STRESS AND ANXIETY OF UNDERGRADUATE NURSING STUDENT

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ABSTRACT

Stress and anxiety is the main of mental health problem in student, mostly in nursing student. This study was descriptive researches that aim to study a stress level, anxiety level in nursing student of Suan Sunandha Rajabhat University. The samples were 100 sophomores nursing students. Data were collected by personal data questionnaire, Suanprung Stress Test 20, and the anxiety assessment form. The data were analysis by descriptive statistics. The results shown that 62.0% of sophomores of nursing student had high stress level, 32.0% had moderate stress level and 6.0% of them had severe stress level. According to the findings shown that 81.0% of sophomores nursing students have a moderate level of anxiety and 18.0% have a low level of anxiety. The finding revealed that three external factors were affected of student’s stress level as learning course, economic and family problem. The findings can be information input, filling a gap of knowledge and benefit for instructor to facilitate quality of life of nursing student.

Key word—STRESS, ANXIETY

INTRODUCTION

Stress is a kind of individual response to some unclear incidents threatening his/her life security, and it appears to be varied in each individual case (Suwanee Keawkingkeaw, B.E. 2554). Stress is one of mental health problems found in every person. It has been usually found that stress is a common problem against nursing education and possibly affects students’ health condition (Labrague, 2013). Students’ stress is partially caused by aged-related stress since most undergraduate students are adolescents at the age of 18-22 years who are developing from the late adolescence to the early adulthood that need to adapt themselves to rapid changes physically, psychologically, emotionally, socially, and intellectually (Laaid Jamjan and Suree Khantaruksawong, B.E. 2553). Moreover, to study in the field of nursing sciences, students are required to adjust themselves to specific learning involving the responsibility for human life and security. Students have to be cautious, patient, dedicate themselves, comply with rules for nursing practices, as well as adjust themselves so as to build relationship with other professionals, colleagues, including patients and relatives, all of which have effects on stress levels of undergraduate nursing students (Maleewan Lertsakornsiri, B.E. 2558).

Undergraduate students’ stress is associated with various factors. It was found that risk factors causing undergraduate students’ stress might be negative life events for undergraduate students, namely, difficult courses, time management for completing assignment, preparation for examination, and trainee program. In addition, there are also some problems regarding the relationship between undergraduate students and surrounding people, roles to be taken by undergraduate students, financial restriction, and health and illness issues (Tusana Taweekoon, Patcharin Nintachan, and Sopin Sangon, B.E. 2555). Undergraduate nursing students’ stress should not be overlooked or ignored because it has been found that stress affected health and psychosocial conditions of undergraduate nursing students (Labrague, 2013). Apart from stress, anxiety is
another significant common problem (Horwitz, Hill & King, 2011). Undergraduate nursing students might be anxious and feel afraid of more responsibilities when starting the nursing profession.

College of Nursing and Health, Suan Sunandha Rajabhat University is an education institute for educating undergraduate nursing students, aiming to produce quality nursing graduates for the society. Efficient education has to take the quality of life of students, including both physical and mental health, into consideration. Therefore, it is very necessary that the researcher has to explore the level of stress and anxiety of undergraduate nursing students so as to acknowledge the level of stress and anxiety of undergraduate nursing students, and acquire the information to be utilized to promote mental health of undergraduate nursing students so as to ensure good physical and mental health of these students and to enable them to be ready to learn and further become quality registered nurses.

**OBJECTIVES**

1. To study the level of stress of second year undergraduate nursing students of Suan Sunandha Rajabhat University.
2. To study the level of anxiety of second year undergraduate nursing students of Suan Sunandha Rajabhat University.

**METHODOLOGY**

This study is a survey research, aiming to study the level of stress and anxiety of second year undergraduate nursing students of Suan Sunandha Rajabhat University. With regard to the scope of the research, the researcher had studied the level of stress and anxiety of second year undergraduate nursing students of Suan Sunandha Rajabhat University during 17 March – 11 April 2016.

**Population and Samples**

The samples in this study consist of 100 second year undergraduate nursing students of Suan Sunandha Rajabhat University.

**Data Collection**

The researcher provided the information on the research scope and objectives to second year undergraduate nursing students, and asked for their cooperation to answer the questionnaire on voluntary and anonymous basis. The data would be collected from only students who agreed to participate in the study. The research assistant who is an undergraduate student was assigned to help collect the data. The questionnaires were distributed to second year undergraduate nursing students in the classroom, and these undergraduate nursing students who are the samples were required to complete the questionnaires without presence of any professor or researcher in order to prevent interruption and data bias. Then, the questionnaires would be returned to the research assistant on the same day. The research instrument for the data collection in this study consists of 3 sets of questionnaires as follows:

1. **The questionnaire on personal information**

   This questionnaire is used to inquire about personal information of undergraduate nursing students, namely, gender, age, grade point average, residence, marital status of father and mother, and monthly income.

2. **Suanprung Stress Test 20 (SPST), Department of Mental Health, Ministry of Public Health**

   Suanprung Stress Test 20 (SPST) is a standard stress measurement form which passed the concurrent validity test. The instrument for measurement of 523 samples is the muscle strain levels, of which the concurrent validity is more than 0.27 of the muscle strain levels with a statistical significance at the 95% confidence level (Department of Mental Health, B.E. 2559). The SPST is used to explore feelings over the past 6 months, whereby the content involves the occurrence and feelings towards such occurrence. The assessment criteria are as follows:
1 point of stress score represents no stress.
2 points of stress score represent low stress.
3 points of stress score represent moderate stress.
4 points of stress score represent high stress.
5 points of stress score represent the highest level of stress.

Next, total scores were summed up and compared with the criteria for assessment on the level of stress as follows:
- 0-24 points represent low stress.
- 25-42 points represent moderate stress.
- 43-62 points represent high stress.
- > 63 points represent severe stress.

3. The anxiety assessment form

This is a standard form for the anxiety assessment. The content was validated by experts, while the confidence level was explored through the trial use with 30 persons possessing similar characteristics to the samples. The calculation of the confidence level was made by using Cronbach's Alpha Coefficient, resulting in 0.78. The anxiety assessment form contained 20 questions regarding anxiety, while the anxiety was classified into 4 levels based on the score range.

Data Analysis

The data analysis was made by the computer program as follows:
1. Personal information of undergraduate students was analyzed by using the percentage.
2. The levels of stress and anxiety were analyzed by using the criterion-referenced assessment.

RESULTS

1. Personal information

There were totally 100 second year undergraduate nursing students of College of Nursing and Health, Suan Sunandha Rajabhat University. The majority of them aged 19-20. Most of them achieved 3.01-3.05 grade point average (51.7%). 85.0% of these undergraduate students lived at the dormitory. Their family's monthly income is mostly Baht 15,000-25,000 (43.0%), followed by more than Baht 25,000 per month (30.0%). 95.0% of these undergraduate students had no part-time jobs.

2. The level of stress of undergraduate nursing students

According to the assessment on levels of stress over the past 6 months of 100 second year undergraduate nursing students of College of Nursing and Health, Suan Sunanaha Rajabhat University by using Suanprung Stress Test 20, it was found that 62.0 out of 100 undergraduate nursing students had a high level of stress (62.0%), followed by the second rank totaling 32.0 persons who had a moderate level of stress (32.0%), and the third rank totaling 6 persons who had a severe stress (6.0%). Most undergraduate students responded that they were stressful due to their study (89.0%), followed by expenses (6.0%).

Table 1: The level of stress over the past 6 months of second year undergraduate nursing students, College of Nursing and Health, Suan Sunandha Rajabhat University

<table>
<thead>
<tr>
<th>Score Criteria of Suanprung Stress Test</th>
<th>Number (n=100)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low stress (0-23 points)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Moderate stress (24-41 points)</td>
<td>32.0</td>
<td>32.0</td>
</tr>
<tr>
<td>High stress (42-61 points)</td>
<td>62.0</td>
<td>62.0</td>
</tr>
<tr>
<td>Severe stress (&gt;62 points)</td>
<td>6.0</td>
<td>6.0</td>
</tr>
</tbody>
</table>
3. The level of anxiety of undergraduate nursing students

According to the study on the level of anxiety of second year undergraduate nursing students, most of them had a moderate level of anxiety (81.0%), followed by a low level and a high level (18.0% and 1.0%), respectively as shown in Table 2.

<table>
<thead>
<tr>
<th>Level of anxiety</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number (%)</td>
<td>18.0</td>
<td>81.0</td>
<td>1.0</td>
<td>100</td>
</tr>
</tbody>
</table>

CONCLUSION

The findings of the study revealed that most second year undergraduate nursing students of College of Nursing and Health, Suan Sunandha Rajabhat University had a high level of stress (62.0%), followed by the second rank, i.e., a moderate level of stress (32.0%). These undergraduate students were most stressful due to their study (89.0%), followed by expenses (6.0%). Accordingly, the past study (Sujitra Uratanamanee, Supawadee Lerdasamran, Jenjira Wongsrinak, Kanchanaporn Saengthong, and Anussara Rawang, B.E. 2559) conducted in third year undergraduate nursing students revealed that most undergraduate students had a high level of stress (38.1%), followed by a moderate level of stress (32.2%), and a severe stress (22.9%). With regard to the anxiety, it was found that most second year undergraduate nursing students had a moderate level of stress (81.0%), followed by a low level of stress (18.0%). The moderate level of stress is a level that deteriorates sensory function, ranging from vision, hearing, skimming, attention, concentration, and perception (Stuart, 2013), and thereby affecting learning concentration.

SUGGESTION

1. Next study should involve the relationship between stress, anxiety, and related factors of undergraduate students.
2. Since the results of this study found that most undergraduate students had a high level of stress, and some of them had a severe stress adversely affecting mental health and quality of life of undergraduate nursing students. Therefore, next study should be conducted in the form of a quasi-experimental research in order to explore how to utilize nursing practices, psychotherapy, group therapy, and other kinds of nursing therapeutics so as to reduce stress among undergraduate students who had a moderate-a high level of stress. Then, the research findings should be applied to further reduce stress of undergraduate nursing students.
3. The research findings should be utilized to acquire in-depth data regarding educational programs and student affairs since it was found that these factors had effects on stress as perceived by undergraduate students. Therefore, the in-depth study should be conducted to revise the policy to further reduce stress of undergraduate nursing students.

ACKNOWLEDGEMENT

I would like to express my appreciation to Suan Sunandha Rajabhat University for providing great support for conducting this research, and I feel grateful to all second year undergraduate nursing students for their cooperation and participation that helps contribute to the success of the research work.

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ABSTRACT

The purpose of this research were to study information retrieval in OPAC and problems in searching of undergraduate students at Suan Sunandha Rajabhat University. A stratified random of 380 samples was collected. A Likert five-scale questionnaire was developed to collect data and to obtain students' opinions their information retrieval in OPAC. The findings revealed that the majority of respondents information retrieval for reporting and studying purpose. The average information retrieval time was about 5 minutes to 10 minutes by searching from title. They studied how to use the OPAC by themselves. The respondents searched the information 2-3 day per week from the Academic Resource Center. As for problems in searching, it was found that the information retrieval result did not cover their fields and not support their need. Beside that the students did not know how to advance searching. As for this research results, the school should have a plan for information retrieval training for students in order to have the skill for searching in OPAC. Beside that the Academic Resource Center should always update information database.

Keywords—Information Retrieval, OPAC, Searching

INTRODUCTION

Information is crucial as related to the human way of life. Humanity searches for information in order to respond to objectives such as routine life, study, working, news, knowledge development, entertainment and etc. In order to seek for desired information, most of them seek such one form several resources such as personal, institutional, mass media, internet resources and websites; however, nowadays, there are much information and multiplied rapidly combined with limitation of time, language and place making a hardship in following as desired. Therefore, if the information is stored systematically, retrieval could be done effectively (NECTEC, 2015).

Information retrieval means an act to select information from database to retrieve the information as desired as it may be information or a document contains a desired content. It is a process in documentary retrieval related to any subject (NECTEC, 2015) in other words, the information retrieval is a method to access the stored information by utilizing computer or not using computer in order to retrieve the desired information by categorizing the desired one from the information for use.

In education, library is an important unit as it promotes an instruction, a study and research of students; in addition, it is a resource of information stored as books, journals, documents, audio visual aids and modern electronic media in order to respond to needs of students and instructors in university. At the same time, library has to provide service for its users in response to needs of them (Waeota Thechathawiwan, 1998: 49). Increasing of information resource, library has to transform into automated library by largely utilizing computer technology in order to make the faster retrieval.

Library automation or integrated library system is an information system utilizing computer to store library functions consistently and completely, then the system has to be connected with users by network and telecommunication system as these systems help users to retrieve information to be used in online mode, resulting in more effectiveness. The system functions by integrated library system, such as cataloging module, acquisition module, circulation module, Online Public Access Catalog-OPAC module, interlibrary loan module and, serial control module.
OPAC or Online Public Access Catalog is a subsystem of library automation, such subsystem has retrieval characteristics in the same as catalog card making an easier retrieval, such as authors, titles, topics and Boolean logic, truncation, retrieval scope by printing year, publishers and etc. OPAC system is superior in information resource retrieval from other forms of library as the system offers an opportunity for users who are the one that truly needs data to perform in retrieval by themselves; therefore, the users must have knowledge regarding retrieval principle, on other hand, OPAC must have appropriate effectiveness and relevance to the needs of user. (Pornthip Phanngam, 2003: 2)

Academic Resource Center of Suan Sunandha Rajabhat University implements library automation to use in information retrieval in library. From observation and access in OPAC of Academic Resource Center, it is appeared that users, especially students encounter with retrieval problems from OPAC, for example inadequate knowledge in tools for retrieval and retrieval results not in response to needs and inadequate knowledge for word usage and etc.

From such context, the researcher is interested in study regarding information retrieval from OPAC system of undergraduate students, Suan Sunandha Rajabhat University to be a guideline in instruction development in Library and Information Science Program, especially Information Storage and Retrieval Subject and to be a model in OPAC retrieval trainings for students, as well as, to be a guideline in library automation development of Academic Resource Center, Suan Sunandha Rajabhat University.

LITERATURE

Regarding the study of information retrieval by OPAC of bachelor students, the researcher has conducted a relevant review literature in several points for determining research concept as follows:

1. Information Retrieval
   Information database is a database consisted of bibliography of books, journals, magazines, audio visuals and electronic media existed in library. The retrieval procedures are as follows:
   1.1 Prerequisite before retrieval: Planning must be done in order to retrieve desired information rapidly. The planning is consisted of term choosing from database utilizing controlled terms and free terms as controlled terms making search efficiently as it is a standard term used in index making by database. (Pornthip Phanngam, 2003). The controlled terms are from relevant terms or thesaurus; however, information retrieval could utilize free terms such as all meaningful words and words appeared in documents. Searchers could use any meaningful words, except stop words or not utilized in index, for example A, An, And, By, For, From, Of, The, To, With as being unable to search (Pradita Siriphan, 1992).
   1.2 Retrieval method determination: Determination of searching strategy will help in the success of retrieval and obtaining desired data and time-saving. The retrieval could be done by names of author, titles, headings and keywords. Regarding the strategy, it could be consisted of truncation or Boolean logic; nevertheless, the retrieval procedures in each system will be different (Pornthip Phanngam, 2003).

2. OPAC System
   Online Public Access Catalog or OPAC is a subsystem of automation library program which is the system to utilize in information retrieval of library. The OPAC system as a bibliography retrieval system of books or documentation of library stored in database which could be retrieved by computer; moreover, users could access this data by terminal (Saman Loifa, 1992).
METHODS

This was a quantitative research that was aimed to study the information retrieval and the problem in searching from OPAC of undergraduate students, Suan Sunandha Rajabhat University. There were five steps of this research. The first step was to study the document and other studies related to information retrieval in order to find the guideline of developing questionnaire of quantitative method. The second step was to define population and sample. The population included 24,971 undergraduate students who registered for the second semester of 2015. A Krejcie & Morgan sampling technique was performed to get a sample group that included 380 students. They were collected at 6 faculties: Faculty of Education, Faculty of Industrial Technology, Faculty of Humanities and Social Sciences, Faculty of Science and Technology, Faculty of Fine and Applied Arts, and Faculty of Management. The third step was the development of tool. The tool for this survey was the questionnaire which had three major parts. The first part was designed to ask about the demographics. The second part was designed to obtain the information about information retrieval of students. The third part of the questionnaire was about problems in information searching. The fourth step was data collection. A stratified random sampling technique was performed to obtain 380 respondents. Finally, the fifth step was data analysis. This step was performed by using SPSS. Descriptive statistics utilized in this research including percentage, mean, and standard deviation.

