.

Conclusion: Drawn from the causal relationship model of factors influencing happiness at work among the head nurses, the factors with the most influencing overall impact on happiness at work are: work satisfaction, organisational climate, social support, and leadership characteristics.

Keywords: Employee, Organisational climate, Satisfaction, Work environment

INTRODUCTION

The health service system in Bangkok has been adjusted and improved in order to provide the public with the service of standard quality under limited resources. Downsizing of the organisation resulted in overwork of the nurses. Moreover, managers in the nursing service management system lacked of skills and experiences and ignored the rules of effective resource management. Along with insufficient support, these factors caused the conflict among individuals in the organisation [1]. Nursing organisations have been established to deliver nursing services as well as to assist patients in recovering from sickness and continuing their lives. Human resources in these organisations are comprised of nurse administrators, nurse educators, staff as well as practical nurses, including ward clerks [2]. Nurses play a key role in keeping the service recipients satisfied, as well as ensuring smooth operation of hospitals. To fulfill all their job requirements, nurses need to comply with professional ethics as well as morality [3].

Nursing organisation is an agency or an organisation officially established for nursing service mission, with the purposes of saving patients from risk, assisting them to have the adequate well-being lives, and promoting their quality of life. Personnel in nursing organisation comprises of staff from various levels, i.e., nurse administrators, nurse educators, staff nurses, practical nurses and ward clerks nurses are a key to an organisation's success. They perform several duties not just being vital to high quality patient care, but also play an important role in the healthcare system for developing and enforcing practical health policies and procedures that finally result in the

effective management for the organisation [1]. Thailand's 20-Year National Strategy exhibits vision and mission about making people healthy, employees happy, and healthcare system sustainable [4]. Drawn from the national strategy with a focus in healthcare sector [4] and a review of relevant literature [5,6], it is evident that there are numerous factors affecting workplace happiness e.g., awareness of professional values, work satisfaction, and organisational climate. Most of the previous studies [7,8] seemed to focus on relationships and factors affecting workplace happiness in other contexts than healthcare.

Thus, this research sought to explore the issues of workplace happiness among head nurses at northern Thailand's secondary hospitals by using a Structural Equation Model (SEM). The current findings would give some insights about nursing research and workforce management, thereby leading to higher performance and sustainable growth for hospitals.

MATERIALS AND METHODS

This research uses the causal relationship research method. The selected research site included 16 secondary hospitals with the number of beds ranging from 121 to 500, located in both upper and lower northern parts of Thailand. The study was conducted from June 2019-September 2020.

The researcher conducted the right protection of the research participants by submitting a request for approval from Human Research Ethics Committee (HREC), Naresuan University (certificate

of approval: COA No.178/2019 IRB No. 0157/62 on 8 May 2019). During data collection process, the researcher also explained the participants about research aims and method and also gave the contact details for any question and ensured data confidentiality and anonymity.

Inclusion criteria: Among these 16 hospitals, there were 300 head nurses in total at the time of the study. The questionnaires were posted to 250 head nurses who fulfilled the following criteria: Registered nurses with a Bachelor of nursing or diploma in nursing and midwifery, have been head nurses/ward leaders for at least one year and willing to participate and gave consent in the research.

Exclusion criteria: Nurses who were uncomfortable. in providing information and unwilling to participate in the research.

Sample size calculation: According to Hair JF et al., [9], the minimum criterion of the sample size for a linear structural relationship model is between five and ten participants for each estimated parameter. This study had 24 parameters and thus required at least 120 participants. While the researcher aimed for a sample size of 200.

Data Collection

The researcher wrote a letter seeking for permission to conduct research and submitted to the dean of Faculty of Nursing, Naresuan University, Thailand and informed the Faculty of the research while asking for permission to travel for data collection. They took permission for doing research from the administrators of secondary hospitals in the north. Finally, a questionnaire was mailed in sealed envelopes to 250 head nurses of the studied hospitals and they were asked to fill the questionnaire and send back by post. Among them, 196 returned the completed questionnaires (78.4% response rate). The data collection took around four months from May 2020-August 2020.

