Factors Related to Performance Effectiveness of Dental Nurse in Primary Care Unit in the Northeastern Part of Thailand

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Objective: To investigate the relationships between job characteristics, motivation, role stress and performance effectiveness of dental nurses in primary care units in the northeastern part of Thailand.

Material and Method: A explanatory cross-sectional study was conducted in 326 dental nurses who were working in 310 PCUs of 19 provinces, 220 amphurs in the northeastern part of Thailand were taken as the study samples. Data were collected by using questionnaires. Pearson's Product Moment Correlation was applied to test between job characteristic model, motivation, role stress and performance effectiveness.

Results: The analysis showed that there was no relationship between job characteristics model and performance effectiveness as performing dental task needed 'dealing with others' and 'task significance'. There was a positive relationship between motivation and performance effectiveness at a low level. Role stress was not related to performance effectiveness; however, when the dental nurse had more stress caused by role conflict internal standard, several roles and their performance effectiveness was reduced.

Conclusion: From the research result, it is necessary to help construct networks of dental tasks and other public health tasks in obvious forms, for some feedback from agents. Work allocation should be precisely arranged and professional skill should be determined responsibility. Lastly, recruiting dental nurses with proper characteristics in primary care units in the northeastern part of Thailand is crucial as well.

Keywords: Job characteristics model, Motivation, Role stress, Performance effectiveness

The health care reform was implemented to match the needs of Thai people and the society. With an aim to closely provide health care service to the Thai, many primary care units (PCUs) have been built. As a result, power and authority regarding healthcare and health security were decentralized. The holistic care was also set up by a community to continuously support a community itself. In a PCU, health care services are provided by its staffs[1]. The characteristics of service in PCUs should be integrated health services to fit for all age groups covering the best solution for basic health problems at both individual and family level. Moreover, such service must include curative, promotive, preventive and rehabilitative healthcare activities for both physical and mental of each person.

Another added services such as the control and prevention of communicable and noncommunicable diseases in local area and the prevention of diseases caused by environment and occupation are provided. In addition, surveillance system in a community, consumer protection regarding food and drugs, including standard and quality of care are also offered[2].

Dental Public Health tasks is one of the main service that is necessary in PCUs, thus dental nurses were allocated to PCUs to provide dental care at primary level. These cares includes encouraging people to join the process of dental care, dental health promotion, oral disease control and prevention. Dental nurse

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refers to a person who finished and hold certificate of dental nurse, provided by the Sirindhorn Public Health College, Ministry of Public Health. He or she must have knowledge and skill to provide dental care and services to children aged less than 14 years[3]. Autonomous Performances of dental nurses under the Dental Act, BE. 2539 are 1) dental prevention 2) emergency Dental therapy 3) dental therapy and 4) gum treatment by scaling[4]. Dental nurses working in a PCU need to integrate all dental tasks by using their skill and knowledge to carry out their work covering the main target in a unit and its networks. Some PCUs had a full-time dental nurse with the support for resource and budget from community hospitals or the secondary health facility. As a result, a dental nurse must work on his/her own from the first step until the last one. A proper decision making is needed and some factors affecting their performance effectiveness should be assessed.

To enhance PCUs on performing the complete and effective roles according to people's needs in local area, the ratio of dental staffs per population must not less than 1:10,000. The ratio of total working time for dental staffs to encourage people to join oral care activities should be three-fifths. The rest two-fifths of working time should be for oral disease control and prevention. During transformation period, in the area where dental staff is lacking, the ratio of dental staffs per population should not less than 1: 20,000 (covering all population under responsibility of PCUs in the second type). In this case, the healthcare team should be developed to have effective potential in providing oral care-encouraging people to effectively join dental health promotion. Therefore, the dental staffs will spend four-fifths of the total time to perform oral disease control and prevention. The rest one-fifth is spent for assisting or supporting the health promotion team[5].