RESULTS

The research results regarding information retrieval from OPAC of SSRU students, it is found that the students retrieve information from OPAC system in order to search for compiling in a report as most students learn how to use OPAC system by themselves and they retrieve by title making information search to be in conformity of the needs. The retrieval takes 5-10 minutes; however, if a search result is not in conformity with the needs, they will use the same method but with new words. As for problems of information retrieval from OPAC system, most students encounter a problem regarding service, especially lack of computer, service officer having many duties, resulting in unclear recommendation and lack of retrieval service computer. In overview, students have moderate satisfaction in information retrieval by OPAC system as the following details.

Figure 1
Purpose for Information Retrieval by OPAC System

From Figure 1 The highest purpose for information retrieval was compiling a report purpose (33%) and compiling thesis was lowest purpose (10%).
Table 1
Learning Retrieval Method

<table>
<thead>
<tr>
<th>Learning retrieval method</th>
<th>Quantity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>orientations</td>
<td>82</td>
<td>21.6%</td>
</tr>
<tr>
<td>Asking librarians or library staffs</td>
<td>106</td>
<td>27.9%</td>
</tr>
<tr>
<td>Asking friends</td>
<td>82</td>
<td>21.6%</td>
</tr>
<tr>
<td>By themselves</td>
<td>110</td>
<td>28.9%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>380</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

From Table 1, the highest learning retrieval method was by themselves (28.9%) and the lowest method was orientation (21.6%).

Figure 2
Words for searching

From Figure 2, the highest word for searching was title and the lowest word for searching was series.

Table 2
Duration in Information Retrieval by OPAC System

<table>
<thead>
<tr>
<th>Duration</th>
<th>Quantity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 5 minutes</td>
<td>112</td>
<td>29.5%</td>
</tr>
<tr>
<td>5-10 minutes</td>
<td>171</td>
<td>45.0%</td>
</tr>
<tr>
<td>10 minutes</td>
<td>46</td>
<td>12.1%</td>
</tr>
<tr>
<td>More than 10 minutes</td>
<td>51</td>
<td>13.4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>380</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

From Table 2, the majority of respondents take 5-10 minutes to retrieve information from OPAC.
### Table 3
User Problems(s) in Information Retrieval by OPAC

<table>
<thead>
<tr>
<th>Problems</th>
<th>X</th>
<th>S.D</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Unclear displayed execution command</td>
<td>3.35</td>
<td>0.917</td>
<td>2</td>
</tr>
<tr>
<td>2. No knowledge in western name-surname format of author for retrieval</td>
<td>3.33</td>
<td>0.925</td>
<td>3</td>
</tr>
<tr>
<td>3. Users not understanding retrieval methods such as Boolean operator (and, or, not) in retrieval</td>
<td>3.38</td>
<td>0.947</td>
<td>1</td>
</tr>
<tr>
<td>4. Users not understanding retrieval procedure</td>
<td>3.20</td>
<td>1.015</td>
<td>4</td>
</tr>
<tr>
<td>5. Users not understanding typing words for retrieval such as spacing and truncation</td>
<td>3.16</td>
<td>1.023</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3.28</td>
<td>0.809</td>
<td></td>
</tr>
</tbody>
</table>

From Table 3, The highest user problem in information retrieval was users not understanding retrieval method especially advance searching (X = 3.38) and the lowest problem was users not understanding typing words for retrieval such as spacing and truncation (X = 3.16).

### Table 4
Service Problems (s) in Information Retrieval by OPAC

<table>
<thead>
<tr>
<th>Problems</th>
<th>X</th>
<th>S.D</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Inadequate computer</td>
<td>3.42</td>
<td>0.978</td>
<td>1</td>
</tr>
<tr>
<td>2. Underperformed computer</td>
<td>3.24</td>
<td>0.960</td>
<td>3</td>
</tr>
<tr>
<td>3. Service officer under heavy tasks resulting in unavailability for recommendation</td>
<td>3.29</td>
<td>0.890</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3.31</td>
<td>0.806</td>
<td></td>
</tr>
</tbody>
</table>

From Table 4, The highest service problem in information retrieval was inadequate computer (X = 3.42) and the lowest was underperformed computer (X = 3.24).

### DISCUSSION

From the study of information retrieval from OPAC of undergraduate students, Suan Sunandha Rajabhat University, the crucial points are as follows.

Students of Suan Sunandha Rajabhat University retrieve information resource database by OPAC system in order to search for information to compile in reports. Most students learn how to retrieve information by OPAC by themselves. Title is used as a method to search information, resulting in compliance with needs. This is in conformity with the research conducted by Jitraporn Phengdee (1998), Prakaidaw Srimora (1998) and Siriporn Poolsuwan (2516). The successful retrieval takes 5-10 minutes in conformity with the research conducted by Pornthip Phanggam (2003); however, if the search is not in conformity as desired, they use the same method but with a new word. As for problems in information retrieval by OPAC, in overview, they are regarding services, especially a lack of computer, unavailability of service officer resulting in unclear recommendation and underperformed computer; this results are in conformity with the research conducted by Kanjana Kaewpadee (1999), who studied a problem regarding modular usage in online information retrieval (OPAC) of students in Academic Service Center of Mahasarakham University as it is found that the students learn how to use OPAC system by reading usage manual from monitor and they search by title mostly, when the search is not succeeded, a new search is done by changing searching words. Most students obtain information as desired in high level. As for OPAC usage problems in each aspect, they are as follows: regarding premises and equipment, they are inadequate for providing service; regarding service, it is found that no service
officer provides explanation and usage recommendation; regarding users, it is found that the users do not possess knowledge in complex search and regarding search result, the desired information is not found.

**CONCLUSION**

From the study of information retrieval from OPAC of undergraduate students, Suan Sunandha Rajabhat University, it could be seen that the level of student achievement, aside from classroom study, is depended on data retrieval from database in Academic Service Center. If the students possess knowledge and skills in OPAC usage effectively, this will result in quality information according to needs to compile in instruction very well, which could be beneficial to them while study, graduation and all of lifetime. Nowadays, the crucial and necessary qualifications of education personnel are searching, selecting and accessing to desired information by retrieval from databases in order to implement in instruction to be in highest effectiveness.

**FUTURE WORK**

According to this research, information retrieval from OPAC of undergraduate students, Suan Sunandha Rajabhat University is in moderate level. In order to improve database and method for retrieval of the students to compile in instruction, the university should emphasize on as follows:

1. Academic Service Center, Suan Sunandha Rajabhat University should supply effective equipment and facility for OPAC system usage and computer for information retrieval of library to be adequate with the needs of users.

2. Academic Service Center, Suan Sunandha Rajabhat University should provide training and service improvement of officers to create satisfaction for users continuously.

3. Academic Service Center should emphasize on retrieval procedures by OPAC information by providing training for OPAC for students, especially freshmen in order to facilitate them.

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SERVICE QUALITY ON DECISION MAKING OF USING THE FERRY BETWEEN DONSUK SAMUI, SURATTHANI PROVINCE

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ABSTRACT

The purposes of this study were to examine the decision on service used. The quality level of service, the relationship between personal factors and the decision on service used, the relationship between the service quality and the decision on service used and suggestions from water transportation users in Suratthani province. Data was collected from 400 users by questionnaire with a reliability of 0.92 Data was analyzed using basics statistic are frequency, percentage, mean, standard deviation, and test statistic chi -square.

The findings revealed that, most of the decision on service used was selected Sea-Tran Ferry ltd., used the ferry service at Donsak Pier. The objectives of using the service were for travel and rest. The cost of the fare is up to 200-400 THB per time, use at least one time a month at 10.01am - 3.00 pm. There could not determine the exactly date of service used and arrive to the pier by car. The level of service quality that affect to the decision on service for overall and each aspect was at a good level, sorted by reliability of service, physical, trust, access to mental, and need responsiveness of the service users. Personal factor was related to the decision on service used for overall had related in every aspects statistically significant at the 0.05 level. The quality of service was related to the decision on service used statistically significant at the .05 level. Suggestions of the users are there should increase the cleanliness of the toilets in the ferry, should increase the number of cruise passengers, and the salesperson should be more friendly with the users.

Keywords - Service Quality, Decision making, Ferry

INTRODUCTION

Tourism industry is one of the industries that became a major role in the economy of the Southern part of Thailand because the south of Thailand has high tourism potential. However, with the availability of a wide variety of tourist attractions, especially marine tourism both the Andaman Sea and the Gulf of Thailand with beautiful beaches and islands, natural resources, including marine resource which facilitate the activities that attracts both local and foreign, including diving and water sports (sailing, banana boat, windsurfing, etc.) as well as marine conservation activities such as the release of sea turtles and creating a habitat for marine life (artificial reef) to be consistent with the conservation of natural resources.

According to the latest statistics from the Department of Tourism, Ministry of Tourism and Sports in 2011 found that tourists travel to the south higher than another part of Thailand (excluding Bangkok). A total of approximately 27,319,500 people (including tourists from Thailand and overseas who will travel more than one province in each trip) 43 percent are foreign tourists which can make the revenue as high as 71 per cent of total tourism revenue of 307,239 million baht in 2011.

Considering only the foreign tourists market, foreign tourists travel to the south of Thailand more than another part of Thailand (Excluding Bangkok). A number of tourists is 11.68 million from a total of 40.94 million people, representing 29 percent of total foreign tourist traveling in Thailand and also can generate tourism revenue to the south for 219,543 million baht, representing 35 percent of all tourism revenue from foreign tourists traveling in Thailand.
LITERATURE REVIEW

Tourist information and transportation in Surat Thani Provinces on the Gulf of Thailand, there are Chumphon, Surat Thani, Nakhon Si Thammarat and Phatthalung have a combined area of over 32 square kilometers, or more than 20 million hectares are considered as the largest province in the south. In 2009 the southern provinces on the Gulf of Thailand has a GDP of 141,881 million baht or 37.69 percent of the South. Agricultural production totaled 47,536 million baht. The value of most agricultural crops is oil palm, rubber, fruit and fisheries products, while the industry has exported abroad for 100,000 million baht per year.

There are 2 piers for getting to Samui Island and Phangan Island: Raja Ferry pier is at Nang Gam Beach, Seatran Ferry pier Bang Nam Jeud, Don Sak, Surat Thani. It’s about 73 kilometers away from the city. Currently, a trip to Samui and Phangan Island is comfortable and faster; do not have to wait for a long time. A ferry trip takes about 1 hour to Samui Island, 2 hours and 30 minutes to Phangan Island. A ferry can be carry a vehicle for approximately 40 - 60 units. Ferry runs 15 flights per day.

THEORIES REGARDING TO THE SERVICE QUALITY

Service Quality approach is important in order to make customers be satisfied. The service quality occurs when the customer’s expectations of service quality is lower than customer perceptions of service quality. Nowadays competition in business has intensified so the business had to concern more for service quality.

Services have characteristics that are different from the goods. This service executives need to understand the difference. It is important to design marketing programs to support specific aspects of the service.

The service cannot be separated (Inseparability) providers and user are interacted due to consumption of services must occur simultaneously which differs from product to produce a piece of work in a warehouse before and await further distribution. Therefore, the cooperation between the service providers and the users are beneficial to both parties. The businesses need to add the ability to produce work for clients as a group with a number of clients such as training in various courses to enhance the efficient and fast.

Parasuraman, et al. (1994). have said that the quality of service is an aspect of concepts that are looking to understand how customers think, however, the quality of service is an important aspect to achieve the business effectiveness. The concept consists of three thing, customer satisfaction, and service quality and customer value.

Zeithaml, Valarie A. (1981). has said that service quality is one thing to make a difference from other business. To do service business and win the competition, it has to deliver a consistently high quality product and exceeding customer expectations. Customers’ expectation is from the experience of the customers in the past, word of mouth and advertising. After the customer receives the service, they will compare the services that customer receive with the services that customers expect. If the service quality has been lower than expectation, customer will not interested in the service provider, but if the service quality is equal to or exceeds the customer's expectations, customers will be happy to use the service provider again.

OBJECTIVE OF RESEARCH

1. To study the decision making to use the service on Ferry between Donsak- Koh Samui in Suratthani.
2. To study the level of service quality to use the Ferry between Donsak- Koh Samui in Suratthani.
3. To study the relationship between individual factors to use the Ferry between Donsak – Koh Samui in Suratthani.
METHODOLOGY OF RESEARCH

1. Population in this study were 400 people who use the Ferry between Donsak- Koh Samui in Suratthani province.
2. Questionair were used, there are three part of them.
   - Part 1. Individual factors that ask people their age, sex, education, career, income and their home town.
   - Part 2. The decision making factors that ask people to use the Ferry between Donsak- Koh Samui in Suratthani.
   - Part 3. The service level factors that ask people who use the Ferry between Donsak- Koh Samui in Suratthani.

RESULTS OF RESEARCH

Part 1. Individual factors found that, most of them were female, age between 26-30 years, single, bachelor degree, official government, income on average 10,000-20,000 Bht/month, live in south of Thailand.

Part 2. The decision making factors found that, Seatrant Ferry company were most used, travel for holliday, spent 200-400 Bht, less than 1 time a month, time between 10.00-15.00, can not specify certain day of using, drive their own vehicle.

Part 3. The service level factors found that, reliability of service and physical attribute were the same level in average. Empathy and responsiveness the same level as well.

CONCLUSION AND FUTURE WORK

Present study is focused on evaluating customer loyalty in ferry companies of Suratthani. Further investigation may be undertaken to explore and establish the possible relationship between loyalty and its individual antecedents. The antecedents discussed in the literature review section are mainly customer variables which may be classified into evaluative judgments with relational outcomes and relational company/industry dynamics. Future studies may test the interrelationships of these variables in relation to customer loyalty formation and examine the possible indirect and interactive effects on the relationships of customer loyalty. Researchers may also work in the direction of developing and validating a scale for customer loyalty assessment on the basis of preliminary research instrument used in this study.

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YOUTH PARTICIPATION IN IRISH YOUTH SERVICES

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ABSTRACT

This paper discusses some headline findings from a recent study with a representational sample of different types of youth services in Ireland. Managers of services from national organisations and locally operated services were interviewed as part of a Bourdieusian (1984) inspired mapping exercise of the sector. Initial findings suggest that young people’s participation in decision making is mainly at the programme implementation level. Identification of stakeholders in the sector and an examination of their deployment of capital have shown that young people and their needs play only a small role in how youth work is implemented within the sample. A Grounded Theory approach to gathering and analysing data (Glaser and Strauss, 1967) was used and highlighting large disparities between youth services and the variety of youth work taking place. A large number of funding agencies (nineteen) outside of the core state funding are identified and their expectations as well as their required outcomes are discussed. The paper also explores how youth work that is provided in youth services appears to have evolved into providing services to young people in certain categories and the associated struggles with the philosophical roots of the sector. With pressure on youth services to act as frontline agents for funding organisations and the ongoing move towards open tendering for contracts, this paper proposes a rethinking of how the sector is viewed and supported to enable more meaningful participation from young people.
THE EFFECT OF STUDY-ABROAD ON ENHANCING LEARNERS’ COMMUNICATION SKILLS AND STRATEGIES

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ABSTRACT

Countries come closer to each other through knowledge and communication technologies and need to establish strong bounds among each other. New cooperative fields, partnerships and solidarities make education necessary to be analyzed from the perspective of various approaches (Budak, Çakmak and Gündüz, 2015). This study explores whether 1-year study-abroad programme and having opportunities to use the target language in a real environment enhance students’ oral communication skills. This piece of research study also examines language challenges that the students faced and also the strategies they used to overcome these challenges during their study abroad. Several research studies (Donato and MacCormick, 1994; McDonough, 1999; He, 2002; Takeuchi, 2003) put forward a notion that learners’ strategy use is dynamic and varying across contexts (Gao, 2006). In this study, the participants were 4th year TEFL students (n=8), who were enrolled international-joint degree progra, went to America to pursue their 3rd year in an American university. After finishing their studies abroad, the students were interviewed in order to explore the language difficulties they experienced and also their efforts to develop language learners’ strategies to promote their language learning. The data is analysed in order to develop a deeper understanding of language learners and their strategy use and also provide insights into the effect of learning environment on strategy use.