Study Procedure

Data were collected by employing a set of self-administered questionnaires which had been distributed by post to examine research objectives and also to investigate factors influencing nurses' workplace happiness, to test the hypothesis by constructing SEM, and to predict the outcomes using test confirmatory factors. In addition, the survey consisted of two sections. In the first section, demographic characteristics of head nurses were collected through five questions. The second section comprised of a 5-point Likert scale 24 questions aimed at gathering about leader characteristics, work satisfaction, awareness of professional values, organisational climate, social support and workplace happiness and using the mean scores of the sample groups to consider the levels as follows: 1-1.50=Strongly disagree (lowest), 1.51-2.50=Disagree (low), 2.51-3.50=Not sure (moderate), 3.51-4.50=Agree (high) and 4.51-5.00=Strongly agree (highest).

The questionnaire was examined by five experts for content validity and reliability. Content validity index was equal to 0.87. For reliability, Cronbach's alpha coefficient was obtained as follows: 0.88 for leadership characteristics, 0.83 for work satisfaction, 0.84 for awareness of professional values, 0.89 for social support and 0.94 for organisational climate as well as 0.86 for workplace happiness.

The following are the analysis procedure steps [10]:

1. Validity and reliability tests of the questionnaire items.
2. If there are indicators that are invalid and unreliable then these variables will be eliminated.
3. Model specification by designing structural models and measurement models.
4. Create a path diagram by connecting the latent variables the path diagram was formed based on the research hypothesis.
5. SEM estimation using Weighted Least Square (WLS) method [11].

6. Testing the estimated model and evaluate the model using the Goodness of Fit (GOF) index.

STATISTICAL ANALYSIS

The analysis of the SEM starts from retrieving data from Statistical Package for the Social Science (SPSS) for Windows version 17.0 analysing the SEM using linear structural relationships from Mplus program version 8.4. The necessary steps included preparing raw data, constructing a model or picturing a model based on research, deciding model presentation, analysing the model, and adjusting the model based on the statistics of observable variables which had effects on latent variables.

RESULTS

Among the 196 participants, 195 were women; with 148 aged 51 years or above (75.5%); 124 earned a Bachelor of Nursing (63.3%); 118 were married (60.2%); and 59 had working experience as ward leaders from one to five years (30.1%) [Table/Fig-1].

Data	Number	Percentage (%)
Gender		
Men	1	0.5
Women	195	99.5
Age (years)		
31-40	8	4.1
41-50	40	20.4
51 and above	148	75.5
Education		
Bachelor	124	63.3
Master	70	35.7
PhD	2	1
Marital status		
Single	56	28.6
Married	118	60.2
Widowed	9	4.6
Separated/divorced	13	6.6
Working experience as a ward leader (in years)		
1-5	59	30.1
6-10	47	23.9
11-15	38	19.4
16-20	18	9.2
21-25	16	8.2
Over 25	18	9.2

[Table/Fig-1]: Demographic data of research participants (n=196).

[Table/Fig-2] shows that all factors were rated high in overall scores, ranging from awareness of professional values, leader characteristics, social support, work satisfaction, organisational climate, and workplace happiness.

It is noteworthy that factor loadings of observed variables were all positive from 0.26 to 0.95, with a significance value of 0.001. The observed variable with the highest factor loading was positive affect in the latent variable of workplace happiness while the one with the lowest factor loading was negative affect. An analysis of alpha coefficients of all the observed variables (R²) suggested that covariance of these variables ranged between 0.07 and 0.90.

From the analysis, the GOF with the causal relationship model and the empirical data, by testing with Chi-Square, was found with 238.098 with Degree of Freedom (df) of 205, equal to a p-value of 0.56. This was also equal to a CFI value of 0.99 as well as an TLI value of 0.98. Further, it was equal to a SRMR value of 0.04, and a RMSEA value of 0.02 with a significance level of 0.001.