Most dental nurse had been working for 1-2 years or less. Working in a PCU where there was no dental team as in a Community hospital and lacking of experiences in providing dental care, can caused dental nurses to feel unconfident doing their work and feel insecure with their career advancement comparing to a Community hospital.

Most dental nurses were responsible for all dental tasks and other public health tasks. They need to be responsible for the tasks of other 2-4 Tombons nearby such as School-based oral health program, mobile dental service, training, and providing dental service in different Tombons. Except from Dental Public health, 72.2% of them had to do other jobs within health centers such as being in charge, having responsible villages and providing dental care to such villages, administrating paper work, and giving general treatment. For this point, it was easily seen that dental nurses lacked of experiences so they could not perform their roles smoothly[6].

Other assigned tasks did not fall within the scope of dental nurses' duties, thus they unavoidably felt uncomfortable and unconfident to perform such tasks. Moreover, inexperience in providing other public health tasks, the dental nurse may make an error that has a negative impact to an individual or even to an organization at last.

The competence of dental nurses who were working in PCUs consisted of abilities to perform dental condition, to promote oral health, dental disease control & prevention, and dental treatment. This work needs professional skills at a high to the highest level[7]. Moreover, providing dental service in PCUs is necessary and dental staffs cannot deny this work. Sometimes dental nurse have to provide complicated dental service under control of a dentist in each PCU. This is a conflict between real practice and the regulations prescribed by the Ministry of Public Health regarding dental tasks under control of a professional dentist, BE, 2539.

From literature review about related researches, the researcher found that work characteristics, motivation and role perception were related to work performance. The ambiguous and role conflict was negatively related to quality of work, overload and outcomes. The researcher had considered to use some variables affecting work outcomes-job characteristics model, motivation and role stress[8-12]. As a result, the variables in this study include independent variables (motivation according to Maslow's Hierarchy of Need theory, role stress and job characteristics model) and the dependent variables (performance effectiveness). Thus, this present study aimed at analyzing the factors related to performance effectiveness of dental nurses in PCUs in the northeastern part of Thailand, on the hypothesis that Job characteristics model and motivation were a high level of positive correlation to performance effectiveness of dental nurse in PCUs and role stress was negatively related to performance effectiveness of dental nurses in the northeastern part of Thailand.

Material and Method

A explanatory cross-sectional study was conducted in 326 dental nurses who were working in

310 PCUs of 19 provinces, 220 amphurs in the north-eastern part of Thailand were taken as the study samples. Questionnaire constructed by the researcher was divided into 5 parts as follows:

Part 1 questionnaire about performance effectiveness was measured by using 4 levels of rating scale are as follows: 4 points = strongly agree... 1 points = strongly disagree. The questionnaire of TJ. Delong was adapted[13] and was used as research instruments. The questionnaire was composed of 44 questions. Performance effectiveness means a level of work results according to a person's technical/functional competence, autonomy, service, identity, variety, managerial competence, security, and creativity. Briefly, the eight career anchors mean the following: 1) Technical competence. Your organization, your career around the challenge of the actual work you're doing. 2) Autonomy: You value freedom and independence. 3) Service: You're concerned with helping others or working on an important cause. 4) Identity: You're concerned with status, prestige, and titles in your work. 5) Variety: You seek an endless variety of new and different challenges. 6) Managerial competence: You like to solve problems and want to lead and control others. 7) Security: You want stability and career security. 8) Creativity: You have a strong need to create something of your own.

Part 2 was about role stress caused by role conflict and role ambiguity. 7 levels of rating scale were used to measure level of stress. The role-evaluation form of John R. Rizzo, Robert J. House, and Sidney I. Lirtzman[14] was adapted to be a research instruments. It covered 30 items. The scoring criteria are as follows: 7 points = very false … 1 points = very true.

Part 3 was about motivation (security & safety ,physiological & safety needs, belongingness, affiliation & acceptance (social needs), esteem and self actualization), it was measured by using 6 levels of basic need or 6 rating scales. The need evaluation form constructed by Cliff F. Grimes[15] was adapted and used as a research tools. It was multiple-choice questions covered 24 items. Scoring criteria are as follows: 6 points = strongly agree… 1 points = strongly disagree.