It is hoped that the findings of this piece of research study will provide some food for thought on a number of pedagogical and theoretical issues.
ABSTRACT

Istanbul, the largest city in Turkey, has undergone major urban transformations particularly in the 2000's, during which integration with globalization gained pace. The process of transforming Istanbul into a "global city" has been shaped by top-down governmental decisions and the urban transformation projects has been implemented without any participation of civil society.

Beyoğlu-Istiklal Street, which was a cosmopolitan centre of Istanbul, has had a significant place in the urban transformation. It has been undergoing a transformation since the 1990's, and the process has gained momentum from 2005. The cultural spaces of everyday life have gone through the displacement-evacuation-renovation cycle in the gentrification process inducing a widespread social resistance. As a space of collective memory, Emek Movie Theatre has a symbolic meaning for the urban movements. Emek, built by Alexandre Vallaury in 1884 and opened as a movie theatre in the early-Republic era, was demolished in 2013 and reopened in 2016 in the Grand Pera shopping mall. Against the destruction, activists, artists and citizens started a resistance to reclaim Emek on April 17, 2011, crying out their slogans "Emek is Ours/Istanbul is Ours". The struggle to reclaim Emek composed "Emek is Ours Initiative" organizing various conferences and activities and triggering the other urban movements.

This paper aims at analyzing the manipulation of cultural capital in Beyoğlu-Istiklal Street through a reading of the tensions between civil society and the state on the demolition of Emek. In this framework, our study argues that the demolition of Emek reflects the neo-liberal urban policies of the local government and gives an example of the social resistance to the reconstruction of the historical quarter. In this context, our study initially presents a brief history and theoretical framework – referring to Bourdieu’s concept of cultural capital. Secondly, the economic and political changes influencing the demolition of Emek are presented. Finally, it gives a contextual reading on political discourses and social reactions. Analyzing the demolition of Emek, our study presents a criticism of the urban transformation in Istanbul.

Keywords: Cultural capital, Emek Movie Theatre, Urban transformation.
IRAN AND ITALY RELATIONS: A HISTORICAL SURVEY

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ABSTRACT

In this article, after mentioning a historical background of relations between two countries as ancient empires of Asia and Europe, forming formal diplomatic relations and developing it since the end of the nineteenth century would be considered. The vast political, economic, and cultural relations and ties of Iran and Italy during more than recent one hundred years are studied in this survey.

Key words: Italy, Iran, relations, politics, trade, culture

INTRODUCTION

Relations between Iran and Italy are of major importance. Although relations of two states of Iran and Rome in ancient times often were not peaceful and experienced some great and bloody wars, in recent centuries these relations were friendly and constructive. After forming colonialism in recent five hundred years, on the contrary of other powerful European states, Italy has been not a colonial state. While many European states and armies invaded Iran and occupied parts of Iranian mainland and islands, either in colonial era or in twentieth century during first and second world wars, there is no any background of these policies and actions by Italy in Iran. So, Iranians have considered Italy as a trustable friend.

Historical Background

Historical relations between Iran and Italy as two ancient civilizations and old countries are backed to two thousands years ago Iran and Rome, as two great empires of Asia and Europe or in fact superpowers of east and west from two thousands to one and half thousand years ago, had the long relations since those times to now. One aspect of these relations was some wars while another one was peaceful including trade relations, traveling of Roman merchants to Iran and other eastern countries through Iran as well as presence and teaching of some Roman professors in Iranian University of Jondi Shapour under Sassanian rule in Iran.

During four to five hundred years ago, in Safavid dynasty period, there were active commercial relations between Iran and Venice. In the kingdom of Nasser al Deen Shah the Qajar, many Italian merchants, photographers and other travelers came to Iran. In this time, in 1862, a friendship pact was concluded between two sides as well as a trade agreement in 1873. Finally, in 1886, by establishing Iranian embassy in Rome, the formal political and diplomatic relations of two countries started (www.rome.mfa.ir).

Formal Relations in contemporary Era

The first Iranian head of diplomatic core in Rome was Nariman Khan Qavam al Saltaneh (IPIS, 1980: 24). The second Iranian minister plenipotentiary was famous Iranian writer and journalist, Mirza Malkam Khan Nazem al Dowleh and the third one was later foreign minister Mirza Ebrahim Khan Ghaffari Moaven al Dowleh. After them other 15 diplomats were appointed as Iranian representatives in Italy to 1941 (IPIS, 1980: 4 & 24). Some of these diplomats were notable Iranian politicians. Fathollah Pakravan, previous foreign minister and later governor of Khorassan state, Anoushiravan Sepahbodi, later foreign minister, Mohammad Saed Maraghe, later...
foreign minister and prime minister, and Mostafa Adl previous foreign minister, were among them (IPIS, 1980: 4.5 & 24; Azghandi, 2002: 171).

In the world war second, foreign policy of Iranian government under Reza Shah the Pahlavi oriented to the Axis states including Fascist Italy and Nazi Germany. This ended to Allied states serious ultimatums to Iran. Iran declared nutrition policy, but Allied arms including USSR and UK attacked to Iran in 1941. So, Iran was obligated to cut its relations to Italy and other Axis states and Iranian head of diplomatic core came to Iran back. By ending the war in 1945, relations between two countries restarted after five years in 1946. Pakravan more previous Iranian minister plenipotentiary went to Rome in this office. Two years later, in 1948, political relations of two sides promoted to embassy level and Pakravan acknowledged as ambassador in Rome (IPIS, 1980: 24). Iran and Italy relations in these times were at highest level. After Pakravan, two Iranian ex-prime ministers, Mahmoud Jam and Ali Mansour, became ambassadors ordinary. Among other Iranian ambassadors can be noted to Musa Noori Esfandiari and Jalal Abdoh, two formerly foreign ministers (IPIS, 1980: 5 & 25).

In 1974, a common commission for economic corporations between two countries was established. In 1976, Italian president, Giovani Leone, at the head of a high level political-economic delegation arrived to Iran (www.rome.mfa.ir).

**Up and Down in Relations after 1979 Iranian Revolution**

After 1979 Iranian revolution, diplomatic relations of Iran and Italy decreased from ambassador to charge de affaire level, but in 1987 again promoted to ambassador one (IPIS, 1980: 25). In 1988, when Iraq invaded Iran, Italy declared impartial position in the Iraq-Iran war, but condemned applying chemical weapons by Iraq in the war. Italy cooperated with Iran in post war constructing plans and actions (www.rome.mfa.ir).

By declaring death penalty for Salman Roshdi, author of Satanic Verses, by Ayatollah Khomeini in 1988, Iranian relations with Europe including Italy became convulsive, and ambassadors of countries of European Economic Community were recalled from Iran. In 1989, according a resolution, European Parliament requested from members of EEC to cut their relations with Tehran and adopting sever acts against Iranian interest. However, the relations went toward normalization when Hashemi Rafsanjani was elected as Iranian president (Dehghani Firoozabadi, 2009: 412).

In 1990, lesser than one month after Iraqi invasion to Kuwait, occupying this country, and Iranian position in support of independence and national sovereignty of Kuwait, Italian foreign minister as representative of EEC traveled to Tehran and stated European trend to developing relations with Iran (Fowzi Toisserkani, 2005: 2.298; Dehghani Firoozabadi, 2009: 413). In 1991, European Community Troika including Italian foreign minister traveled to Tehran resulting to increasing level of the relations between Iran and Europe. Negotiations were called critical talks in this period. In 1997, the relations strained, 15 members of European Union cut negotiations and recalled their ambassadors (Fowzi Toisserkani, 2005: 2.298-302; Dehghani Firoozabadi, 2009: 414-417).

By electing Mohammad Khatami as Iranian president in 1997, relations between Iran and Europe including Italy reconstructed European-Iranian critical talks changed into creative talks in this period. In the first step in improving the relations, Italian foreign minister Lamberto Dini arrived to Tehran in 1998. This followed by travel of Italian prime minister Romano Prodi to Iran and his talking with Iranian president and foreign minister (Dehghani Firoozabadi, 2009: 462; Zakerian, 2001: 170).
In 1999, president Khatami traveled to Italy in reply to Prodi travel to Iran. Khatami initiated doctrine of Dialogue among civilizations. Italian culture and civilization were the most prominent in this trend. So, a document was signed in this subject between Iran, Italy and Egypt, three great ancient civilizations of Asia, Europe and Africa. Khatami visited Pope in this travel too (Dehghani Firoozabadi, 2009: 463-464). After Khatami, since Ahmadi Nejad was elected president in 2005, Iranian relations with Italy and many other countries were decreased, but by electing Rowhani as president in 2013 a new season in the foreign relations was started in which relations with Italy are of notable importance.

In addition to Italian embassy in Tehran and embassy of Iran in Rome, Iranian permanent diplomatic missions in Italy, include a general consulate in Milan established since 1959. Italy as a relatively near European country to Iran, have been both destination and transitional location for Iranian tourists and passengers. Iranian airlines have had flights to Italian airports of Rome and Milan since many years ago.

**Non-Governmental Relations**

It was mentioned before on traveling of many Italian people including merchants, professors and artists to Iran or passing from Iran since ancient times. Iranian historical monuments and natural attractive places have been interested for Italian tourists. Meanwhile Italian private sector in industry and manufacturing and other economic sections have trended for activity and investment in vast and varied economic opportunities in Iran. In return, Italy has always been a familiar and beloved country for Iranians. Actually, Italian cinema especially neorealism style have been not only known in Iran but a pattern for some Iranian movies. Many Italian movies, directors, actors and actresses are famous in Iran. Italy in painting, sculpture and architecture is a unique country for many Iranian artists and a lot of Italian universities notably in these fields have being chosen by Iranian students.

**CONCLUSION**

Relations of Iran and Italy can be divided in three periods; Ancient period during Roman and Iranian empires, recent centuries notably in the times of Safavid and Qajar dynasties, and contemporary period before and after 1979 Iranian revolution. While in the ancient times relations were almost competitive and antagonistic ones, relations in recent centuries and modern relations in contemporary era have been friendly and fruitful ones. These relations and ties have been formed in formal and governmental spheres in political-diplomatic, economic and cultural aspects as well as informal and public spheres between Iranian and Italian private sectors and peoples including intellectuals, researchers, authors, translators, artists, merchants, craftsmen, businessmen, tourists and so on. The relations have great potentials capacities and capabilities. In addition to normal relations, many new dimensions of relations such as urban or city diplomacy, food diplomacy, etc. can be interested in this regard.

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COSMOLOGY IN ARCHITECTURE BUDDHIST LANNA

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ABSTRACT

Three Planes of Existence is a Buddhist doctrine based on 5 precepts. The idea of such precepts is to do good deeds and avoid evil deeds. Trai Phum Pra Ruang or Three Planes of Existence is a literature work, dividing the world into three different worlds. The ingenious idea behind this story was written by Pramahathammaraja Lithai or Praya Lithai, king of Sukothai dynasty. The purpose of this story was to preach his mother about Dharma. Even though the doctrine behind Three Planes of Existence is not about nirvana, it is a beautiful literature about different lands in different worlds/planes within the universe. The story reflects the consequences of doing evil deeds. It makes people afraid of doing evil deeds and trying to do good deeds. From the doctrine story of Three Planes of Existence, it enhances the craftsmen with more understanding of Dharma. In a way, they create their works to communicate the story by using symbols and patterns. The meaning of symbols and patterns are to convey the doctrine in artistic ways through architectures and paintings.

Three Planes of Existence in Lanna Buddhist Architecture illustrated the power of faith in Buddhism. The power of faith is conveyed through the architectures in Lanna style. The underlying Buddhist doctrine within the work is a valuable piece of art. In this study, we not only acknowledged the beauty of work but also received the knowledge about Buddhist doctrine from the Three Planes of Existence. We also acknowledged the talent of the craftsmen and the sophisticated of Lanna’s ancestors. This study was also considered as a conservation of Lanna Buddhist Architecture.

INTRODUCTION

Cosmology or the Three Planes of Existence has been passed on and reflected on the belief of Buddhism through the Lanna Buddhist Architecture. The Buddhist Architecture illustrated the Buddhist doctrine in the Three Planes of Existence. It also concealed the doctrine about worlds/planes. The Three Planes of Existence or Trai Phum Pra Ruang is a well known scripture in Thai society. Trai Phum Pra Ruang is a foundation for the craftsmen in their paintings, sculptures, architectures, sophisticated arts and folk arts. Sometimes they would illustrate the story directly or use the symbolic of different planes to show their beliefs. (Niyada laosunton, 2000 : 11-12)

The purposes of this composition were

1) To have a Dharma scripture in the kingdom
2) To make Dharma flourish
3) To preach his mother about Dharma

Trai Phum Pra Ruang by Praya Lithai or Pramahathammaraja the first was completed on the 15th day of the 4th waxing moon on the year of the rooster, 1895 Buddhist era. (Akarat Udompon, 2010 : 12)

Universe in Tri Phumi, Three Planes of Existence or cosmology is the important idea used to explain the spiritual structure of human. It created the image of abstract and related to the nature form in ancient people mind. Universe in the beliefs of Buddhist means three worlds or Tri Phumi. It composed of Kamaphumi, Rupaphumi and Arupaphumi. The three worlds represented all sort of status of living creatures. The cosmology was also the foundation of ancient wisdom which showed the power of faith in Buddhism. (Chalongdet Kupanumas, 2014 : 17-18)
Buddhist Cosmology

Trai Phum Pra Ruang explains that the center of the universe is at Mount Mere, which is the highest mountain in the universe. It is also the core of the world, surrounded by other mountains called Mount Sundhaboriphan (ring shaped mountain encircle repeatedly 7 times). The space between the 7 mountains from Mount Meru to the universe’s mountain wall is surrounded by Nateeseetundhon. The human land is scattered on four directions or on 4 planes, which are as follows:

1. The Northern Plane is called Utarakuroot.
2. The Western Plane is called Amorradohyarn.
3. The Eastern Plane is called Boorapaviteh.
4. The Southern Plane is called Chompoo Plane.

Cosmology in Architecture Buddhist Lanna

In this study 5 temples were investigated. There were Phra Singh Temple (Chiang Mai), Ton Kain Temple (Chiang Mai), Phrathat Lamphang Luang Temple (Lampang), Lai Hin Luang Temple (Lampang) and Pong Sanook Temple (Lampang). The empirical data were collected in order to find patterns of Buddhist cosmology in architecture. The data were positioning of the object, size of the area, pattern and size of objects (doors and windows), lighting, color, shading and reflection, position of principle Buddha image in a temple and painting or design inside the Ubosot. Those elements were the reflection of the beliefs in Buddhism according to Three Planes of Existence especially inside the Ubosot. The decorations as the component of Buddhist Architecture were to give structural shape, aesthetic and concealed the belief within the northern society of Thailand. (Tik Sanbun, 2010: 45)

The other components were part of the imaginary fulfillment. All the details were related and creative which made a distinct interior design more perfect. According to the diagram of Three Planes of Existence and the layout of the important temples in Lanna, showed the differences between Theravada sect located in the central and southern part of Thailand and Mahiyankarat sect which was originated in Lanna. Mahiyankarat sect or Weng Jang Jarng believed that the former existence of Lord Buddha was white elephant. Thus the elephant can be seen in Buddhist Architecture. In Theravada sect or the Sri Lankan lineage, Chedi or Ubosot will be located in the center as it represented Mount Meru. The surrounding cloister of Chedi or Ubosot represented Mount Sundhaboriphan. There is also a single base Chedi represented 4 planes. The principle Buddha image faced to the east. The position of Chompoo plane was at the south. According to the belief that India was Chompoo plane (Land of Buddha), so the people who wanted to meet Buddha had to sail to the south. This was different from the people in Lanna, who used Viharn as the center. The underlying meaning was to image that Viharn was Himmapan Forest. The patterns and symbols were related to Himmapan Forest. Inside the Viharn, there was Mulagandhkuti. The Mulagandhkuti was a Chedi over the statue of Buddha and represented Buddha. (Somkit Jiratasnakul, 2003: 206) These designs implied that when people passed Samsara, they would enter to Himmapan Forest and meet Buddha.
The Viharn inside Ton Kain Temple (Chiang Mai) had Yodchat which represented Mount Meru. There were also many Chedi which represented the stars or other universe. Chedi also represented 4 planes around Mount Meru. Fine sand was a representative of Nateeeseetundhon. The cloister or glass cloister was a representative of universe’s boundary.