Variables	Descriptive statistics			Linear structural model			
	(\bar{x})	SD	Level	b	SE	T	R2
Leader characteristics							
1. Technical proficiency	4.06	0.52	Agree	0.79	0.03	27.05***	0.63
2. Morality and ethics	4.23	0.59	Agree	0.90	0.02	50.89***	0.82
3. Personality	4.28	0.54	Agree	0.86	0.02	37.68***	0.73
4. Communication	4.11	0.58	Agree	0.87	0.04	24.47***	0.76
5. Conflict management	4.04	0.66	Agree	0.89	0.02	47.18***	0.79
Work satisfaction							
1. Compensation and welfare	3.84	0.69	Agree	0.47	0.06	7.68***	0.22
2. Safety	4.06	0.57	Agree	0.49	0.06	8.33***	0.24
3. Job characteristics	4.21	0.51	Agree	0.68	0.04	15.38***	0.46
4. Relationship with colleagues	4.21	0.52	Agree	0.66	0.05	14.69***	0.44
5. Relationship with supervisors	4.03	0.58	Agree	0.33	0.06	5.08***	0.53
6. Career advancement	3.50	0.73	Agree	0.33	0.07	4.75***	0.11
Awareness of professional values							
1. Role and duties	4.47	0.45	Agree	0.71	0.04	16.12***	0.50
2. Pride	4.31	0.49	Agree	0.89	0.04	25.43***	0.80
Organisational climate							
1. Key organisational process	4.09	0.47	Agree	0.75	0.05	15.34***	0.56
2. Organisational structuring	3.82	0.53	Agree	0.64	0.05	13.27***	0.40
3. Internal social system	3.97	0.44	Agree	0.77	0.04	18.96***	0.59
4. Technology	3.96	0.57	Agree	0.73	0.04	16.59***	0.53
Social support							
1. Emotion	4.06	0.45	Agree	0.74	0.04	18.92***	0.55
2. Information	3.84	0.52	Agree	0.62	0.05	11.89***	0.38
3. Assessment	4.05	0.48	Agree	0.76	0.04	19.95***	0.58
Workplace happiness							
1. Life satisfaction	4.36	0.45	Agree	0.47	0.09	5.23***	0.53
2. Work satisfaction	4.00	0.48	Agree	0.60	0.13	4.63***	0.64
3. Positive affect	4.19	0.48	Agree	0.95	0.04	23.64***	0.90
4. Negative affect	3.11	0.88	Not sure	0.26	0.07	3.79***	0.07

[Table/Fig-2]: Analysis of the confirmation elements of the latent variable measurement model.

***p<0.001, descriptive statistics and confirmatory factors analysis; (\bar{x}) mean, (SD) Standard deviation, (b) beta, (SE) standard error of estimate, (t) t-test statistic, (R2) square multiple correlation, descriptive statistics and confirmatory factors analysis was used

Given the path analysis of latent variables of factors affecting workplace happiness, awareness of professional values was found with indirect influence at 0.47, with a significance value of 0.001, via other latent variables of leader characteristics, social support, organisational climate, and work satisfaction. Further, the latent variable of work satisfaction was identified with direct impact on workplace happiness at 0.78, with a significance value of 0.001. Awareness of professional values was also indicated with indirect

influence at 0.22 with a significance value of 0.001 through work satisfaction. With respect to organisational climate, it was indicated as indirect influence at 0.69 with a significance value of 0.001 through work satisfaction as displayed in [Table/Fig-3].