Part 4 was about job characteristics model (skill variety, task identity, task significant, autonomy, feedback from job itself and feedback from agents) it was measured by using 7 levels of rating scale. The questionnaire on Job Diagnostic Survey of Hackman and Oldham[16] was applied. Only one choice was selected, scoring criteria are as follows: 7 point = the lowest, 4 points = moderate and 1 point = the highest.

$$\text{Motivative Potential Score (MPS)} = \frac{(\text{Skill Variety} + \text{Task Identity} + \text{Task Significance})}{3} \times \text{Autonomy} \times \text{Feedback}$$

As can be seen from the formula, a very low score on either autonomy or feedback will reduce the overall MPS of the job very substantially. On the other hand, a low score on one of the three job characteristics that contribute to experienced meaningfulness cannot by itself, seriously compromise the overall motivating potential of a job.

Part 5 was about demographic characteristics of the samples such as age, sex, educational level, change of work, income, duration of being in the current position and duration of working in the PCUs.

Three experts of Dental Public Health Section had examined the questionnaire for its completeness of the content, clarity of language and relevance of issues. Some corrections were made based on the provided suggestions. The questionnaire was tried out in Saraburi and Sa Keaw province, with dental nurse who had similar characteristics to the study population. The reliability was measured by Cronbach's Alpha Coefficient. The reliability of each instruments are as follows: performance effectiveness = 0.86, roles stress = 0.73, motivation = 0.71 and job characteristics model = 0.66.

Data were analyzed by descriptive statistics such as frequency and percentage which were applied to describe demographic characteristics of dental nurse in primary care units. Pearsons' Product Moment Correlation was applied to test relationship between job characteristics, motivation, role stress and performance effectiveness of dental nurses in primary care units. The statistical significance level was set at a = 0.05. To consider level of relationships, criterion set by Munro and Page[17] was used. It was classified into 5 levels as follows:

Alpha coefficient	Level of relationships
0.00-0.25	Low
0.26-0.49	Rather low
0.50-0.69	Moderate
0.70-0.89	High
0.90-1.00	Very high

Results

The questionnaires were sent to 326 samples in 310 PCUs of 19 provinces in the northeastern part. A total of 194 questionnaires or 59.50% were returned and used for data analysis.

Demographic characteristics of dental nurses

Results about demographic characteristics of the samples in Table 1 showed that most respondents (61.34%) aged between 25-29 years, followed by 20-24 years (24.22%) and ≥ 35 years (7.73%). Most of them held Dental nurse certificates or diploma (50.51%), followed by bachelor degree or equal (46.91%), and master degree (1.03%). The rest was still studying for bachelor and master degree (1.55%). Most respondents had not changed their position (98.96%). However, a few of them used to be dentist assistants (1.03%). More than half of them had been in the position of dental nurse for 4-6 years (54.64%), followed by 7-9 years (21.13%) and 1-3 years (12.89%) and more than 10 years (11.34%) respectively. About a half were working in PCUs for 4-6 years (51.55%), followed by 1-3 years (38.66%) and 7-10 years (9.79%).

Performance effectiveness, role stress, motivation and job characteristics

Performance effectiveness

Most respondents thought that 'Service' was the most important (M = 3.39). As the crucial characteristics of dental tasks was serving the other by using interpersonal relationship. Other people induced to enhance useful skills. A total performance effectiveness of dental nurses was a high level (M = 3.16, SD = 0.42). Among 8 aspects of dental performance, the dental nurse perceived 'Service' as a first key elements, followed by creativity, variety, managerial competence, technical competence, autonomy, identity and security respectively (Table 2).

