



## Factor Analysis of Spirituality as Medical Teachers, Faculty of Medicine Siriraj Hospital, Mahidol University

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### Abstract

The purpose of this study is to analyze factors of spirituality as medical teachers. The sample is 300 medical teachers, Faculty of Medicine Siriraj Hospital. The instrument is a questionnaire about the characteristics of spirituality as medical teachers and the content validity determined by 0.67 - 1.00 of IOC and 0.98 of the alpha coefficient reliability. The methods used for data analysis was an Exploratory Factor Analysis (EFA) with the factor extraction that consisted of common factor analysis (CFA) using PAF and orthogonality by varimax method. The result of checking the relationship among the variables showed that 96 observable variables have KMO at 0.953, and communality ( $h^2$ ) is at 0.57 - 0.90. The results found 7 factors that show the spirituality as medical teachers; 1) Roles and Duties as a Medical Teacher 2) Operating in an Integrity Profession 3) Responsibility 4) Innovation and Academic work 5) Soulful of Faith in the Profession of Medical Teachers 6) Consideration of Benefits for Work and Altruism and 7) Focus on Self-development and Journey to Excellence. In particular, the obtained factors shows 63.81 percent of spirituality as medical teachers. In conclusion, the doctor who teaches "medical teacher" should have the spirit of being a teacher because the doctor is not only treating patients but also has to teach medical students to have knowledge, skills, and attitudes so that they are able to treat patients effectively.

### Introduction

The spirit of being a good teacher is to have a heart for pupils, to realize the roles that must be a role model, to show dedication and determination to develop work, to keep up with academic progress, to have compassion and good wishes for students. Teachers are

not just people with only good knowledge or teaching skills, but must also have a spirit of being a teacher. In addition, Kansan, et al. (2015) studied the developing indicators of spirituality of teachers and found that the teacher's spirit consists of 7 main components; namely, the fulfillment of roles, having good human relations and

friendliness, being a role model, teaching psychology, love and faith in the profession, morality, ethics and the bond between the teacher and the pupils. Therefore, to produce quality graduates, requires teachers who have career passion and motivation to be professional teachers. To be a good teacher should consist of three areas; morality, discipline and continually progressing and developing (Sobkroo, 2015).

Good medical teachers should be aware that learning has three parts: knowledge, skills and attitudes. Teachers should create learning benefits for students by incorporating all three parts. At the same time, teachers should realize that different learning styles are suitable for different people. Teachers important role is in guiding directions, regardless of what part of the learning process or form. Teachers should follow the progress of students' learning, make suggestions to improve or solve those learning problems with different styles of each person. (Sangthaweasin, 2014. In addition, Jirapinyo (2010) noted that if a medical teacher has three qualifications; being a medical teacher, being a doctor and being a scientist at the time, they can help to promote teaching to medical students and residents better. Therefore, medical teachers play a very important role in creating good doctors in the society. What every teacher should understand is to be aware of the role and duty of being a teacher in order to be a good role model.. Medical teachers must be a professional teacher with excellent academic and excellence in the medical field and be able to apply the teaching principles in managing medical teaching efficiently, and more importantly, they can cultivate the faith of being a teacher to develop themselves forever. Teachers should fully perform duties with the spirit to teach with the heart, love, faith, adherence to professional ideology, and commitment to work. They must behave as a role model, be attentive, care and give good wishes to pupils. When teachers work with the spirit of being a teacher, they have to realize that the pupils, the products of teachers, can have the characteristics that society needs. As Udompetch (2018) found from the study of the experience of being a medical teacher who had the spirit of being a medical teacher, namely the awareness of being a medical teacher, behavior and self-development to build faith with the aim of organizing teaching and learning activities to promote medical students. From the qualifications of being a teacher and the various research mentioned above, this study uses Factor Analysis techniques or Exploratory Factor Analysis to

analyze and group variables of spiritual teachers, so that the variables that are related or the same are grouped accordingly.

**Objective**

To analyze factors of spirituality as medical teachers.

**Conceptual Framework**

This research is a descriptive research with a study of variable groups by studying relevant theories and researches. The content consists of factors and opinions of spiritual characteristics of being a medical teacher.