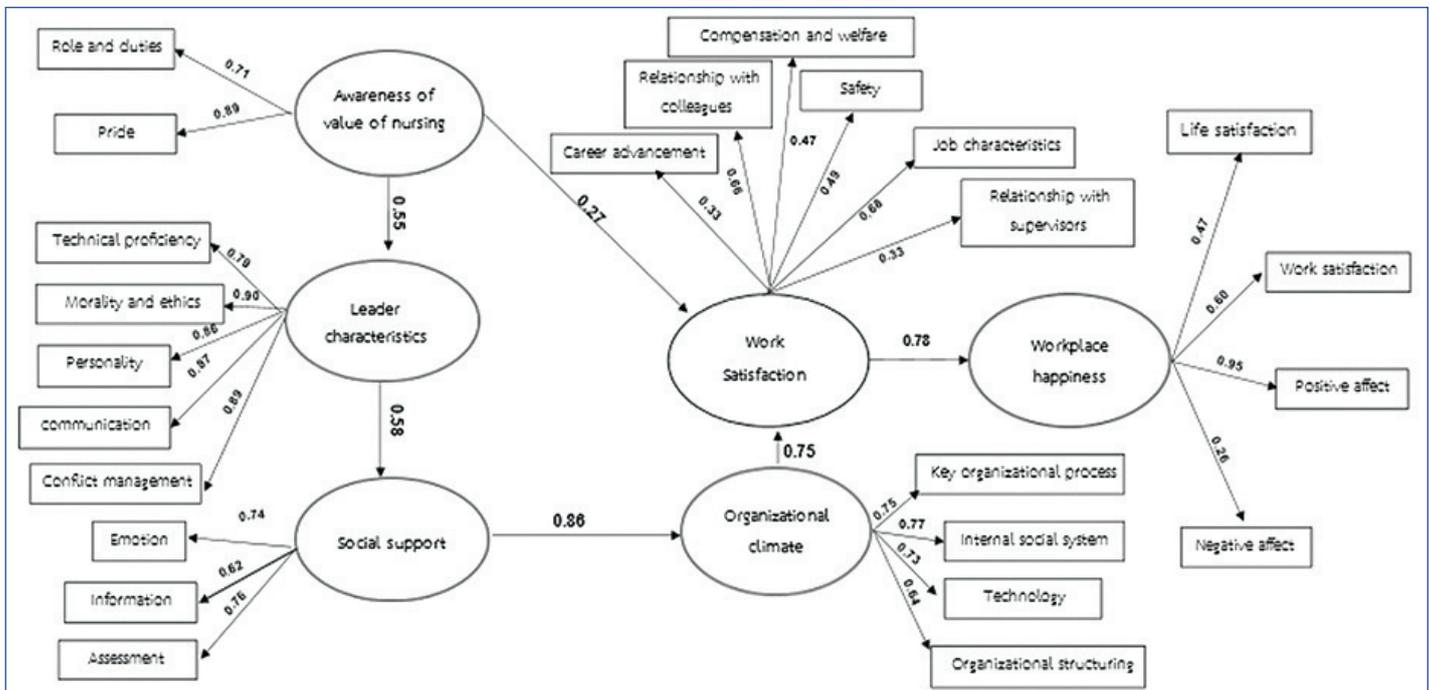
The factors shown in [Table/Fig-4] were identified to influence workplace happiness among the head nurses: social support, work satisfaction, organisational climate, leader characteristics and awareness of the professional values.

Dependent variables	Leader characteristics			Work satisfaction			Awareness of professional values			Organisational climate			Social support			Workplace happiness		
	TE	IE	DE	TE	IE	DE	TE	IE	DE	TE	IE	DE	TE	IE	DE	TE	IE	DE
Leader characteristics	-	-	-	0.15**	0.15**	-	0.55***	-	0.55***	0.51***	0.51***	-	0.58***	-	0.58***	0.47***	0.47***	-
Work satisfaction	0.15**	0.15**	-	-	-	-	0.27***	-	0.27***	0.75***	-	0.75***	0.76***	0.76***	-	0.78***	-	-
Awareness of profession values	0.55***	-	0.55***	0.27***	-	0.27***	-	-	-	-	-	-	-	-	-	0.22**	0.22**	-
Organisational climate	-	-	-	0.75***	-	0.75***	-	-	-	-	-	-	0.86***	-	0.86***	0.69***	0.69***	-
Social support	0.58***	-	0.58***	0.76***	0.76***	-	-	-	-	0.86***	-	0.86***	-	-	-	0.59***	0.59***	-

[Table/Fig-3]: Influence coefficient of the causal relationship model of workplace happiness.

(Goodness of Fit Measures): $\chi^2/df < 2$, p-value > 0.05, CFI ≥ 0.90 , TLI ≥ 0.90 , RMSEA < 0.05, SRMR < 0.05, p < 0.001 TE: Total effect; IE: Indirect effect; DE: Direct effect; statistical significance at level p < 0.001

Refers to factors that influence the workplace happiness was statistically significant at level p < 0.01; *Statistically significant at level p < 0.001



[Table/Fig-4]: Causal relationship model of factors affecting workplace happiness among head nurses' of secondary hospital at northern region Thailand.