Role stress

The average of role stress (role conflict and role ambiguity) from the highest to the lowest was shown in Table 2. The dental nurses had stress caused by role conflict more than role ambiguity. When considering by items, it was found results as follows:

Role conflict: most respondents felt uncertain about this issue (55.20%), followed by 'Slightly true' (28.40%) and 'Slightly false' (13.90%) respectively. The total score of opinion was at the 'Slightly false' to 'Slightly true' (97.42%). The average score was at 'Uncertain' (M = 4.13, SD = 0.71).

Role ambiguity: it was found that most of them showed the opinion of 'Uncertain' (56.20%), followed by 'Slightly false' (30.40%), 'Slightly true' (7.70%) and 'Mostly false' (5.70%) respectively. The total of opinion level was at 'Slightly false' to 'Slightly true' (94.33%). The average opinion ranged from 'Slightly false' to 'Uncertain' (M = 3.66, SD = 0.70).

Motivation

The analysis of dental nurses' motivation in Table 2 was presented from the highest to the lowest mean. It showed that the respondents had need on 'Self actualization' at a high level-most of their opinion was at the level of 'Moderately agree' (44.33%), followed by 'Strongly agree' (32.99%), 'Tend to agree' (32.99%), 'Tend to disagree' and 'Moderately disagree' (1.55%) respectively. The total opinion was at 'Moderately agree' to 'Strongly agree' level (77.32%). The average opinion was at 'Moderately agree' level (M = 5.00, SD = 0.87). It means that the dental nurses desired to reach 'Self actualization'. Most of them needed to fully exploit their competence. They learned about self value from their experience and would like these evidences to be repeated.

Job characteristics

Job characteristics of the dental nurses classified by item are shown in Table 2. It was found

Table 1. Number and percentages of Dental Nurses' Demographic characteristics (n = 194)

Demographic characteristics	n	%
Age (years)		
20-24	47	24.22
25-29	119	61.34
30-34	13	6.70
35-40	6	3.09
> 40	9	4.64
Education		
Certificates (Dental Nurse)/Diploma	98	50.51
Bachelor Degree or equal	91	46.91
Master Degree/Equal/Higher	2	1.03
Right now studying Master degree	2	1.03
Right now studying Bachelor degree	1	0.52
Having changed work position		
No	192	98.96
Yes	2	1.03
Duration of being in current position (years)		
1-3	25	12.89
4-6	106	54.64
7-9	41	21.13
>10	22	11.34
Duration of working at PCU (years)		
1-3	75	38.66
4-6	100	51.55
7-9	17	8.76
>10	2	1.03

that on the issue of "Dealing with others" had the highest mean score. Most respondents had opinion level on this topic at the 'Highest' (52.06%), followed by 'High'(20.10%), 'Rather high'(14.95%), and 'Moderate' (10.31%) respectively. The total of opinion level ranged from 'High' to the 'Highest' (76.16%). The average opinion level was high (M = 6.09, SD = 1.15). It means that job characteristics of dental nurses were related to many people. They needed to give care service and deal with community. When calculate all scores to get the 'Motivating Potential Score', the result is as the following:

$$MPS = \frac{(\text{Skill Variety} + \text{Task Identity} + \text{Task Significance}) \times \text{Autonomy} \times \text{Feedback}}{3}$$

$$\text{Full score} = \frac{(7 + 7 + 7) \times 7 \times 7}{3} = 343$$

$$\text{Real score} = \frac{(5.28 + 4.92 + 5.10) \times 5.53 \times 5.39}{3} = 152.0143$$

Table 2. Number, percentage, mean and SD of performance effectiveness, role stress, motivation and job characteristics model of dental nurses by item (n = 194)