Main components	Subcomponents	Indicators
S1: Professed faith in the teacher / medical teacher	S1.1: Love as a teacher / medical teacher	6 factors (S1_1.1.1 – S6_1.1.6)
	S1.2: A good example for others	8 factors (S7_1.2.1 – S14_1.2.8)
S2: The role of a teacher/ medical teacher	S2.1: Training for pupils to the best of their ability	11 factors (S15_2.1.1 – S25_2.1.11)
	S2.2: Treat students with compassion	8 factors (S26_2.2.1 – S33_2.2.8)
	S2.3: Promote physical and mental development, emotional and social for students	6 factors (S34_2.3.1 – S39_2.3.6)
S3: Commitment to work	S3.1: Job responsibility	4 factors (S40_3.1.1 – S43_3.1.4)
	S3.2: Sacrifice for work	3 factors (S44_3.2.1 – S46_3.2.4)
	S3.3: Honesty	4 factors (S47_3.3.1 – S50_3.3.4)
S4: Justice and equality	S4.1: Not subject to influence or benefit	5 factors (S51_4.1.1 – S55_4.1.5)
	S4.2: Not discriminating	3 factors (S56_4.2.1 – S58_4.2.3)
S5: Continuous self-development	S5.1: Regularly research	5 factors (S59_5.1.1 – S63_5.1.5)
	S5.2: Track academic progress	3 factors (S64_5.2.1 – S66_5.2.3)
S6: Code of ethics	S6.1: Research ethics	6 factors (S66_6.1.1 – S72_6.1.6)
	S6.2: Ethics in professional	3 factors (S73_6.2.1 – S75_6.2.3)
S7: Behavior with colleagues	S7.1: Good friend	6 factors (S76_7.1.1 – S81_7.1.6)
	S7.2: Promote and support colleagues	4 factors (S82_7.2.1 – S85_7.2.4)
S8: Ideology for the common good	S8.1: Participate in university development	5 factors (S86_8.1.1 – S90_8.1.5)
	S8.2: Responsibility to others, society and the nation	6 factors (S91_8.2.1 – S96_8.2.6)

Figure 1 The research framework consists of 8 main components, 18 subcomponents and 96 indicators.

**Research Methodology**

1. Population and Samples

The population for this study consists of 933 medical professors of the Faculty of Medicine, Siriraj Hospital, Mahidol University, fiscal year 2018.

The sample size depends on the analysis of the factors to determine the accuracy of the structure: 100 are fair, 200 are better, 500 are very good and more than 1,000 are excellent (Comrey and Lee, 1992). The researcher therefore specifies a minimum sample size of 300 - 500 persons.

2. Research Instrument

The questionnaire is divided into 2 parts as follows:

Part 1: General information about the respondents.

Part 2: 96 items of opinions about the

characteristics of the spirit of being a medical teacher. The questionnaire implements a Likert scale with five rating levels.

### 3. Collection of Data

3.1 The researcher studied documents, textbooks and research related to being a teacher and being a medical teacher by content analysis to obtain item guidelines in order to lead to a study of the Factor Analysis of spirituality as medical teachers.

3.2 To create a questionnaire based on the research framework by applying the professional ethics manual for teachers, Mahidol University Faculty Senate (2008), Teacher Ethics of the Secretariat of the Teachers Council of Thailand (1997) and a study of the experience of being a medical teacher with the spirit of being a medical teacher of Udompetch (2018), including documents and research relating to being a good teacher.

3.3 To check the content validity with three experts; 1) Assoc. Prof. Pornpun Kualmanachai, Lecturer, Department of Medicine, Faculty of Medicine Siriraj Hospital 2) Dr. Yodying Dangraphai, Lecturer, Department of Physiology, Faculty of Medicine Siriraj Hospital and 3) Dr. Kiatkul Kadechachancharn, Lecturer, Educational and Psychological Test Bureau, Srinakharinwirot University. Correct the content validity by specifying that the IOC value higher than 0.5 is acceptable and the IOC between 0.67 - 1.00.

3.4 Reliability tested with medical teachers who have previously attended training at Siriraj Health science Education Excellence center and 30 samples who are not a medical teacher of the Faculty of Medicine Siriraj Hospital. Cronbach's alpha coefficient was used for reliability analysis using criteria 0.8 or higher (Phanpinit, 2008: 191-193). The whole set of reliability is 0.980 and the reliability of each variable is as follows: 1) Professed faith in the teacher / medical teacher is 0.938, 2) The role of a teacher / medical teacher is 0.960, 3) Commitment to work is 0.917, 4) Justice is 0.829, 5) Continuous self-development is 0.903, 6) Other related codes of ethics is 0.925, 7) Treatment of colleagues is 0.931, and 8) Ideology for the common good is 0.922. By reliability testing, one research tool used to collect data from the tested group once.