From our investigation at Ton Kain temple, we found out that pavilion was used as a representative of Chompoo plane on the south western. Thus when Lanna people travelled to India, they needed to pass to the eastern before encircling to the south.

Before entering into Viharn, you must reflect virtue, concentration and discernment or wisdom. The doctrine underlying were Eightfold Path and the Four Noble Truth. The Eightfold Path was represented by eight angles. The Four Noble Truth was represented by a square pillar on the side. The round pillar in the middle represented Paramattung (Everything combined into meditation). This implied that the person who wanted to meet Lord Buddha must have virtue. Most of the Viharn faced to the east. The design made the light reflect to the principle Buddha statue in the morning.

When we entered Viharn (center of the universe), there was Himmapan Forest symbol. The component of pattern and symbol gave the detail of Himmapan Forest. There were three groups of them which were animals, plants, and cloud. Inside Phra Singh Temple, the pattern of Viharn was comparable to the local Lanna people wearing Raja pattern shirts. The pattern was delicate and decorated with Ava glass. Most of
the colors used were blue and red. These colors represented King Rama V who patronized the reconstruction of Phra Singh Temple.

Inside Viharn, it was very simple. There was no decoration. The color inside was white. However pillars and roof were painted in maroon color. Lanna people mixed cinnabar with lacquer varnish to create a unique reddish brown color. This color not only represented the king but also created a reflection. This design created the atmosphere for meditation and was called Samanusati. Inside Viharn, there was a big principle Buddha statue in the attitude of subduing Mara. This represented the idea that Lord Buddha was supreme over the universe (idea from Ayutthaya). The smaller size of Buddha statues meant that apart from the Buddha, there were other monks as well.

The hall characteristic of Viharn was a closed system. In general, the structure was the same with multi-tiered roof and lower eaves than usual. There were two patterns of Kong Khew (arches beneath the gable which meet to suggest a stylized eyebrow). The patterns were man and woman patterns. On top of the door, there was a Naga-tun symbol. The reason why there was a Naga-Tun symbol on top of the door was for the protection. The belief of Naga was from the story of Lord Buddha. Since then the word Naga was part of ordination ceremony.

The pattern of stilt was Air Naga pattern. The pattern was derived form of Naga with wing. The balustrade of stairway was in Makara Naga pattern. They believed that Makara or dragon represented enchantment or time. When things released from the mouth of Makara, it represented nirvana. So it can be concluded that Naga was free from time or samsara.

It was to imply that once you entered the Himmapna Forest, you had to pass through three layers. The first layer was plants and floral. The second one was different kinds of animals, and the third layer consisted of four mountains which were represented by 4 different animals (cow, horse, elephant and lion). Next it would be water which was represented by lotus. Further above, it would be the sky level which meant the roof. Craftsman would use Mak pattern.

CONCLUSION

The study of Three Planes of Existence in Lanna Buddhist Architecture was done at five temples. There were Phra Singh Temple (Chiang Mai), Ton Kain Temple (Chiang Mai), Phrathat Lampang Luang Temple (Lampang), Lai Hin Luang Temple (Lampang) and Pong Sanook Temple (Lampang). All 5 temples have similar components and temple layout. The components and temple layout was based on Three Planes of Existence. They emphasized on Chom Poo Plane which is the center of the universe. Patterns, components and details of Viharn decorations were similar. The difference between each temple was only the delicacy of the craftsmen. Phra Singh temple, Ton Kain temple and Phrathat Lampang Luang temple were more delicate since they were constructed and designed by the royal craftsmen. While Lai Hin Luang temple and Pong Sanook temple were constructed and designed by the peasant craftsmen, resulting in less delicacy work. But they conveyed the doctrine and imaginary story of Three Planes of Existence in a straight forward and easy understanding way.

Three Planes of Existence associated to Lanna Buddhist Architecture attracted people who want to enter Buddhist Plane. Thus the purpose was to learn and appreciate the beauty of Buddhism in Lanna Architecture.

SUGGESTION

The study explores the history, mythology and to expand the influence of the Sukhothai kingdom through faith in Buddhism. Causing the Trai Phum Pra Ruang And from the influence of faith affecting the layout and decor, as well as the story through the Buddha Lanna architecture. Shows how to create an atmosphere outside. And building Since the choice of direction The building layout A focus on details and still slightly conservative faith. Mind is an anchor to hold on to the good. So it should be to educate the people. the general public the tourist To demonstrate the importance of the Apocalypse Prarewg worlds. Buddhist and Lanna architecture to more accurately focus on beauty alone.

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The purposes of the study were to examine and compare the quality of life in the elderly categorized by gender, age, marital status, education level, occupation and income in Bang Krabue community of Bangkok Thailand. The sample group consisted of 120 volunteer elderly people who living in Bang Krabue community of Bangkok Thailand. The data were collected by the questionnaire from WHOQOL-BREF-THAI with 0.65 content validity and alpha cronbach reliability was 0.84 which consisted of four aspect were as follows: physical, psychological, social relationships and environment. The statistics used for data analysis included frequency, percentage, mean, standard deviation, t-test, and One-way ANOVA then used LSD for comparing the difference in pair was found.

The results showed that the majority of the sample were quality of life was at the middle level. When considered in each aspect was found that the score of social relationships was highest, followed by psychological, environment and physical respectively. From the comparison, it was found that the elderly who had different gender had no difference in the quality of life. However, the elderly with different age, marital status, education level, occupation, and income had difference in the quality of life a statistically significant at p<0.05. These findings can be applied to the development quality of life of elderly in Bang Krabue community and other communities.

Keywords - Quality of Life, Elderly

INTRODUCTION

Definition of an older or elderly person means most developed world countries have accepted the chronological age of 65 years as a definition of elderly or older person. At the moment, there is no United Nations standard numerical criterion, but the UN agreed cutoff is 60 years to refer to the older population. [6]

United Nations New York [5] found that Globally, population aged 60 or over is the fastest growing, in the more developed regions, the population aged 60 or over is increasing at 1.0 percent annually before 2050 and 0.11 percent annually from 2050 to 2100; it is expected to increase by 45 percent by the middle of the century, rising from 287 million in 2013 to 417 million in 2050 and to 440 million in 2100. In the less developed regions, the population aged 60 or over is currently increasing at the fastest pace ever, 3.7 percent annually in the period 2010 to 2015 and is projected to increase by 2.9 percent annually before 2050 and 0.9 percent annually from 2050 to 2100; its numbers are expected to rise from 554 million in 2013 to 1.6 billion in 2050 and to 2.5 billion in 2100. Meanwhile, the 2014 survey of the older persons in Thailand found that Thailand has the number and proportion of older people is increasing rapidly from 1994 to 2011. The number of older
people of the country's population were 6.8 percent, 9.4 percent, 10.7 percent and 12.2 percent in the year 1994, 2002, 2007 and 2011 respectively. Number of the elderly accounted for 14.9 percent of the total population (13.8 percent as male and 16.1 percent as female).

Quality of life in the elderly means that older people with physical, mental, emotional, social and happy. The economic well-being, disease-free and living a stable life better conditions. Elements of the quality of life in the elderly were as follows: 1) physical, 2) psychological, 3) social relations, 4) Environment 5) security in life. [1]

However, National Statistical Office Ministry of Information and Communication Technology [2] found that the elderly of Thailand in a given annual checkup constantly 35.2 percent in 2002. The increase as a percentage of 52.2 in 2014 from the data thus seen that the elderly were very conscious of health own more than before. But in the meantime to live longer can not imply that there must be good health as well. Because most seniors tend to live longer with the disease and take care of themselves. At the same time the elderly who live alone in the household increased from 3.6 percent in 1994 to 8.7 percent in 2014. 88.9 percent of seniors do not care /self-care. The elderly who have served in the routine daily care, with 11.1 percent and 76.1 percent, mostly female. Consistent with a study on the Depression in the elderly. The unique features related to diagnosis and treatment of Shear K et al [4] found that old age is a phase in life where there is a greater probability of social disruptions such as bereavement, social isolation, physical disability and cognitive decline, all of which contribute to depression.

Bang Krabue community located in Bangkok Thailand. The Community congestion has been announced as a community established by Bangkok in 1992. People in this community have every age group. Allows people to live as one big family. Those who live in this community, mostly the elderly and preschoolers. Some families of the elderly living alone as some families of the elderly had caregiver. But caregiver must be worked out in the daytime. The researchers is interested to find out the characteristic and level of the quality of life among elderly in community of Bangkok Thailand. As a result, this study was intentionally examine and compare the quality of life among elderly in Bang Krabue community of Bangkok Thailand.

OBJECTIVES

The purposes of the study were to examine and compare the quality of life in the elderly categorized by gender, age, marital status, education level, occupation and income in Bang Krabue community of Bangkok Thailand.

METHODOLOGY

Study design

This study was a quantitative research, which cross-sectional descriptive study for a period of 1 week (June 5-11, 2016).

Study population

The sample group consisted of 120 volunteer elderly people with age ≥ 60 years who living in Bang Krabue community of Bangkok Thailand. An accidental sampling procedure was used and they were willing to participate in this study.

Data collection procedures

The data were collected by the questionnaire from WHOQOL-BREF-THAI with 0.65 content validity and alpha cronbach reliability was 0.84 [1]. There were two kinds of questionnaire were perceived objective...
and self-report subjective. Which consisted of four aspect were as follows: physical domain, psychological domain, social relationships and environment. The quality of life scores from WHOQOL-BREF-THAI between 26-130 points, which can be interpreted as follows: 1) 26-60 points indicates low level of quality of life, 2) 61-95 points represents the middle level quality of life and 3) 96-130 points represents the high level quality of life.

Analysis of data Collection

The statistics used for data analysis included frequency, percentage, mean, standard deviation, t-test, and One-way ANOVA then used LSD for comparing the difference in pair was found.

RESULT

The results showed that general characteristics of majority of the sample, 54.20 percent were female, 56.70 percent as aged from 60 to 69 years old, 36.70 percent as widowed status, 37.50 percent as elementary school graduation, 33.30 percent as the workers, 58.30 percent as income 1,000 to 5,000 baht per month and 66.70 percent as lived with the family (Spouse and children). The majority of the sample were quality of life was at the middle level (Table 1). Consistent with Nuengruethai P. [3] found that in Quality of Life among Elderly in Bangkok Metropolitan Thailand was the most of sample with in moderate quality of life. Overall mean Standard Deviation (SD) score of the quality of life was 0.47. When considered in each aspect was found that the score of social relationships was highest, followed by psychological, environment and physical respectively. From the comparison, it was found that the elderly who had different gender had no difference in the quality of life (Table 3). Consistent with Yaser Khaje-Bishak et al. [7] in Assessing the Quality of Life in Elderly People and Related Factors in Tabriz, Iran. However, the elderly with different age, marital status, education level, occupation, and income had difference in the quality of life a statistically significant at p<0.05 (Table 2).

Table 1. Quality of life of elderly classified by domain (n = 120)

<table>
<thead>
<tr>
<th>Quality of life Domain</th>
<th>High</th>
<th>Middle</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>N %</td>
<td>N %</td>
<td>N %</td>
<td>N %</td>
</tr>
<tr>
<td>Psychological</td>
<td>22</td>
<td>18.30</td>
<td>92</td>
</tr>
<tr>
<td>Environment</td>
<td>11</td>
<td>9.20</td>
<td>102</td>
</tr>
<tr>
<td>Physical</td>
<td>11</td>
<td>9.20</td>
<td>87</td>
</tr>
<tr>
<td>Social relationship</td>
<td>26</td>
<td>21.70</td>
<td>84</td>
</tr>
<tr>
<td>Quality of Life Total</td>
<td>26</td>
<td>21.70</td>
<td>90</td>
</tr>
</tbody>
</table>
Table 2. Compare quality of life of elderly with age, marital status, education level, occupation and income

<table>
<thead>
<tr>
<th>Table 2.</th>
<th>Quality of life (n = 120)</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>1332.74</td>
<td>666.37</td>
<td>3.26</td>
<td>.042*</td>
<td></td>
</tr>
<tr>
<td>Within Groups</td>
<td>117</td>
<td>23867.25</td>
<td>203.99</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>119</td>
<td>25199.99</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>3</td>
<td>4669.48</td>
<td>1556.44</td>
<td>8.79</td>
<td>.000*</td>
<td></td>
</tr>
<tr>
<td>Within Groups</td>
<td>116</td>
<td>20530.51</td>
<td>176.99</td>
<td></td>
<td></td>
<td></td>
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<td>25199.99</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Education level</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>4</td>
<td>3307.47</td>
<td>826.87</td>
<td>4.34</td>
<td>.003*</td>
<td></td>
</tr>
<tr>
<td>Within Groups</td>
<td>115</td>
<td>21892.52</td>
<td>190.37</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>119</td>
<td>25199.99</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>4</td>
<td>2712.24</td>
<td>678.06</td>
<td>3.47</td>
<td>.010*</td>
<td></td>
</tr>
<tr>
<td>Within Groups</td>
<td>115</td>
<td>22487.76</td>
<td>195.55</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Total</td>
<td>119</td>
<td>25199.99</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Income (Baht/ Month)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>3</td>
<td>7556.50</td>
<td>2518.83</td>
<td>16.56</td>
<td>.000*</td>
<td></td>
</tr>
<tr>
<td>Within Groups</td>
<td>116</td>
<td>17643.49</td>
<td>152.099</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>119</td>
<td>25199.99</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p< 0.05

Table 3. Compare quality of life of elderly with gender

<table>
<thead>
<tr>
<th>Table 3.</th>
<th>Quality of life (n = 120)</th>
<th>n</th>
<th>x̄</th>
<th>SD</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Male</strong></td>
<td></td>
<td>55</td>
<td>85.05</td>
<td>14.07</td>
<td>0.561</td>
<td>0.902</td>
</tr>
<tr>
<td><strong>Female</strong></td>
<td></td>
<td>65</td>
<td>83.55</td>
<td>15.02</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p< 0.05

**CONCLUSIONS**

These findings can be applied to the development quality of life of elderly in Bang Krabue community and other communities and may help other researchers to use qualitative research with focus groups or in other programs with the aim of helping people enjoy a better quality of life.

**ACKNOWLEDGEMENT**

The researchers would like to thank you all experts who kindly provide the valuable advices. Thanks to Research and Development Institute, Suan Sunandha Rajabhat University and College of Nursing and Health who gave funding for doing this research and co-operation of all participants.
REFERENCE


EFFECTIVENESS OF APPLIED FOLK ART PLONG STICK EXERCISE AND SOCIAL SUPPORT TOWARDS SELF-CARE BEHAVIORS OF ELDERLY

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ABSTRACT

The purpose of the research were to study effectiveness of applied folk art plong stick exercise and social support towards self-care behaviors of elderly. The sample group consisted of 100 elderly were purposive sampling, who had lived in Dusit district, Bangkok Thailand. The instrument of the research was the questionnaire. The questionnaire consisted of 2 aspects: 45 items. An applied folk art pole stick exercise and social support program was taught by a master for 45 minutes, at least three times weekly, for two months. The statistical analysis were percentage, average, standard deviation and paired samples t-test. Effectiveness of applied folk art pole stick exercise, social support and self-care behaviors were measured at the beginning of the program as a baseline, and at three months of training. The result found that the socio-demographic characteristic majority 78% were female and Divorce (68%). Average the social support increased from the baseline (mean = 3.33, SD = .07) were statistic significantly at .05 level and average of self-care behaviors on health status increased from the baseline (mean = 3.01, SD = .02) were statistic significantly at .05 level.