Performance effectiveness	M	SD	Level of opinion			
			Strongly agree	Agree	Disagree	Strongly disagree
			n (%)	n (%)	n (%)	n (%)
Performance effectiveness	3.16	0.42	36 (18.60)	154 (79.40)	4 (2.10)	0 (0.00)
Technical competence	3.23	0.42	58 (29.90)	130 (67.01)	6 (3.09)	0 (0.00)
Autonomy	3.22	0.38	65 (33.51)	127 (65.46)	2 (1.03)	0 (0.00)
Service	3.39	0.39	98 (50.52)	96 (49.48)	0 (0.00)	0 (0.00)
Variety	3.24	0.42	75 (38.65)	114 (58.76)	5 (2.58)	0 (0.00)
Managerial competence	3.24	0.41	63 (32.47)	127 (65.46)	4 (2.06)	0 (0.00)
Identity	3.16	0.47	51 (26.29)	130 (67.01)	13 (6.70)	0 (0.00)
Security	2.95	0.49	28 (14.43)	135 (69.59)	31 (15.98)	0 (0.00)
Creativity	3.31	0.42	81 (41.75)	109 (56.19)	4 (2.06)	0 (0.00)

Role Stress	M	SD	Level of opinion						
			Very true	Mostly true	Slightly true	Uncertain	Slightly false	Mostly false	Very false
			n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Role stress	3.94	0.66	0 (0.00)	0 (0.00)	32 (16.50)	122 (62.90)	36 (18.60)	4 (2.10)	0 (0.00)
Role conflict	4.13	0.71	0 (0.00)	2 (1.00)	55 (28.40)	107 (55.20)	27 (13.90)	3 (1.50)	0 (0.00)
Role ambiguity	3.66	0.70	0 (0.00)	0 (0.00)	15 (7.70)	109 (56.20)	59 (30.40)	11 (5.70)	0 (0.00)

Motivation	M	SD	Level of opinion					
			Strongly agree	Moderately agree	Tend to agree	Tend to disagree	Moderately disagree	Strongly disagree
			n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Motivation	4.36	0.54	4 (2.10)	64 (33.00)	124 (63.90)	2 (1.00)	0 (0.00)	0 (0.00)
Security & safety	4.44	0.66	14 (7.22)	68 (35.05)	92 (47.42)	20 (10.31)	0 (0.00)	0 (0.00)
Belongingness & affiliation, acceptance	4.67	0.76	23 (11.85)	97 (50.00)	58 (29.89)	16 (8.25)	0 (0.00)	0 (0.00)
Esteem	3.85	0.74	3 (1.55)	34 (17.53)	98 (50.52)	53 (27.32)	6 (3.09)	0 (0.00)
Self actualization	5.00	0.87	64 (32.99)	86 (44.33)	33 (17.01)	8 (4.12)	3 (1.55)	0 (0.00)

Table 2. (cont.)

Job characteristics model	M	SD	Level of opinion						
			The highest	High	Rather high	Moderate	Rather low	Low	The lowest
			n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Job characteristics model	5.29	0.88	3 (1.50)	96 (49.50)	56 (28.90)	33 (17.00)	0 (0.00)	6 (3.10)	0 (0.00)
Dealing with others	6.09	1.15	101 (52.06)	39 (20.10)	29 (14.95)	20 (10.31)	0 (0.00)	0 (0.00)	5 (2.58)
Autonomy	5.53	1.48	77 (39.69)	26 (13.40)	33 (17.01)	46 (23.71)	0 (0.00)	8 (4.12)	4 (2.06)
Task identity	4.92	1.54	42 (21.65)	33 (17.01)	23 (11.86)	78 (40.21)	0 (0.00)	9 (4.64)	9 (4.64)
Skill variety	5.28	1.45	40 (20.62)	64 (32.99)	35 (18.04)	34 (17.53)	14 (7.22)	1 (0.52)	6 (3.09)
Task significance	5.10	1.56	46 (23.71)	34 (17.53)	49 (25.26)	44 (22.68)	10 (5.15)	1 (0.52)	10 (5.15)
Feedback from agent	4.62	1.69	17 (8.76)	63 (32.47)	22 (11.34)	55 (28.35)	12 (6.19)	8 (4.12)	17 (8.76)
Feedback from the job itself	5.47	1.62	68 (35.05)	47 (24.23)	30 (15.46)	26 (13.40)	9 (4.64)	8 (4.12)	6 (3.09)

The lowest of Motivating Potential Score (MPS) was 1 point, the highest was 343 points, and the real score was 152.014 point which was less than half of the highest score. This score was then considered in a group of low score. It can be explained that job characteristics of dental nurses had MPS at a low level they then need to emphasize 'Feedback from agent' and 'Task identity'.