DISCUSSION

The current research indicated five factors affecting workplace happiness among head nurses at northern Thailand's secondary hospitals: work satisfaction, awareness of professional values, leadership characteristics, organisational climate, and social support. These findings are confirmed by Diener E who suggested that happiness components are likely to associate with life satisfaction as well as satisfaction gained from achieving main life goals [6]. These goals may range from work satisfaction, life experience, or actions associated with high positive as well as low negative affect. In this research, work satisfaction was the most influential factor for workplace happiness in the sampled head nurses with a statistical significance. Among the observed variables of factors, work satisfaction was the one with the highest factor loading (b=0.78). This was also consistent with what indicated that nurses seem to perceive and interpret workplace happiness in accordance with their views and experiences [12]. That is, happiness could be defined as fulfillment, pride, independence which was similar to the findings by Manion J [7]. They stated that love and admiration for work, excitement as well as willingness to perform every aspect of tasks are key reasons for keeping people happy. Also, work satisfaction appears to be commonly reported in other studies [3,5] conducted in different work settings.

As proposed by Warr P, there are three components of workplace happiness: delight in work, satisfaction with work, and enthusiasm for work [13]. Organ DW et al., advocate that work satisfaction, among several other factors, is a transition factor with the highest influence on behaviours of organisational members [14].

Another interesting finding is that awareness of professional values emerged as a factor indirectly influencing workplace happiness via work satisfaction. This was confirmed by Promchoo N, who reported that professional values were positively related to workplace happiness among registered nurses with a high level as well as a statistical significance [15]. Likewise, most registered nurses are likely to be aware of the importance of their profession values which mainly involve sacrifice [16]. Additionally, Edgar L stated that when registered nurses are aware of their professional values, they will be strongly committed to their tasks, attempt to make their best, and attain workplace happiness [17]. Hence, nurses are full of self-esteem and proud to perform their tasks in helping patients recover [18]. Nurses who are satisfied in their jobs, have a sense of giving in terms of Buddhist

perspectives, gain respect in the profession as well as have good health (internal factors) are likely to retain their jobs. External factors such as family support, co-worker support in the workplace and high salary were found to be significant for retention [19]. This means that most nurses recognise professional values, originated internally, which can lead to happiness and pride [20].

Such other factors as organisational climate, social support, and leader characteristics also contribute to workplace happiness. That is, factors affecting workplace happiness include a healthy working environment and good relationship with colleagues as well as leaders who provide support and working directions [8]. This result was consistent with those of previous research. For example, Lertwiboonmongkoi J and Angsuroch Y A concluded that challenging tasks that can help develop rational thinking emotions as well as intelligence are essential factors for success and workplace happiness [21]. Promsri C also proposed that workplace happiness tends to occur with good colleagues as well as supervisors [22].

Similarly, iOpener, a UK consulting firm in human resource management says that key factors of working happily contain five components or 5Cs: contribution, conviction, culture, commitment, and confidence [23]. These factors reflect how employees are happy with work while maximising their potential and competency. This is also confirmed by Pathomchaiumporn R and Jadesadalug V who studied the perception of support from organisations that impact employee effectiveness by a balanced score card technique [24]. This technique suggested that the perceived support from organisations consists of support in resource allocation, skill and capacity development as well as information technology were all ranked as high influence on employee effectiveness. From hypothesis testing of this prior work, perceived organisational support was of a positive impact on employee performance. Hence, this means that perceived organisational support can predict workplace happiness as well.

According to the research, it was found that the factor having the most overall influence and direct influence was job satisfaction. Therefore, when the organisation takes this factor into consideration, the head nurses will be ready to work for the organisation and be more loyal to the organisation, resulting in their highest productivity. A better job satisfaction will enhance their happiness at work, and consequently improve their quality of life.

Limitation(s)

While this research solely used a questionnaire which provides unbiased data, the questionnaire cannot best represent all participants' opinions or experiences. Additional qualitative tools such as interviews with some participants, open-ended questions, and free-text comments at the end of the questionnaire would complement the quantitative analysis as well as explain some of the results.

CONCLUSION(S)

The study of the causal relationship model of factors impacting workplace happiness among head nurses at northern Thailand's secondary hospital demonstrated the following four influential factors: work satisfaction, organisational climate, social support, and leader characteristics. As for the analysis of direct and overall influences on workplace happiness, work satisfaction was the most crucial factor with influence coefficient of 0.78.