Keywords - applied folk art, pole stick exercise, elderly, social support, self-care behaviors

INTRODUCTION

Thailand is currently ranked the third most rapidly aging population in the world. (HelpAge international global network, 2016). Statistics show that the proportion of persons aged over 60 years in Thailand now accounts for 13 percent of the total population. In the next 20 years, the aging population is expected to account for 25% of the population. (The Government Public Relations Department, 2014). This means that out of every four Thais, one will be a senior citizen. Globalization Nowadays is changes in economic and social structure. The elderly were abandoned lot alone. Meanwhile, the change in family size from the large family to a single family then they no time to take care of the elderly. Neither the elderly be effected by economic and social culture nor physical problem.

The aging process is associated with the onset of chronic conditions so that two thirds of elderly citizens in Europe suffer from multimorbidity, defined as the presence of at least two co-occurring conditions. European Union (2012). The aging may suffer from the multiple health disorders due to the vulnerability for many physical and mental disturbances. Self-care behavior and Quality of life in elderly population can be affected by many environmental factors. Chronic, non-communicable diseases are the biggest cause of death in high-income countries; responsible for more than 70% of deaths in 2008. Costs associated with chronic conditions have been estimated at 75% of total health expenditure, which is related to a wide range of health services such...
as hospitalization, medication, physician consultation, transportation, rehabilitation or long-term care (Nagel A, et al., 2012).

Social support as part of the factors that influence in elderly. The peer support response the needs and emotionally. Elderly need friends when anxiety or loneliness. Friends, family, social supporters as well as the emotional and as part of society. In crisis situations friends, family, social support can help each other, although the social structure and family have changed most seniors still live with their family, which is an important source of social support base. Especially in Thai culture providing care for parent show their gratitude. Strong social support is a key role in promoting self-care behaviors of elderly. According to Boen H., Dalgard. O S and Bjertness. E. (2012). The research Found that lack of social support and somatic health problems were associated with psychological distress in elderly. The combination of poor social support, poor somatic health and economic problems may represent a vulnerable situation with respect to the mental health of older persons. interventions suggested that highlight social support should be considered in mental health promotion.

Exercise is particularly important for the elderly, which main aim of the exercise is Making the body more healthy: then it will slow down the degeneration of physical exercise with a pole application form to the elderly. This exercise continued for about 20 -30 minutes to help increase metabolism 90-120 calories and weight control, improvement Trunk muscles, back and legs, stretching more. Prevent and reduce back pain. Balance and gait, the function of various organs Better coordination. According to Collins E. G. et al., (2012). This study showed that traditional walking was superior to walking with poles in increasing walking endurance on a constant work rate treadmill test for patients with peripheral arterial disease. A short time to 10 minutes several times. A pole exercise can adjust the strength or speed to suit the elderly individual and force the weak increase of pulse, weight and body mass index decreased, corresponding to the typical physical fitness of the elderly. Exercise with a pole is healthy to a physical, mental, and social relationships. Not only the absence of disease or disability but also build the relationship between their friend and their family.

Previous research has not studied the psychological and social relations of the elderly. Therefore, in this study, the researchers are interested to learn that the elderly have increased as well. Faced with the changes of the physical, psychological and social make elderly exercise and when social support to help motivate exercise affects self-care behaviors of the elderly, however. The findings will be used as key information in promoting health care behavior. And provide social support to the elderly in order to have a better quality of life in the further.

**METHODOLOGY**

**Study design.**

This study was a Quasi - experimental research, One group, pretest-posttest design and the sample were random. The purpose of this research were compared pre - post test of the elderly's self - care behaviors. This applied folk art plong stick exercise and social support programmed was taught by a master for 45 minutes, at least three times weekly, for two months. The study was approved by the Ethics in Research Committee of the institution.

**Subjects.**

The sample of this study consisted of 100 elderly who aged 60 years and older with independent ADL who did not have risk for fall and were not under physical activity restrictions from their physicians, were living in the community in Urban area such as Dusit District in Bangkok Metropolitan Thailand. They were voluntarily to take part in the study. Setting this study is Dusit District in Bangkok Metropolitan Thailand, between January 5, 2016 and April 10, 2016.
Exclusion criteria.

Subjects were excluded under the following circumstances: individuals with Alzheimer disease and other cognitive disorders who had no ability to answer the questions and no took part in the interview.

Applied Folk Art Plong Stick Exercises with social support program

Subjects voluntarily participated in a three month for applied folk art plong stick exercises training program. They practiced with family or the neighborhood at least three times a week, in the evening, within a Fitness center in community by Community volunteers. A plong stick exercise applied folk art program consisted of the following 3 sessions: Session 1, "warming up"; Session 2 "practice"; Session 3 "cool-down exercise": Session 1 included 10 minutes of warm-up exercises, Session 2 included 30 minutes of a pole stick exercise applied folk art program practice and 5 minutes of cool-down exercise in Session 3. Session 2 included 14 postures within folk art posture such as Thai standard dance, thum-na posture, thor-pha-mai posture with some repeated movements during the exercise. Sessions 3 included 8 postures, subjects were led by an instructor, and they imitated the movement and postures at the same speed.

Measurement.

Measurement the regional Ethics Committee in Suan Sunandha Rajabhat University, Thailand approved the protocol of the study. After explaining the whole protocol of study, a written informed consent taken from the eligible participants. measurement instruments were divided into four separate parts: sociodemographic data, health history (number of illnesses, medication used and fall accident), health behaviors and social support. Questionnaires were distributed and filled in individually by physically active elderly during group sessions with the supervision of a research assistant. This instrument contains 2 domains with a total of 45 items. Demographic characteristics of subjects age, gender, diseases background were collected through face-to-face interview. Subjects of both genders, apparently and healthy, independent, mobile, and were able to communicate verbally defined as inclusion criteria. Validity and reliability questionnaire were approved in other study according to the confirmation of panel of experts and the score of alpha Cronbach up to 0.8.

Statistical Analysis.

Statistically of SPSS was used for data analysis. Standard statistical methods were used to calculate means and standard deviations. The normality of the continuous data was checked using the mean and standard deviations. To determine the elderly ’s self-care behavior and social support of physical activity of the applied folk art plong stick exercise. An dependent t-test for repeated measures was used to compare before and after of the self-care behavior and social support of the subjects. Statistical significance was set at 5%.

RESULT

Demographic characteristics of the subjects are shown Majority 55% were in the Middle Old group (70 – 79 years), 78% were in the female, Divorce (68%), Graduate primary education level (48%), low income (45%), chronic morbid conditions such as Hypertension (53.3%), Diabetic mellitus (60%) and Cardiovascular disease (94.2%) respectively. The social support mean score of the subjects increased after receiving the applied folk art Pole stick exercise and social support program (mean = 3.33, SD = .07). (Table 1). The mean score of the self-care behaviors after receiving the applied folk art plong stick exercise program were increasing (mean = 3.01, SD = .02) statistically higher (p < .05). (Table 2)
Table 1
Compared Social support Score of study population (N=100)

<table>
<thead>
<tr>
<th>Social support</th>
<th>x</th>
<th>SD</th>
<th>t</th>
<th>p - value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Program</td>
<td>3.07</td>
<td>0.09</td>
<td></td>
<td>.011</td>
</tr>
<tr>
<td>Post - Program</td>
<td>3.33</td>
<td>0.07</td>
<td></td>
<td>.01</td>
</tr>
</tbody>
</table>

Table 2
Compared Self - Care Behaviors Score of study population (N=100)

<table>
<thead>
<tr>
<th>Self - Care Behaviors</th>
<th>x</th>
<th>SD</th>
<th>t</th>
<th>p - value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Program</td>
<td>2.69</td>
<td>0.23</td>
<td></td>
<td>.015</td>
</tr>
<tr>
<td>Post - Program</td>
<td>3.01</td>
<td>0.02</td>
<td></td>
<td>.01</td>
</tr>
</tbody>
</table>

DISCUSSION

Hypotheses the elderly who attend the program with the plong stick of applied folk art with social support can improved self - care behaviors than previous experiments Significant statistically .05 The results from this study reveal two themes of self - care behaviors and social support mean score of the both theme increased after receiving the applied folk art plong stick exercise and social support program. The first theme is self - care behaviors is increased after receiving the applied folk art plong stick exercise especially item of increase of frequency of exercise. According to Yokoi K., et al., (2015). The conclusion of their research revealed that the effects of short stick exercise (SSEs) appeared effective for fall prevention and improvement of physical function in older adults. Effects gained by performing the short stick exercises, such as static balance, flexibility and agility may last for six months. The short stick exercises were found to be easy for older adults to practice continuously in residential care facilities. Sukaya Boonvarasatit, (2016). Factor influencing health is health responsibility, physical activity, nutrition, and self - management and factors predicted health promotion behaviors were perceived self - efficacy and social support. The concept and the factors mentioned earlier would affect the behavior of self - health care of the elderly was good as well. Regular physical activity remains the most effective way of maintaining and improving vascular health status and caution should be taken regarding potential interference of supplements on training adaptations. (Gliemann L.,Nyberg M., Hellsten Y., 2016). According to Yokoyama S, Gamada K, and Sugino S., (2012). The post-intervention values of the Core Conditioning with the stretch pole (SP group) were higher than the Core Conditioning exercises without Stretch Pole group (CC group) at both the axillary and 10th rib levels. These results indicate that CC using the Stretch Pole improves thoracic mobility. The second theme is social support increased after receiving the applied folk art plong stick exercise especially family support for health status.

According to study the result of their research revealed that life quality of the elderly is in a high level as the result of high personal interaction, social organization, positive emotion and positive health condition orderly. Suttipong Boonphadung, (2011). This study showed that there is a need for actions to control factor associated complications with the purpose of self - care behavior towards improving QOL.
CONCLUSION

The study findings may help provide guidance for understanding the association of factors influencing self-care behaviors of Elderly and the interventions that are responsive to the needs of the elderly and help in improving the Quality of life (QOL) among the Elderly population. Health education with regard to activity and environmental changes and increase in social relationship may help in improving the QOL among the elderly population. Planning the policies and programs that improve and promote quality of life and decrease burden of elderly's diseases and establish information services for educating elderly people regarding healthy diet and doing regular exercise can be effective.

SUGGESTION

This study finding, it is suggested that presence of social support and other complications is an important factor to be considered during the assessment of self-care behavior among the elderly. Health promotion is necessary in adult population before reach to the aging population because it is Prevent morbidities and its complications in future and improve QOL among elderly.

LIMITATION

The study sample was composed of primarily elderly. Thus, our results cannot necessarily be generalized to adult populations. Additionally, our sample size may not have been large enough to detect other factor differences between male and female groups.

ACKNOWLEDGEMENTS

We would like to express our sincere thanks to Institute for Research and Development, Suan Sunandha Rajabhat University, Bangkok, Thailand for management support and financial support. We would like to acknowledge the anonymous elderly in the community and experts who voluntarily participated into this study, without them this study would have been impossible.

REFERENCES


THE RELATED RISK FACTORS AND SELF-EFFICACY OF WOMEN TO PREVENT BREAST CANCER

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ABSTRACT

The study aims to survey the determinants of breast cancer risks and association between the determinant factors and self-efficacy among women to prevent breast cancer. The study samples were 100 randomly selected women who were more than 35 years old and lived in Dusit District, Bangkok in 2014. Data were collected from constructed questionnaires with 5-Likert scales of very high, high, moderate, low and least. The questionnaires were verified the content validity with reliability coefficient of 0.7. Data were analyzed by descriptive statistics: frequency, percentage, standard deviation (SD), Pearson Correlation and Chi square. The results showed there were 27 samples (27%) who were 31-40 years old, 25 samples (25%) who were 71-80 years old. 27% of the samples completed primary schools, 42% had occupation as trade, 57% were married, 88% had income of 20001-30000 Baht per year, 93% had no family history of cancer, 99% had no history of contraception, 69% had source of information from health personnel and 99% did not have regular self-breast examination. Self-efficacy among women to prevent breast cancer were associated with age, marital status, education level and source of information.

Keywords- Self-efficacy, women, breast cancer

INTRODUCTION

One of the major health problems in every country is cancer. World Health Organization (WHO) has predicted that all types of cancer will be double in the next 20 years and the incidence of cancer will be 68 per 100,000 population year (Jirapan Srithamee, et al, 2010). The mortality rate of breast cancer among Thai women are 81.4, 83.1 and 84.9 per 100,000 population in 2005, 2006 and 2007 respectively. Office of Policy and Strategy, MOPH 2008). The ratio of breast cancer is 1 in 9 among women with cancers. Bangkok has the highest incidence of breast cancer of 28.6 per 100,000 population (National Cancer Institute, 2015).

Breast cancer remains a major public health problem. The incidence is rising in most countries and is projected to rise further over the next 20 years despite current efforts to prevent the disease. The increased incidence is not surprising since there has been, in most countries, an increase in numbers of women with major breast cancer risk factors, including lower age of menarche, late age of first pregnancy, fewer pregnancies, shorter or no periods of breastfeeding, and a later menopause. Other risk factors which add to the burden of breast cancer are the increase in obesity, alcohol consumption, inactivity, and hormone replacement therapy (HRT).

Which is in accordance with the mortality rate from pilot study which showed the women, who were more than 35 years old in Dusit District Bangkok, did not have breast cancer screening by any methods. The researchers are interested in self-efficacy for health promotion among women to prevent Breast cancer. Self-efficacy and result expectation will lead to health behavior of self breast examination to prevent breast cancer and plan to promote breast cancer education and self breast examination.

MANUSCRIPT STRUCTURE

Objectives

1. to study the related of breast cancer risks among women
2. to study the association between the related factors and self-efficacy among women to prevent breast cancer.
METHODS

No restriction criteria for participation was imposed, and as all the women included in each registry were invited to participate. Each woman was mailed either a concealed flyer or postcard inviting them to take part in the study by accessing the questionnaire on line, or requesting that a hard copy be mailed to them which they would then return anonymously. Each piece of mail had a randomly generated and untracked unique key code attached to it. The purpose of the code was to help tracking where each participant completing the survey was geographically located, and as well ensure that each woman who accessed the website to respond to the questionnaire only did so once. Population and samples 100 randomly selected women from 3 communities in Dusit District, Bangkok in 2014. This study is a descriptive research to study determinants of breast cancer risks among women and to determine the determinant factors associated with self-efficacy to prevent breast cancer among women in communities in Dusit District, Bangkok. Data are collected from constructed questionnaires by the researchers and they are verified for content validity by 3 experts. The questionnaires have 5-Likert scales of very high, high, moderate, small and least. They have coefficient of reliability of 0.7. Statistics Quantitative data are analyzed by descriptive statistics: frequency, percentage, standard deviation (SD), Pearson Correlation and Chi square.

Conceptual Framework

<table>
<thead>
<tr>
<th>Individual factors</th>
<th>Self efficacy among women to prevent breast cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td>- sex</td>
<td></td>
</tr>
<tr>
<td>- age</td>
<td></td>
</tr>
<tr>
<td>- education level</td>
<td></td>
</tr>
<tr>
<td>- genetics</td>
<td></td>
</tr>
<tr>
<td>- Hormone usage</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Economic and social factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>- occupation</td>
</tr>
<tr>
<td>- income</td>
</tr>
</tbody>
</table>

RESULTS

Table 1

Numbers and percent of samples by family history of cancer

<table>
<thead>
<tr>
<th>Family history of cancer</th>
<th>Number (person)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(N=100)</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>12</td>
<td>12.00</td>
</tr>
<tr>
<td>No</td>
<td>88</td>
<td>88.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Data analysis shows most samples of 88 persons (88.00%) do not have family history of cancer and 12 samples (12.00%) have family history of cancer.
Table 2
Numbers and percent of samples by source information

<table>
<thead>
<tr>
<th>Source of information</th>
<th>Number (person) (N=100)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newspaper</td>
<td>4</td>
<td>4.00</td>
</tr>
<tr>
<td>Neighbors</td>
<td>3</td>
<td>3.00</td>
</tr>
<tr>
<td>Relatives</td>
<td>4</td>
<td>4.00</td>
</tr>
<tr>
<td>Television</td>
<td>19</td>
<td>19.00</td>
</tr>
<tr>
<td>Health personnel</td>
<td>69</td>
<td>69.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Data analysis shows most samples of 69 samples (69.00%) have source of information from health personnel, 19 samples (19.00%) receive from television and 3 samples (3.00%) receive from neighbors.