In summary, job characteristics of dental nurse was at a high level (M = 5.29, SD = 0.88) and they paid attention to dental task regarding 'Dealing with others', followed by 'Autonomy' and 'Feedback from the job itself'. In contrast, they focused less on 'Feedback from agent' and 'Task identity', therefore; these two kinds of job characteristics should be emphasized to enhance motivating potential.

Relationships between job characteristics model, motivation, role stress and performance effectiveness

From the first hypothesis: Job characteristics model and motivation had a high level of positive correlation to performance effectiveness of dental nurses.

Pearson's Product Moment Correlation Coefficient was applied to determine relationships between job characteristic model, motivation and performance effectiveness as shown in Table 3. It showed that job characteristics was not related to performance effectiveness (r = 0.126, p = 0.079). There was a positive relationship between motivation and performance effectiveness at a low level (r = 0.143, p = 0.047), the first hypothesis was not strongly supported.

When considering the Correlation Coefficient of independent variables and performance effectiveness as presented in Table 3, it was found that job characteristics model regarding 'Dealing with others' and 'Task significance' were positively related to performance effectiveness at a low level (r = 0.195, p = 0.007 and r = 0.156, p = 0.030 respectively). It means that performance effectiveness of dental nurse depended on these two factors.

When considering motivation factor, it was found that 'Belongingness, Affiliation, Acceptance' and 'Self actualization' were related to performance effectiveness (r = 0.195, p = 0.006 and r = 0.162, p = 0.024). That means performance effectiveness was influenced by these two factors.

Hypothesis 2: Role stress was negatively related to performance effectiveness of dental nurses in PCUs in the northeastern part of Thailand.

From Table 3, it was found that role stress was not related to performance effectiveness (r = 0.070, p = 0.329), then the second hypothesis was not statistically supported.

In Table 3, it was found that role stress regarding role conflict-internal standard, and several roles were negatively related to performance effectiveness at a low level (r-0,189, p = 0.008 and r = 0.158, p = 0.028).

It can be explained that when a dental nurse had more stress caused by role conflict regarding internal standard and having several roles, their performance effectiveness was reduced.

From the analysis, it can be summarized that both hypotheses were not supported. The performance

Table 3. Relationship between job characteristics model, motivation, role stress and performance effectiveness (n = 194)

	Performance effectiveness	
	r	p
Job Characteristic Model	0.126	0.079
Dealing with others	0.195	0.007
Task significance	0.156	0.030
Motivation	0.143	0.047
Belongingness, Affiliation, Acceptance	0.195	0.006
Self actualization	0.162	0.024
Role Stress	-0.070	0.329
Role conflict between internal standard	-0.189	0.008
Role conflict between several role	-0.158	0.028

effectiveness of dental nurses depended on (1) job characteristics- 'Dealing with others' and 'Task significance', (2) motivation-Belongingness, Affiliation, Acceptance and Self-actualization, and (3) role conflict between internal standard and role conflict between several roles.

Discussion

It was revealed that job characteristics model was not related to performance effectiveness; motivation was significantly related to performance effectiveness at a low level (p < 0.05), the first hypothesis was not supported. Besides, it showed that role stress was not significantly related to performance effectiveness (p < 0.05) and the second hypothesis was not supported as well.

From hypothesis 1, it showed that even if the dental nurse had received feedback from agent sometimes, but they did not know the clear feedback on their work. Most of dental tasks covered both dental healthcare and the other tasks, thus the 'Task identity' was ambiguous. Dental tasks needed personnel with skill variety at a moderate level. Most dental nurses were able to know how good of their performance without any suggestion from their boss or colleagues because they obtained feedback from the job itself. Besides, the dental tasks needed autonomy so that a dental nurse can decide to take responsibility in their job. They were able to make a decision about when to start and finish, and how to continue the tasks.