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REFERENCES

- [1] Thongdee P, Na Nongkhai S, Siri S. Relationship and predictors of effectiveness of patient ward perceived by registered nurse in a governmental hospital, Bangkok metropolitan. *J Health and Nurs Res*. 2012;28(2):01-10.
- [2] Srisathitnarakun B. Research methods in nursing science. 4th ed. Bangkok, U&I inter media 2007;4:22-40.
- [3] Jintanawalee N. The related factors of work happiness among critical care nurse in an autonomous university hospital. *J Nurs Sci and Health*. 2019;42(2):87-95.
- [4] Ministry of public health. Public health statistics. Bangkok: [Online]. Available from: <http://ghdx.healthdata.org/organisations/ministry-public-health-thailand> [Accessed cited 2019 may 15].
- [5] Panyakumpol J. Factors affecting the happiness of professional nurses private hospital eastern region. *Rajamangala University of Technology Tawan-ok Social Science Journal*. 2013;2(2):104-08.
- [6] Diener E. Subjective well-being. *Psychol Bull*. 2008;95:542-75.
- [7] Manion J. Joy at work!: creating a positive workplace. *J Nurs Adm*. 2003;33(12):652-59.
- [8] Phasukyud P. Knowledge management for new developer. Bangkok: Silk Publishing House; 2007. Thai.
- [9] Hair JF, Black WC, Babin BJ, Anderson RE. *Multivariate Data Analysis*. 7th ed. New Jersey: Pearson Prentice Hall; 2010.
- [10] Meyers L, Gamst G, Guarino AJ. *Applied multivariate research: Design and interpretation*. 3th ed. Los Angeles, CA: Sage Publications Inc. 2017;5:120-45.
- [11] Lu HL, Tao SH. The estimation of pareto distribution by a weighted least square method. *Quality & Quantity*. 2007;41(1):913-26.
- [12] Wannapin T, Wiserith W. Happiness at work of professional nursing staffs in an autonomous university hospital. *Rama Nurse Journal*. 2012;18:09-23.
- [13] Warr P. *Work, happiness, and unhappiness*. 3th ed. New Jersey: Lawrence Erlbaum Associates Inc. 2007;5(5):01-03.
- [14] Organ DW, Podsakoff PM, Mackenzie SB. *Organisational citizenship behavior Its Nature, Antecedents and Consequences*. London: Sage Publications Inc. 2006.
- [15] Promchoo N. Happiness workplace of professional nurse in community hospital, Nakhonsritammarat province. *The Journal of Boromarjornani College of Nursing Suphanburi*. 2020;3(1):81-98.
- [16] Sirilai S. *Ethics for Nurses*. 13th ed. Bangkok: Chulalongkorn Press; 2013. Thai.
- [17] Edgar L. Nurses' motivation and its relationship to the characteristics of nursing care delivery systems: A test of the job characteristics model. *Can J Nurs Leadersh*. 1999;12(1):14-22.
- [18] Suwannachart P. Moral and ethics in the professional documentation of nursing and midwifery law and practice in nursing and midwifery professionals nursing council. Bangkok: The best graphic and print; 1998.
- [19] Chirawatkul S, Songwathana P, Rungreangkulkij S, Fongkhe W, Deoisres W, Sindhu S, et al. Happiness and professional attachment amongst Thai registered nurses. *Thai Journal of Nursing Council*. 2012;27(4):26-42.
- [20] Thara K, Wivatvanit S, Kespichayawattana J. *Nursing work values: Meanings and experiences of professional nurses*. Bangkok: Chulalongkorn university press; 2008.
- [21] Lertwiboonmongkol J, Aunguroch Y. Personal factors, work empowerment, achievement motivation, and work happiness of staff nurses, governmental university hospitals. *Thai Journal of Nursing Council*. 2004;19(2):26-38.
- [22] Promsri C. *A handbook for excellent organisations*. Bangkok: Panyachon press; 2008.
- [23] *The Science of Happiness at work: A case study* [Internet]. 2010 [cited 2019 May 15] Available from: <https://iopenerinstitute.com/an-iopener-case-study/>.
- [24] Pathomchaiumporn R, Jadesadalug V. The influence of perception in supporting the organisation affecting to staff's performance efficiency based on the Balanced Score Card (BSC) concept. *Journal of Community Development Research (Humanities and social science)*. 2013;6(2):75-85.

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