Table 3
Numbers and percent of samples by history of contraception

<table>
<thead>
<tr>
<th>History of contraception</th>
<th>Number (person) (N=100)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>7</td>
<td>7.00</td>
</tr>
<tr>
<td>No</td>
<td>93</td>
<td>93.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Data analysis shows most samples of 93 persons (93.00%) do not have history of contraception and 7 samples (7.00%) have history of contraception.

Table 4
Numbers and percent of samples by history of hormone usage

<table>
<thead>
<tr>
<th>History of hormone usage</th>
<th>Number (person) (N=100)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1</td>
<td>1.00</td>
</tr>
<tr>
<td>No</td>
<td>99</td>
<td>99.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Data analysis shows most samples of 99 persons (99.00%) do not have history of hormone usage and only 1 samples (1.00%) have history of hormone usage.
### Table 5
**Numbers and percent of samples by self-breast examination**

<table>
<thead>
<tr>
<th>Self-breast examination (N=100)</th>
<th>Number (person)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>1</td>
<td>1.00</td>
</tr>
<tr>
<td>Yes, regularly</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Yes, not regularly</td>
<td>99</td>
<td>99.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Data analysis shows most samples of 99 persons (99.00%) have self-breast examination but not regularly and only 1 samples (1.00%) never has self-breast examination.

### Table 6
**Association of self-efficacy and age**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>Pearson Correlation</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>48.46</td>
<td>14.63</td>
<td>0.224</td>
<td>0.025</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data analysis shows statistically significant association between age and self-efficacy (p<0.05).

### Table 7
**Association between self-efficacy and marital status**

<table>
<thead>
<tr>
<th></th>
<th>Chi-Squares</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital status</td>
<td>102.20</td>
<td>4</td>
<td>0.00</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>102.96</td>
<td>3</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Data analysis shows statistically significant association between marital status and self-efficacy (p<0.05).

### Table 8
**Association between self-efficacy and education level**

<table>
<thead>
<tr>
<th></th>
<th>Chi-Squares</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education level</td>
<td>43.36</td>
<td>6</td>
<td>0.00</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>56.06</td>
<td>3</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Data analysis shows statistically significant association between education level and self-efficacy (p<0.05)
### Table 9

<table>
<thead>
<tr>
<th>Source of information</th>
<th>Chi-Squares</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-efficacy</td>
<td>209.84</td>
<td>5</td>
<td>.00</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>56.06</td>
<td>2</td>
<td>.00</td>
</tr>
</tbody>
</table>

Data analysis shows statistically significant association between source of information and self-efficacy (p<0.05)

### CONCLUSION

The study of determinants of breast cancer risks and association between the determinant factors and self-efficacy among women to prevent breast cancer in 100 randomly selected women who were more than 35 years old and lived in Dusit District, Bangkok in 2014 showed that there were 27 women (27%) who were 31-40 years old, 25 women (25%) who were 71-80 years old. 27% of them completed primary schools, 42% had occupation as trade, 57% were married, 88% had income of 20001-30000 Baht per year, 93% had no family history of cancer, 99% had no history of hormonal contraception, 69% had source of information from health personnel and 99% did not have regular self-breast examination. Self-efficacy among women to prevent breast cancer were associated with age, marital status, education level and source of information. One conclusion of this review is that the application of measures that are already available, such as chemoprevention and lifestyle prevention, would result in appreciable reductions in breast cancer risk. A second conclusion is that the pace of advance of our understanding of the biology of breast cancer risk and development is highly likely to give rise to new avenues for prevention over the next 10 years. A major problem is applying what we already know concerning the efficacy of prevention to appropriate populations of women. To apply chemoprevention, we need to have measures in place to assess risk and to explain the pros and cons of treatment and for prescription of appropriate therapies. Lifestyle change is a population problem which involves publicity concerning its risks and benefits of change and providing mechanisms to support women in their choices throughout society as highlighted of Medicine documents.

### DISCUSSION

The result showed that most of the women had breast cancer risks in genetics and less usage of hormonal contraception. They also had risk of breast screening behavior even though they received information from health personnel. Regular breast screening could reduce severity of breast cancer if it was detected early, therefore we should encourage health promotion for women to have regular breast cancer screening and search for models of sustainability. We found that in order to enhance self-efficacy among women to prevent breast cancer, factors of age, marital status, education level and source of information should be considered since perceived self-efficacy and personal expectation result in sustainable behavior. With this study we examined knowledge and prevention practices among breast cancer survivors, as well as how knowledge impacted their involvement with medical treatment. Knowledge of breast cancer, screening with regular mammograms and breast self-exams are expected to be associated with earlier decision to seek medical care and earlier stage of breast cancer at initial diagnosis. Other interesting differences between black and white women were the fact that compassion of the health professional was rated lower by black versus white women, and so was the contribution of the physician to increasing the woman's knowledge on breast cancer. A study among low-income minorities showed a significant association of patient self-efficacy and physician emotional support with breast cancer knowledge; physician emotional support appeared to be more important than physician informational support.
ACKNOWLEDGEMENTS

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REFERENCE


MODEL OF COMMUNITY CARE FOR PATIENTS WITH CHRONIC MENTAL ILLNESS

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ABSTRACT

The main objective to develop a Model of Community Care for Persons Mental Illness. It is action research. Population are 205 persons and special ten families participated in study. A model of community care had divided into four steps, first is a situational analysis; data was collected through document, multidisciplinary 30 persons of focus group. The evidence showed that have limitation of knowledge, skills, and communication, most of patients have behavioral problems, lack of daily activity required, second: plan development by 16 persons who workshop; all instruments were validated be three experts validity validation, third: intervention by multidisciplinary used participation and intervention: about psycho education, case management, project, home health care. The last step is an evaluation which knowledge management, knowledge, skills, home visit, project, Satisfaction. The patients from ten families participated in study. After ten months of the project, results show that nine patients increase their Global Assessment of Functioning of patients and mental health. but one patient chose to stay in psychiatric hospital because he drunk a lots in the community. The overall level of satisfaction about psycho education was “satisfied”. The most satisfied was psycho education about schizophrenia.

Keywords-Community participation, chronic mental, community care, home health care

INTRODUCTION

The fast pace of globalization has a big impact to all factors of the society in terms of financial struggle. It puts more stress on people. Many people turned out drinking to relieve stress, stimulated by the spreading alcohol commercial and advertisement. This has made Thailand the 5th most alcohol consumer of the world. [1] Addicting to cigarettes and alcohol is the way to use other drugs, and drugs can cause mental illness. Mental illness is the dysfunction of thought, emotion, perception, action and reaction. People with mental illness can’t participate well in the workplace and with the society. The report of Thai people who have mental illness per 100,000 people during the fiscal year of 1997-2001 stated that the number of mentally ill patients tended to increase every year. When sorting out services in public health care in 1997, the portion of mentally ill people was 298 people per 100,000. The number dropped down to 228.2 per 100,000 people in 2001. However, the number of people with mental illness increased greatly in the next decade. Top 3 common mental illnesses are alcohol-related mental illness (28.52%), following by major depressive disorder (3.2%) and other illness, e.g. chronic depression (1.18%), panic disorder (0.89%) and anxiety disorder (0.7%) [2] This fact is related to the statistic record from department of mental health which said that numbers of new patients in public psychiatric hospitals from 2010-2011 was raised up 25% (70,717 patients to 88,432). It proves that the volume of mentally-ill patients was increasing[2][3].

More and more people have mental illness these days. Statistic from national statistic office in 2009 showed that 12% of population above 15 years old (5 million people) had mental concern. This group of people was not yet patients, because the symptom was not serious and it could be cured at early stage. In
2008, there were 1,668,041 people who had mental problem. 445,840 patients were diagnosed to be in schizophrenia. 375,035 patients had anxiety disorder, 199,667 patients had major depression. [2] The rest of patients were categorized into drug users, epilepsy and mental retardation. Averagely, patients spent 41 days during treatment in the hospitals. It is 5-6 times more than patients with physical illness. [3] This has an effect to national development in a way because health department needs to spend more budgets to find better solution to support patients who needs mental treatment. People with chronic mental illness need lifetime treatment. Chronic mental illness that needs to be treated regularly is personality disorder, major depression, Alzheimer, and drug-addicted patients. Patients in these categories need the right treatment when they come back home. [4] At home, family members seem to understand how to look after the patients and they learn how to participate (by AIC method) [4] [5] and get involved with patients’ treatment. Family members have better attitude toward mental patients and agree to adapt AIC to use in the family. [6] However, no matter how well family members know the right way to look after mental patients, they are not ready to devote their time to take care of the patients. This agrees with the research [7] said that even though family members know how to take care of mental patients, they still need professional care or medical staff to help training them.

More people have mental illness are Nonthaburi Thailand 2552 case [8] From the house visit and survey in koh kret pak kret Nonthaburi Thailand, we found out that patients did not know how to look after themselves. The stress level was at moderate rate (58.34%) and high rate (33.33%). The problems occurring were: 1. not knowing the real symptom (25%) and 2. inconsistency of medicine taking (18.75%). [8] [9] Also, patients, family and public health volunteer of each community do not have knowledge of mental illness. Inconsistency of taking medicine also affected the patients. We also found out patients with mental illness were not accepted in the community. It is very important to support family and community and educate them how to look after patients so patients can be part of community. [10] In order to decrease stress due to looking after mental patients, some support from the government should be provided. Government can help setting up group support in each community by forming up the community care center and sending professional to the center. There are some centers that set up the mental health care group, such as Nontaburi Hospital Health Care Center and Sritanyai Hospital. Volunteers in each community will be the great support for patients and family. This research’s purpose is to find the right pattern of how to look after mental patients at home by getting support from community and local health service. Action research was the method of this study and main purpose of action research is the participation between researchers and members in study group. Both parties can share experience and find out the right solution together. [6]

**OBJECTIVE**

We expected to find out the right pattern of how to look after chronic mental patients with the participation of family, community and local health service

**LITERATURE & THEORY**

Related Works or Discussion

3.1 Ideas and theories of chronic mental illness in community
3.2 Treatment for chronic mental patients in community
3.3 Format of patient’s treatment in community
3.4 Ideas of community participation and sample research

[4] Studied the format and patterns of community participation in terms of chronic mental patients. The purpose was to develop treatment for patients in 3 sub districts,[4] adapted the System theory and AIC participation pattern to her research. In her research, the result showed process of community treatment process. Firstly, patients in target areas will be screened by professional nurses by using mental competency test. Patients in stage 1 will be observed and taken care off by psychiatric nurses. For patients in stage 2 and 3 (patients with less complicated condition), they will be looked after by staff in local public health center. [4] observed 12 patients with complicated condition for a while; she found out that 3 patients had recovered greatly. 8 patients recovered gradually, and 1 patient got worse and needed to go back to the hospital in Roi-Ed. Krongchit also found out about patients’ family members new attitude toward mental patients. Family

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members tend to have more positive attitude and satisfied with the pattern of house care. Not only family members, public health staff also felt good about the pattern.

[11] A Model of Chronic Psychiatric Patient Care in Community in Chyaphom Provience. It is action research. Population are 200 persons but ten families participated in stud. A model of community care had two dimension the first dimension including having freelance Instructor nurses, study nurse, nurse provide home health care, The second dimension of the community was to decrease the environment risk factor related to drinking in the community. There are some reasons why this project was not successful in getting people involving in caring for the mentally ill people and in changing attitude and behavior related to alcohol drinking in the community First, the problem was not acknowledged by the community. Secondly, mental illness is not a contagious illness, for this reason, people did not see how it related to their lives. therefore, they did not view it as a community problem Thirdly, changing attitude and behaviors related to alcohol consumption needs a multidisciplinary team with involvement at various levels and times, and with sensitive communication. The research team was not skillful to run this kind of project.

[7] Studied the pattern of how to take care of chronic mental patients. The team performed an operational research of home health care by professional nurses. [12] studied the evaluation of integrated community health care for mental patients in Warichphum district, Sakonnakorn. The team discovered that 66 patients from the rehabilitation did not have to come back to get more treatment. Comparing to the same period of time in the previous year, 4 patients had to come back to get the treatment. This good result came from the cooperation between health care staff and family members who devoted their time to take a course of how to look after mental patients at home.

[13] Case management for the mentally ill: Looking at the evidence with case management, each mentally ill person was assigned a ‘case manager.’ The case manager was expected to assess that person's needs, develop a care plan, arrange for suitable care to be provided, monitor the quality of the care provided, and maintain contact with the person. The case manager may be a registered psychiatric nurse, a social worker, or an occupational therapist.

From example operational research studies above, it was proven that community public health care and family support wa an essential treatment for constant mental health care in the community.

METHODOLOGY

4.1 Methodology

4.1.1. Reviewing and studying the related literatures
4.1.2 Creating the research tool and having experts to test them.

There were 4 sets of tools. After checking and evaluating, the Cronbach’s Alpha [14] was 0.89 in the topic of GAF (The Global Assessment of Functioning). For questionnaires about patients’ attitude, Cronbach’s Alpha was 0.87. The evaluation of community’s perception toward the project had got Cronbach’s Alpha of 0.88, while evaluation of satisfaction questionnaires received Cronbach’s Alpha of 0.89.

4.1.3. Research tools were used in the sample group (205 participants).
4.1.4 The data was collected by 16 health care staff. The data was collected from April 20, 2013 to February 20, 2014
4.1.5. The data was analyzed by SPSS for Windows 19. Percentage, Mean and Standard Variation were used in this step. The in-depth interview was used for the qualitative content analyze.

4.2 Research Framework

4.2.1 Population

The population of this research was 205 people who were patients, care taker, inhabitant in Koh Kred, Nontaburi Providence, and 16 health care staff.

Sample group of this research was 50 family members who look after mental patients, 16 health care staff and 10 patients from random sampling. We intended to select patients who do not take medicine regularly.
4.2.2 Idea Framework

Focal system and sub system theory were adapted to be the key framework of this research. When one family member is sick, it affects the rest of the family. On the other hand, family members can be the encouragement of patients and help them recover quicker. More importantly, a multidisciplinary team the surroundings around patients can play important role on recovery, which we call it the supra system. [6]

4.2.3. Duration

The research was conducted from April 20, 2013 to February 20, 2014.

Patients’ right protection: The research team informed patients before conducting the research, clarifying the purpose and detail in this research. Patients are ensured that they can accept or refuse to participate in the research, and they can leave at any time. Personal information from the patients are kept safely, and it won’t be shared in public. Only information in overall will be used in this research.

RESULTS

A model of community care had divided into four steps, first is a situational analysis; data was collected through document, multidisciplinary 30 persons of focus group, the evidence showed that have limitation of knowledge, skills, and communication, most of patients have behavioral problems, lack of daily activity required. They live in Moo 1, 5, 6 and 7. Patients who have Schizophrenia were 84.62%. 7.69% were patients who have depression, and 7.69% were patients who have anxiety disorder as [7] [11]. The information also showed that 58.34% of patients had low skills of personal care. They were in the mid-level stress. 33.33% of patients were in the high-level stress. In terms of obstacles in patients’ personal care, 25% of patients did not take medication regularly. 18.75% of patients did not have personal care either from local public health center or family member. They did not have knowledge of how to look after mental patients and side effects of inconsistency in taking medicine. suggestion; changing attitude and behaviors related to alcohol consumption needs a multidisciplinary team with involvement at various levels and times, and with sensitive communication as idea framework of focal system and sub system theory were adapted to be the key framework of this research. When one family member is sick, it affects the rest of the family. On the other hand, family members can be the encouragement of patients and help them recover quicker. After ten months of the project, results show that nine patients in increase their general functioning and mental health but one patient chose to stay in Srithanya (Psychiatric Hospital) because he drunk a lots in the community.