The result on Motivating Potential Score of dental nurses showed that they had motivating potential at a low level. This then negative affected the motivation, quality of work, work satisfaction, and performance effectiveness. It was conformable to the study of J. Richard Hackman and Greg R. Oldham[18] which revealed that MPS would affect the score of job characteristics that stimulate an individual's motivation. Conversely to the study of Sudarat Peimsin[19] presented that job characteristics of nurses was positively related to nursing performance. The nurses' job characteristics were at a good level and enhanced empowerment in nursing performance. The analysis showed that motivation of dental nurses was positively related to their performance effectiveness at a low level, it rejected the first hypothesis. Nevertheless, there was a positive relationship between 'Motivation' and 'Technical competence' as performing dental tasks needed high technical skill. Besides, to be promoted to the higher position with more technical skill was also important to dental nurses. In regard to 'Service', it was found that dental nurses needed to build relationships with the others and improved the ability to provide good services. It was concluded that the motivation of dental nurses depended on the performance effectiveness on 'Technical competence' and "Recognition in helping the others'.

When considering variables of motivation by item, it was found that there were positive relationships between Belongingness, Affiliation, Acceptance, and Performance effectiveness at a low level. It can be explained that dental nurses needed to be accepted from a society. Most of them understood the feeling of being accepted from the others. Besides, customs and tradition were useful for them because it could indicate what was expected and what to do. Most of the time, they felt that they did too much work because they were asked for and did not know how to refuse.

It can be suggested from the study that the motivation of dental nurses regarding 'Security and Safety' should be emphasized as most of them did not agree with any dependence on welfare for the older, and they suggested about saving for the future. Besides, 'Self confidence' and 'Self-esteem' should be recognized because most of dental nurses disagreed with those who had no feeling when loosing the sport game or arguing the good topic to whomever. It was conformable to the study of Jirakul Toyting[20] which indicated that the Infectious Control nurses had most satisfaction on self developing and the total satisfaction was positively related to their work performance. Likewise, Pratuan Satseu[21] found that

motivation factors regarding work achievement, acceptance, job characteristics, responsibility, and opportunity for advancement were positively related to giving immunization to children aged 0-5 years. It was also similar to Sumran Chatsom[8] who found that the 5th level of motivation-self actualization and role perception were related to performance of the Sub-district Administration officers.

When considering the relationships between role stress and performance effectiveness of dental nurse, it was found that there was no relationship between role stress and performance effectiveness of dental nurses, then hypothesis 2 was not supported. This may be because the dental nurses had enough time to finish and complete their work. They did the works that matched their knowledge so it was easy for them. They had suitable work and they were accepted from some people and they were able to tell how to perform a good work, however, they did not expect for any reward or work correctness. Besides, they knew their own responsibility, work objectives and goals. They precisely knew what they expected for and they had self-confidence about their skill and ability to achieve their work. They knew how to arrange their time and were able to explain about what and how to do, which had a different result from the study of Travice C. Tubre and Judith M. Collins[12]. They conducted a Meta analysis of correlation between role ambiguity, role conflict and job performance. Result revealed a negative relationship between role ambiguity and job performance.

This research result was conformable to the study of Juntana Aungchusak, et al[6] on Dental management of dental nurses in health centers from 1997 to 1998, it was found that dental nurses had to take responsibility to dental tasks and other demand tasks such as administrative work, guarding, curing non-dental patients. As they lacked of experience in other healthcare service, they cannot perform the work that match their ability. Similarly, Somyod Navikarn[22] found that a person had stress when they had role conflict between several roles, it then stimulate them to have high performance. However, when their stress was too high, the performance was then decreased. In contrast to the study of Wanreudee Putong[9] showed that perception of executives towards expectation of beneficiaries and communication to beneficiaries were negatively related to role ambiguity.