GAF are in table 1.

<table>
<thead>
<tr>
<th>Member patient</th>
<th>GAF</th>
<th>Score function</th>
<th>Patients’ behavior during the research and after</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>increase</td>
<td>Patient could perform daily-life routine. They could interact with people. He was a little nervous, but able to control the emotion.</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>increase</td>
<td>she got supported by family.</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>increase</td>
<td>He works in a farm.</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>increase</td>
<td>Patient could perform daily-life routine</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>increase</td>
<td>He got supported by family. Patient takes medicine regularly and has no hallucination.</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>increase</td>
<td>Patient could perform daily-life routine. He stated at home.</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>increase</td>
<td>Patient applied for a job, but still unemployed. she stated at home, helping with some housework.</td>
</tr>
</tbody>
</table>
The evidence showed second: plan development by 16 multidisciplinary used participation and intervention: about psycho education, case management, project, home health care as [11] [13] this finding showed that the psycho education, case management can be the encouragement of patients and help them recover quicker[15][16].

The last step was an evaluation which knowledge management, knowledge, skills, home visit, project, Satisfaction. The patients from ten families participated in study. After ten months of the project, results show that. From the general information, there were 205 mental patients in this research. The overall level of satisfaction about project are in table 2

<table>
<thead>
<tr>
<th>Project</th>
<th>( \chi )</th>
<th>S.D.</th>
<th>Level of Satisfaction</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>knowledge of schizophrenia</td>
<td>4.7</td>
<td>.75</td>
<td>Very Satisfied</td>
<td>5</td>
</tr>
<tr>
<td>Drug addict</td>
<td>4.52</td>
<td>.68</td>
<td>Satisfied</td>
<td>4</td>
</tr>
<tr>
<td>Depression</td>
<td>4.22</td>
<td>.68</td>
<td>Satisfied</td>
<td>4</td>
</tr>
<tr>
<td>Participation and interaction of community member toward mental patients</td>
<td>4.19</td>
<td>.76</td>
<td>Satisfied</td>
<td>4</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Dissatisfied</td>
<td>2</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Very Dissatisfied</td>
<td>1</td>
</tr>
</tbody>
</table>

The overall level of satisfaction about psycho education was “satisfied”. The most satisfied was psycho education about schizophrenia. As Schizophrenia was simply a set of learnt behaviors [16][18] The study could explain 57% of variance of expressed emotion. In addition, severity of illness, mental health status, care giving burden, and family functioning had a direct effect on expressed emotion. Meanwhile, stigma had an indirect effect on expressed emotion, mediated through caregiving burden and mental health status of the family caregiver and suggested on models of community care, including evaluating implementation fidelity, exploring patient predictors of improvement, and evaluating the role of the helping alliance in mediating outcome. This good result came from the cooperation between health care staff and family members who devoted their time to take a course of how to look after mental patients at home [4][6][7][17] patients with complicated condition for a while will had recovered greatly [15][17] also found out about patients’ family members new attitude toward mental patients. Family members tend to have more positive attitude and satisfied with the pattern of house care. Not only family members, public health staff also felt good about the pattern. It is proven that community public health care and family support is an
essential treatment for constant mental health care in the community. Participation and interaction of community member toward mental patients Satisfied as [5] [6]

CONCLUSION AND FUTURE WORK

A model of community care had divided into four steps could decrease their general functioning and mental health needs a multidisciplinary team used participation and intervention: about psycho education, case management, home health care and project. Changing attitude and behaviors related to alcohol consumption needs a multidisciplinary team with involvement at various levels, times and with sensitive communication. Family members can be the encouragement of patients and help them recover quicker. More importantly, a multidisciplinary team the surroundings around patients can play important role on recovery by psycho education, case management, home health care and project.

ACKNOWLEDGEMENTS

The big thank is given to Dr. Ponpun Ratanaamorn and Suan Sunandha Rajabhat University for granting budget for this research via U Ranking project.

REFERENCE

PSYCHOEDUCATION TO ENHANCE SELF-EFFICACY AND THE QUALITY OF LIFE THE ELDERLY IN BANGNANGLEE SUB-DISTRICT, AMPHAWA DISTRICT SAMUTSONGKHAM PROVINCE

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ABSTRACT

The Psychoeducation to enhance self-efficacy and the quality of life in the elderly in Bangnanglee Sub-district, Amphawa District, Samutsongkham Province was investigated, aiming 1) to examine the quality of life of the elderly on knowledge domain, perceived self-efficacy and mental health. 2) to compare the quality of life of the elderly on knowledge, perceived self-efficacy and mental health in Bangnanglee Sub-district, Amphawa District, Samutsongkham. 3) to examine the effectiveness of Psychoeducation to enhance the performance and quality of life for the elderly in Bangnanglee Sub-district, Amphawa District, Samutsongkham. In this study, the samples included a total of three hundred and one elderly aged 60 years up, residing in Bangnanglee Sub-district, Amphawa District, Samutsongkham District, SamutSakhon Province of overall 301 subjects, 175 subjects are male and 126 subjects are female. The purposive sampling method was adopted to divide the sample into two groups; experiment group of 30 persons and control group of 30 persons. The elderly samples participated in the Psychoeducation to enhance the quality of life came from three villages; each included ten persons. Data collection was conducted using the questionnaires. The statistics implemented included percentage, mean, standard deviation, and Pairs t-test for statistical tests.

Results

1. Post-experimentally, the elderly participating in Psychoeducation to enhance the self-efficacy and the quality of life through the group process gained better knowledge than those in normal mental health group at statistically significant level 0.01

2. Post-experimentally, the elderly participating in Psychoeducation to enhance the self-efficacy and the quality of life through the group process perceived higher self-efficacy than those in normal mental health group at statistically significant level 0.01

3. Post-experimentally, the elderly participating in Psychoeducation to enhance the self-efficacy and the quality of life through the group process reported more positive attitude and improved mental health than those in normal mental health group at statistically significant level 0.01

Keywords-Psychoeducation, enhanced self-efficacy, process group, the quality of life of the elderly

INTRODUCTION

The scientific and medical breakthrough brings about the longer and healthier physical being to mankind. However, because the enormously growing number of population on the planet, it is fearful that this may lead to the insufficient foodstuffs. The success of the contraception measures taken decreases the number of the world population[9]. The UN study of the tendency and change in the universal population structure showed that world population aged of 60 years up will increase by 580 million people, and nearby half of these numbers are Asian people (280 million people). The growth rate of the world population estimates 52 percent approximately, the growth rate of the 60-year old or higher elderly increases by 102 percent. The structure of the current generation is covered by the new age group of the older adults[4]. The
Thus, the researcher is of the interest to investigate the mental health of the elderly in Thailand. The elderly have a long life and in good health corresponding to their level of the economic and social development properly, consequently that the elderly have a long life and in good health corresponding to their level of the economic and social development. The availability of personnel and system has been necessary to the adaptation, future changes, and seeking knowledge wisely in the globalization, the developed immunity to all segments based on the philosophy of sufficiency economy. In the realm of social change, today’s developed countries have becoming an aging society. To ensure the desirable health of the elderly and self-care of family members, community involvement in care-giving, and health promotion for the elderly, as well as exposing the elderly to partake in promoting personal health, family, and community, the General Welfare Service for the elderly has been established with the participation of the family and the elderly on health comprehensively.

A survey of the mental health of the aged people in four different regions of Thailand demonstrated the mental health problems of the elderly by regions; the depression in the elderly was identified mostly in South, 15.5 percent while low self-esteem in the elderly was identified mostly in North, 10.9 percent. The commonly found mental health problems in the elderly included depression, anxiety, and feeling of hopelessness. The investigation of the mental health of the aged people in four different regions of Thailand 2014 demonstrated that mental health problems in the elderly that are mostly found include depression, 87 percent, fatigue, 22.6 percent, non-refreshing waking up, 20.6 percent. Consistent with the survey of the mental health of the aged people in Thailand 2014, found that feelings most frequently occurred with the elderly included feeling of non-appetite (4.0 percent), followed by the anxiety (3.4 percent), and frustration (2.9 percent), which the feeling increases with the growing age. The proportion of elderly women is larger than the elderly men, because females are more sensitive emotionally than men.

In short, the quality of life of the elderly requires an integration of well-being physically, mentally, and socially. To achieve this, it calls for the mutual responsibilities between the elderly, family, and society through the measures such as self-help and family help, public service, political and community service which all have engaged on the main goals, to improve the aging people’s quality of life as much as possible. Samutsongkhram, as to the census registration during the past 10 years (2010 - 2014), contained almost 194,057 populations. The number of the population tends to decrease while the number of house has been growing. In addition, it found that number of female people is greater than that of male. In 2014, it numbers a total of 194,189 populations (93,316 male and 100,873 female); and 65,497 houses. The population pyramid is similar to that of Thai populations. The majority of people include working age; the elderly population amount to 16.4 percent of the total population of province, and female is greater than male. The survey indicated that the many elderly have facing health problems; e.g. sick of diabetes, high blood pressure, gastric disease, arthritis, and bronchitis respectively. The illness has usually been neglected for a long time, they usually intake of the traditional medicines or buy drugs themselves. Mental health problems commonly reported included anxiety, depression, and loneliness. Thus, the researcher is of the interest to investigate the effectiveness of the Psychoeducation to enhance the self-efficacy and quality of life for the elderly in elderly in Bangnanglee Sub-district, Amphawa District, Samutsongkhram Province, and to determine which the level of the mental health the elderly is how they perceive their performance to improve the quality of life, and to examine the effect of the Psychoeducation on the elderly. The results of this research is expected to benefit the agencies involved in the protection and promotion of mental health services for older people properly, consequently that the elderly have a long life and in good health corresponding to the National Economic and Social Development Plan No. 11.
OBJECTIVE OF THE STUDY

1. To examine the quality of life of the elderly on knowledge of perceived self-efficacy and mental health in Bangnanglee Sub-district, Amphawa District, Samutsongkham

2. To compare the quality of life of the elderly in terms of knowledge, perceived self-efficacy and mental health in Bangnanglee Sub-district, Amphawa District, Samutsongkham

3. To examine the effectiveness of Psychoeducation to enhance the performance and quality of life for the elderly in Bangnanglee Sub-district, Amphawa District, Samutsongkham.

METHODOLOGY

Instrument
Questionnaires are decided by research
Part 1: general data of elderly (14 items)

Part 2: perceived data of elderly (22 items)
   2.1 Interview of knowledge about psychoeducation of the elderly, the researcher-developed interview under the operational definition and the literature review - 10 items
   2.2 Interview of self-efficacy enhancing the quality of life of the elderly, the researcher-developed interview under the operational definition and the literature review - 5 items
   2.3 Interview of the aging people’s mental health, the researcher-developed interview under the operational definition and the literature review - 7 items

Scoring and Interpretation
Questionnaires about knowledge in psychoeducation to enhance self-efficacy and quality of life for seniors, and mental health - the 5-point rating scale is adopted [2].

Methodology

Design: The purposive sampling was adopted to divide the sample into two groups; experiment group and control group. Ethical Considerations: Prior to implementation, approval to conduct the Study was obtained from the Research Ethics Committee of the primary investigator’s academic institution used as a study site. All potential subjects received written and verbal explanations about the nature of the study; voluntary participation; what study involvement would entail; anonymity and confidentiality issues; and the right to withdraw from the study, at any time, without repercussions. Those consenting to taking part in the study were asked to sign a consent form.

Study population and sampling: The target population consisted of the elderly, with 30 in both the experimental and control groups, the samples included a total of three hundred and one elderly aged 60 years up, residing in Bangnanglee Sub-district, Amphawa District, Samutsongkham District, SamutSakhon Province of 301 subjects, 175 subjects are male and 126 subjects are female. The purposive sampling method was adopted to divide the sample into two groups; experiment group of 30 persons and control group of 30 persons. The elderly samples participated in the Psychoeducation to enhance the quality of life came from three villages; each included ten persons. Data collection was conducted using the questionnaires. The statistics implemented included percentage, mean, standard deviation, and Pairs t-test for statistical tests.
Table 1
compared to the quality of life the elderly for knowledge about psychoeducation between the group process perceived psychoeducation program to normal group.

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>( \bar{X} )</th>
<th>S.D.</th>
<th>t</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge about psychoeducation of the elderly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control group</td>
<td>30</td>
<td>3.87</td>
<td>681</td>
<td>-2.804*</td>
<td>.009</td>
</tr>
<tr>
<td>Experiment group</td>
<td>30</td>
<td>4.40</td>
<td>814</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<0.01
At show in table 1. significant different was found, between the experimental and control group the knowledge about psychoeducation of the elderly. There also significant different in knowledge about psychoeducation between the group process perceived psychoeducation program to normal group.

Table 2
compared to the quality of life the elderly for perception of self efficacy between the group process perceived psychoeducation program to normal group

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>( \bar{X} )</th>
<th>S.D.</th>
<th>t</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perception of self efficacy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control group</td>
<td>30</td>
<td>3.83</td>
<td>950</td>
<td>-2.183*</td>
<td>.037</td>
</tr>
<tr>
<td>Experiment group</td>
<td>30</td>
<td>4.23</td>
<td>504</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<0.01
At show in table 2. significant different was found, between the experimental and control group the perception of self efficacy of the elderly. There also significant different in perception of self efficacy between the group process perceived psychoeducation program to normal group.

Table 3
compared to the quality of life the elderly for mental health between the group process perceived psychoeducation program to normal group

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>( \bar{X} )</th>
<th>S.D.</th>
<th>t</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental Health</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control group</td>
<td>30</td>
<td>3.00</td>
<td>1.017</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experiment group</td>
<td>30</td>
<td>4.20</td>
<td>4.07</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<0.01
At show in table 3. significant different was found, between the experimental and control group the mental health of the elderly. There also significant different in mental health between the group process perceived psychoeducation program to normal group.
CONCLUSIONS

The results showed as follows.

Sex - the samples totaled of 301 people, mainly were female; representing 126 people (41.9 percent), male, representing 175 people (58.1 percent).

Age - the samples were mainly aged between 71-75 years, representing 86 persons (28.6 percent), followed by 76-80 years (82 percent), representing 82 people (27.2 percent), and 66 - 70 years old, and representing 78 people (25.9 percent) respectively.

Marital status - the samples mainly were married, alive and stay together, representing 140 people (46.5 percent), followed by married and the spouse passed away, representing 65 people (21.6 percent), single, representing 55 people (18.3 percent), respectively.

Location - the samples mainly stayed in Bangnanglee Sub-district, representing 300 people (99.7 percent), followed by other parts in Samutsongkham, representing 1 people (0.3 percent).

Income - the samples mainly were unemployed, representing 125 people (41.5 percent), followed by income ranged 7,000Baht or lesser, representing 114 people (37.9 percent), 10,000-15,000Baht, representing 33 people (11.0 percent), respectively.

Source of income - the samples earned income from children's support, representing 163 people (54.2 percent), followed by monthly salary, representing 53 people (17.6 percent), earning, but not regular income, representing 41 people (13.6 percent), senior's financial support, representing 40 people (13.3 percent), respectively.

Child's visit - the samples were mainly visited by children, representing 294 people (97.7 percent). 296 samples (98.1 percent) had religious practice and belief. 286 samples (95.0 percent) participated in society, 209 samples (69.4 percent) had no anomaly in eye sight, 92 samples (30.6 percent) had usually muscle ache, 96 samples (29.9 percent) had recurrent muscle ache, 169 samples (56.1 percent) had underlying diseases, 129 samples (43.9 percent) had no any underlying diseases, 228 samples (75.7 percent) did not smoke, and 260 samples (86.4 percent) did not had alcohol drink.

As note in table 1, 2, 3 the mean score of the knowledge about psychoeducation, perceived self-efficacy and mental health of the elderly were significant different at 0.01, between the experimental and control group.