In addition, the study of Diane Irvine Doran et al[10] studied the Nursing Role Effectiveness Model provides a theoretical basis for exploring the relationship among organizational and unit structural variables, process and patient outcomes. The study results supported work autonomy but the role tension had negative effect on co-ordinate of care. Christina L. Stamper and Mark C Johlke[11] examined the impact to perceived organizational support (POS) on the relationship between boundary spanner role stressor. Results indicated that POS has strong effect on role ambiguity and role conflict, as well as job satisfactions but POS not related to task performance.

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ประสิทธิผลการปฏิบัติงานของเจ้าพนักงานทันตสาธารณสุขในศูนย์สุขภาพชุมชนภาคตะวันออกเฉียงเหนือ

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วัตถุประสงค์: เพื่อตรวจสอบความสัมพันธ์ระหว่างตัวแปรคุณลักษณะงาน แรงจูงใจในการทำงาน ความเครียดใน บทบาทและประสิทธิผลการปฏิบัติงานของเจ้าพนักงานทันตสาธารณสุขในศูนย์สุขภาพชุมชนภาคตะวันออกเฉียงเหนือ

วัสดุและวิธีการ: การศึกษาครั้งนี้เป็นการศึกษาเชิงอรรถาธิบายแบบตัดขวาง กลุ่มตัวอย่างเป็นเจ้าพนักงาน ทันตสาธารณสุขจำนวน 326 คน ปฏิบัติงานในศูนย์สุขภาพชุมชน 310 แห่ง จาก 19 จังหวัด 220 อำเภอในภาค ตะวันออกเฉียงเหนือของประเทศไทย ผู้นิพนธ์รวบรวมเก็บข้อมูลโดยใช้แบบสอบถาม การวิเคราะห์ข้อมูลใช้สถิติ สัมประสิทธิ์ สหสัมพันธ์แบบเพียร์สันตรวจสอบความสัมพันธ์ระหว่างตัวแบบคุณลักษณะงาน แรงจูงใจ ความเครียด ในบทบาท การทำงาน และประสิทธิผลการปฏิบัติงาน

ผลการศึกษา: จากการวิเคราะห์ พบว่า ตัวแบบคุณลักษณะงานไม่มีความสัมพันธ์กับประสิทธิผลการปฏิบัติงาน เมื่อทดสอบ ตัวแปรย่อย พบว่า ประสิทธิผลการปฏิบัติงานมีความสัมพันธ์กับตัวแบบคุณลักษณะงานด้านการทำงาน ร่วมกับผู้อื่น และความสำคัญของงาน ส่วนแรงจูงใจในการทำงาน พบว่า มีความสัมพันธ์เชิงบวกระดับต่ำกับ ประสิทธิผลการปฏิบัติงาน ความเครียดในบทบาทการทำงานไม่มีความสัมพันธ์กับประสิทธิผลการปฏิบัติงาน เมื่อทดสอบตัวแปรย่อยพบว่า เมื่อเจ้าพนักงานทันตสาธารณสุขเกิดความเครียดจากความขัดแย้งในบทบาทด้าน มาตรฐานในตัวบุคคล และการมีหลายบทบาทในบุคคลคนเดียวกันเพิ่มขึ้น ประสิทธิผลการปฏิบัติงานจะลดลง

สรุป: จากผลการศึกษาจึงมีความจำเป็นที่จะต้องมีการเชื่อมโยงงานทันตสาธารณสุขกับงานสาธารณสุขอื่นให้เป็น รูปธรรมชัดเจนโดยเฉพาะการได้รับข้อมูลสะท้อนกลับจากผู้บังคับบัญชา การแบ่งงานที่ชัดเจน และทักษะในงานที่ทำ ควรจะกำหนดความรับผิดชอบ สุดท้ายการสรรหา คัดเลือกเจ้าพนักงานทันตสาธารณสุขที่มีบุคลิกภาพที่เหมาะสม เพื่อเพิ่มประสิทธิผลการปฏิบัติงานในศูนย์สุขภาพชุมชนภาคตะวันออกเฉียงเหนือของประเทศไทย