In conclusion, the effectiveness of Psychoeducation to enhance the self-efficacy and the quality of life through the group process for the elderly has affected the behavioral change for perceived self-efficacy and mental health the quality of life the elderly in Bangnanglee Sub-district, Amphawa District, Samutsongkham improved consequently.

DISCUSSION

The study took psychoeducation to enhance self-Efficacy and the quality of Life the elderly in bangnanglee sub-district, amphawa district samutsongkham province. The elderly have attitude to perceived Psychoeducation of knowledge group (X = 4.40, S.D. = 0.814 t = -2.804), better than normal group (X = 3.87, S.D. = 0.681 t = -2.804) perceived self-efficacy (X = 4.23, S.D. = 0.504, t = -2.183) better than normal group (X = 3.83, S.D. = 0.950, t = -2.183) and mental health (X = 4.20, S.D. = 0.407 t = -5.682 better than normal group (X = 3.00, S.D. = 1.017 t = -5.682). Analyse the result to compare the group took psychoeducation to enhance the performance and quality of life for the elderly with normal group find that increase the
elderly took Psychoeducation to Enhance Self-Efficacy and the Quality of Life will change the behavior to knowledge enhance self-efficacy and mental health (t = -2.804*) probably psychoeducation to enhance the performance and quality of life for the elderly with adaptation self-efficacy theories from Bandura (1977). The results revealed the researcher used Bandura Program appeared to have an impact on the elderly and has affected the behavioral change for perceived self-efficacy and mental health, improve well-being the quality of the elderly in Bangnanglee Sub-district, Amphawa District, Samutsongkham. The findings reveal that the significant different the knowledge about psychoeducation, perceived self-efficacy and mental health of the elderly. Since the elderly in the control group did not have the same the knowledge about psychoeducation, perceived self-efficacy and mental health of the elderly as the elderly in the experimental group, it was possible that the control group elderly were more likely to inappropriately practice their elderly compared to in the experimental group. The effect of knowledge, through self-efficacy, on self-management behavior was stronger than the direct effect of knowledge about psychoeducation on self-management behavior could suggest the importance knowledge about psychoeducation and mental health of the elderly in enhancing self-efficacy with in turn, more strongly influences self-management behavior. Even through knowledge about education can self-management behavior, having self-efficacy can enhance influence that knowledge about psychoeducation (5).

REFERENCES


**AN INVESTIGATION OF ELEMENTARY MATHEMATICS TEACHER CANDIDATES**' MULTIPLE CHOICE TEST ITEM WRITING SKILLS WITHIN THE CONTEXT OF A MEASUREMENT AND EVALUATION COURSE

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**ABSTRACT**

The study was conducted with the participation of 50 Turkish teacher candidates in middle school mathematics education department of a mid-size university in 2015-2016 spring semesters. At the beginning of the course, students were informed about the test preparation project. On the third week, they learned multiple choice tests as one of the traditional assessment tools and reviewed the characteristics of a good math item by demonstration on a number of sample items. At the third step, they were reminded of making a test plan and then writing a 10-item multiple-choice test on a topic of their choice in 6th and 7th grade math curricula. They were given two weeks to review the items, make corrections and improve their tests. At the end, students were asked to work in groups and prepare a test; the items were required to be similar to PISA and TIMMS items. A comparative evaluation of the group tests to the individual work was taken place by the researchers. Our comparison revealed that although not as serious as before, the final tests still had number of problems. Some of them carried similar grammar mistakes, there was no test plan indicating the subject headings or the specific goals. It was seen that the number of items in the item pool and the number of items at the higher conceptual levels were insufficient. Although they were told to write three times more items than the resulting final test (10-item tests), majority of the students did not include the item pool in their projects and the portfolios were limited to 10-item final test. Nonetheless, students seemed to carry a very positive attitude toward the project from the start to the end. According to their self statements, they learned a lot in the course, they enjoyed group work and their item writing skills developed progressively throughout the project.

Keywords— Assessment and evaluation, Mathematics item writing, Teacher candidates

**INTRODUCTION**

Measuring and assessing how much was learned related to the curriculum, finding out the problem areas is an important issue in mathematics education, as it is in any area of education. Therefore, developing item-writing skills is a necessary qualification for mathematics teacher candidates providing them a higher level of cognition, discovering more ideas and concepts on their own (Horn, 1970; Salisbury, 2014; Towns, 2014). In general, the method of assessment used in classrooms requires student's memorization of ideas and steps; however, the test items should provide an opportunity to show the discoveries and connections that were made (Regan, 2015; Salisbury, 2014).

In the present study, we investigated the role of the course design (e.g. student centered instruction, a number of assignments, MOODLE environment, assessment and evaluation of students' item writing skills) to
develop item writing skills in teacher candidates in a measurement and evaluation course. Test items were evaluated based on the Anderson and Krathwohl's (2001) new composition of Bloom's taxonomy. This taxonomy is a framework to classify the teaching objectives, to design proper learning environment eventually to assess and evaluate student learning. The levels of Anderson and Krathwohl's taxonomy are remembering, understanding, applying, analyzing, evaluating and creating (Basol, 2016). The two lowest level of the taxonomy are remembering and understanding which focus on remembering the specific facts, methods, processes and understanding. During the learning process, students are expected to explain mathematical understanding by using more formal notation and vocabulary as result of a deeper understanding of the concept. Finally, at the end of a learning unit, students are expected to be prepared for more cognitively demanding work, such as; deductive thinking, required in application and creative work in mathematics education. This is known as the stage that students bring mathematical understanding into their practice of creative problem solving (Salisbury, 2014).

**Purpose of the study**

The aim of the study was to develop and investigate mathematics teacher candidates' item-writing skills during a measurement and evaluation course, which was offered to mathematics teacher candidates who would become middle grade teachers in grade 5-8. Fifty mathematics teacher candidates in their third year of education were enrolled in this course. The course was taught by first author of the study during fourteen weeks of the spring semester of 2015-2016 school years. In the content of the study, test items were evaluated against a number of criteria to conceive the common problems, students encountered. Additionally, by providing feedback with correction of the mistakes on the draft, the progress was surfaced through a comparison of the draft to final test form.

**METHODS**

The qualitative design was used in the study. The participants were 50 undergraduate sophomore teacher candidates (28 female and 22 male), registered in the measurement and evaluation course. The data were gathered through purposeful sampling in a mid-size university in Turkey. The course was taught by the first author whose area is measurement and evaluation. During the semester, mathematics teacher candidates were engaged in learning how to write effective math test items in one of the topics of their choice from middle school mathematics curriculum. The course was designed according to a blended Learning Management System (LMS) on MOODLE. At the beginning of the course, students were assigned the test preparation project. It was designed as a blended course; in addition to weekly lectures, students were able to follow the course online. There were ppt slides for each topic, assignment sheets, sample data and detailed explanations on the course topics. On the third week, they reviewed multiple choice tests as one of the traditional assessment tools and looked over the characteristics of a good math item by demonstration on a number of sample items. They were also provided PISA and TIMMS math items, provided demonstration of sample items from these exams in the class and discussed their difference from regular test items commonly used in traditional classroom environment. They also acknowledged that PISA 2012 and TIMMS 2011 items were majoring higher level of learning in compared to the regular classroom tests. By the Ministry of Turkish Education's emphases on constructivist approach in Turkish schools since 2004, teachers were expected to adapt their teaching methods, hence the assessment tools. It is important for teachers to use multiple instructional approaches, stimulating reflective and critical learning. Adapting the measurement tools is also required since the exams should be in line with the teaching. We expected that by improving item writing skills not only mathematics teacher candidates' would benefit, but also their future students. Ministry of Turkish Education seeks this as a way of improving Turkish students' scores in international exams (e.g. PISA and TIMMS). At the third step, they were
assigned an individual 10-item multiple-choice test project, with items in similar quality in the ones in PISA and TIMMS. Ten item multiple-choice tests were supposed to be on a topic of their choice from 6th or 7th grade math curricula. In the study, we had focus group interviews to review the draft items after the fifth week of the class. In these gatherings, teacher candidates were provided feedback showing their mistakes according to basic rules of item writing and requested to revise their submissions, accordingly. They were given two weeks to review the items, make corrections and improve the tests. After the first draft was completed, it was submitted along with the test plan and the item pool two weeks before prior to the end of the semester. Finally, the participants worked in groups (five teacher candidates) and prepare a test together; the items similar to PISA and TIMMS. In subsequent classes, PISA and TIMMS math items were demonstrated discussed and working in teams, students were encouraged to evaluate their first draft through the use of a control list developed by the instructor. A comparative evaluation of both tests (individual and the group work) was carried out by the researchers, as well. Teacher candidates were also interviewed as groups to find out their perceptions of the applications.

**Data Analysis**

The content analysis was conducted to explore the items. First the items were reviewed according to their appropriateness to National Mathematics Curricula (MONE, 2013). The sufficiency of the items for each objective was considered looking for three items for each objective. The difficulty levels of the items for the same objective were also checked to make sure they were at different difficulty levels as high, medium, or low. At the beginning of the study, students were reminded to write items at different difficulty levels when they have more than one item for the same objective. The items were checked against a list of certain characteristics defined by the authors, it was also provided when the project was assigned. The control list is provided in Table 1.

**Table 1 The Control List for Multiple Choice Item Test Project**

<table>
<thead>
<tr>
<th>Name: The Control List for Multiple Choice Item Test</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is there a brief explanation for the students before the items?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Are the objectives provided?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Is the item consistent with the objective?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Is item measuring only one objective?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Is the correct level of objectives provided based on the Blooms' revised taxonomy?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Is item stem brief, concise and self exploratory?</td>
<td></td>
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</tr>
<tr>
<td>7. Is the language of the item appropriate for the students’ age level?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Is the item written without unnecessary repetitions?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Is the negative word underlined in the negatively worded item?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Did the teacher candidate refrain from writing double negative wording?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Are the distracters consistent with the stem of the item?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Do the distracters provide clues about the answers?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Is there an answering key?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Although it is possible to gather a total score from the control list, our main interest was to make teacher candidates aware of their mistakes. Control list was provided as the project was assigned. The common mistakes were driven from the focus group gatherings, as we reviewed the items with participants. Therefore,
teacher candidates also had experience in noticing their mistakes and making proper corrections. They submitted the group projects as in individual groups and in these gatherings they were asked certain questions to raise their positive/negative views and their perceptions about the application. Direct quotations are noted to understand the concerns and improve the application for future classes.

RESULTS AND DISCUSSIONS

It was seen that there were items in the individual tests corresponding to Remembering level in Anderson and Krathwohl's (2001) revised taxonomy of objectives. It is important to encourage teacher candidates to aim the upper level of the taxonomy. Below there are a few sample items at Remembering level from the individual test.

Two examples from teacher candidates' test project:

Example 1: What is the name of the angle measuring 180°?
A) Right angle
B) Reflex angle
C) Straight angle
D) Full angle

Example 2: In the grocery, Bülent paid 12 Turkish Liras for 4 kilos of kiwi, how much money does Bülent would pay for 9 kilos?
A) 9  B) 18  C) 27  D) 36

As we can see from the examples, these sorts of items do not add to students' conceptual understanding and do not prepare them for real life situations requiring critical thinking. To answer the first item, students need to memorize the names of the angles, while the second one only requires common procedures in calculation. The findings indicated that after reviewing international exam questions the items improved noticeably. There was not any resemblance to PISA and TIMMS items in any of the individual tests, while there was certain objective with number of similar items to these questions. An example is provided below.

1. Graph reading questions

After reviewing graph reading items from PISA and TIMMS test, teacher candidates included this sort of items into their group projects.

Original PISA Item

![Graph reading question](image)
Example from teacher candidates' test project

There is a graph providing the number of personal cars and caps, sold in the last five years. According to this graph which of the following is wrong?

A) In the year 1990, the number of personal cars sold is 250 more than the number of caps sold.
B) The year 1991 is the year the most personal cars sold.
C) **The year 1992 is the least number of caps sold.**
D) In the year 1993, the number of caps sold is 150 less than personal cars.

2. **The items with scenarios**

Although item with scenarios was a few in the individual tests, there were so many in the group project. The items draw our attention in the final projects, these kinds of items lead students to reflect their learning into real life situations.

An example from teacher candidates' test project:

Erol and his friends are going to climb mountain Palandoken in Erzurum. The distance between Erzurum and Palandoken is 12 miles. Erol and his friends predict that they are going to climb at 2 miles in an hour in average and on their way back they predict to be three times faster than the arrival time. In Palandoken, they are going to have a picnic for two hours. When do you expect them to return to Erzurum?

A) **they will be back 10 hours later**
B) they will be back 11 hours later
C) they will be back 12 hours later
D) they will be back 13 hours later

3. **Items requiring modeling**

Items requiring modeling emerged in the group projects. There was a few in the individual test, but not as many as group projects. The National Turkish mathematics curricula, more apt to constructivist approach also recommended mathematical models in teaching mathematical concepts for conceptual understanding. Modeling items help students to conceptualize mathematical concepts. It was a good experience for teacher candidates to integrate these models into their own test items.

Two examples from teacher candidates' test project:

Example 1:
Which of the below calculations represents the model above?

A) \((-11) +\) \((+5)\) = \((-6)\)
B) \((-11) +\) \((+5)\) = \((-6)\)
C) \((-11) -\) \((+5)\) = \((-6)\)
D) \((-11) -\) \((+5)\) = \((-6)\)

Example 2:

Which of the below calculations represents the model above?

A) \((-4) +\) \((+9)\) = \((-5)\)
B) \((-4) -\) \((+9)\) = \((-5)\)
C) \((-4) +\) \((+8)\) = \((-5)\)
D) \((-4) -\) \((+8)\) = \((-5)\)

This study highlights how measurement and evaluation course was important for providing opportunities to teacher candidates to improve their item-writing skills. A comprehensive evaluation of individual tests to final group projects was taken place by the researchers. Our comparison has revealed that although not as serious as before, the final tests still had number of similar problems; such as similar grammatical mistakes, failure to include the test plan, the subject headings or the specific goals. The number of items for each subject headings and the number of items at higher conceptual levels were insufficient. However, since the participants were restricted to write a 10-item test, this can be understandable. There were single items, measuring several goals and the students forgot underlining the word in negative meaning in some item stems which were against the basic rules in item writing.

Some of the excerpt from the focus group interview presented below.

Interview Question: Can you share your thoughts about the item writing process?

Participant A: Well, in the beginning of the course it was hard since this was the first time I have ever tried to write an item, but now it’s pretty easy.

Participant B: It depends on what type of question it is, writing high level question based on the Bloom Taxonomy is difficult. Nevertheless, if you know what you are doing, it’s easier.

Participant C: All you do is to write a question about a mathematical subject. I feel nervous while writing because you should pay attention so many things to write a perfect item. It’s kind of hard because you don’t know what to write.

Participant D: I enjoyed most while writing real life scenarios for the items. It was fun to use our names for the characters in the questions. In one item we wrote our future plans in the distracters such as climbing a mountain, reading a book, travelling our hometown, preparation period of the final exams etc. We had really productive time while writing the questions for the project.

The results suggest that the measurement and evaluation course should provide teacher candidates with multiple opportunities for exploration and discussion, systematic feedback, and collaboration. According
to focus group interviews, teacher candidates seemed to carry a very positive attitude toward the study from the start to the end. According to self-reports, they learned a lot in the course, their lesson planning skills improved throughout the project. It was also expressed that they enjoyed the classes, hence regarded their learning process highly effective and productive. Moreover, students seemed to carry a very positive attitude toward the project from the start to the end. According to their self statements, they learned a lot in the course, their item writing skills developed progressively, and they enjoyed the application.

CONCLUSION AND FUTURE WORK

Finally, from all these, we concluded that item writing requires experience as well as training. Therefore, these sorts of assignments are a great way to prepare teacher candidates to actual classrooms. Active learning improves their test preparation skills through an understanding of the problems they encounter frequently. In order to get better, we suggest teacher candidates to be aware of the importance of writing more items, hence building an item bank for their courses.

REFERENCES