3.5 The data was collected by sending documents to the department and via e-mail to medical teachers of Faculty of Medicine, Siriraj Hospital with clarifying that if anyone does not wish to answer the questionnaire, there will be no compulsion or request to answer. The questionnaire is available both online and

handout to prevent reuse of information, please select an answer from one of the channels only.

3.6 To collect and check the completion of the questionnaire.

3.7 To Conduct questionnaire analysis.

### 4. Data Analysis

4.1 Analyze the general information of the respondents using descriptive statistics such as frequency and percentage.

4.2 Exploratory factor analysis is carried out as follows:

1) Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) has the following criteria (Angsuchot et al., 2009: 97). KMO values at 0.80 and above are considered most appropriate and KMO values less than 0.50 are considered unsuitable to analyze. Bartlett's test of Sphericity analysis was used for testing correlations. If it is found statistically significant, it will be accepted to the H1 hypothesis. This means that the variables are related and can be analyzed for the composition.

2) Community (h2) should not be less than 0.50 and if it is less than 0.50, that variable will be omitted to determine the variance of each variable. (Kai-yaiwan, 2013: 75)

3) The extraction method was common factor analysis, specifically using the Principal Axis Factoring (PAF), and an orthogonal rotation was also computed by using varimax to generate factor scores.

4) The criteria for determining factors are that each element must have 3 or more variables, that is, the Eigen Value must be greater than 1, The percentage of the cumulative variance must be greater than or equal to 60% and the factor loading value must be greater than 0.3 (Angsuchot et al., 2009: 102).

## Results

The results of the study are as follows: 1) The 166 (55%) respondents were female, 129 (43%) male and 5 (1.7%) unspecified. 2) The age of 119 (39.7%) respondents were 31-40 years old, and 91 (30.3%) respondents were 41-50 years old. There were 69 people or 23.0% of respondents who were over 51 years of age. 3) The 14.7% of respondents were in Department of Internal Medicine, 9.3% were in Pediatrics Department, and 8.0% were in the Surgery Department, 4) In reference to medical teaching experience; 199 (39.1%) respondents have 3-5 years of medical teacher experiences, followed by 97 (32.3%) respondents with 15 years or more on

medical teacher experiences, and 69 (23.0%) respondents with less than 3 years of medical teacher experiences.

Besides, the findings also revealed as follows:

1. The relationship among variables analyzed by Kaiser-Meyer-Olkin Measure Statistics of Sampling Adequacy (KMO) and Bartlett's test of Sphericity values to measure data's suitability as shown in Table 1.

The factor analysis of spirituality as medical teachers the following

**Table 1** Value Analysis Results of Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO or MSA) and Bartlett's Test of Sphericity of Factor Analysis of Spirituality as Medical Teachers.

Statistics	Results
Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO)	0.953
Bartlett's test of Sphericity	29889.127
Chi-Square	4560
df	0.000
Significance	300
n	

Table 1 shows that 96 observable variables used in Factor Analysis of spirituality as medical teachers have Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) equaling 0.953, which is greater than 0.50. This indicates that the variable is related to the appropriate size for use in the Exploratory Factor Analysis. On testing statistical significance with Bartlett's of Sphericity, it was found that the statistically significant level was at 0.05, which indicates that the correlated matrix is not an identity matrix. The data is appropriate for factor analysis.

The researcher examined the suitability of each variable by using Community ( $h^2$ ) statistics to measure the appropriateness of the variable. The Factor Analysis found that the variables used in Factor Analysis of spirituality as medical teachers have Community ( $h^2$ ) at between 0.90-0.57 which is greater than 0.5, indicating that the variable is suitable to be analyzed for the composition (Kaiyawan, 2013).

Factor Extraction with Common Factor Analysis (CFA) with Principal Axis Factoring (PAF) and Orthogonal Rotation with Varimax Method. The amount of seven elements with Eigen Value greater than 1 is shown in Table 2.

**Table 1** Number of the Factor, Eigen Value, Percentage of Variance and the Percentage of Cumulative Variation in each Factor of Spirituality as Medical Teachers.

Factor	Eigenvalues	% of Variance	Cumulative %
1	43.18	44.98	44.98
2	4.61	4.80	49.78
3	4.11	4.28	54.06
4	2.77	2.88	56.94
5	2.65	2.76	59.70
6	2.14	2.23	61.93
7	1.81	1.88	63.81

From Table 2, it is found that Eigen Value which is the sum of squares of Factor Loading of 96 variables in each factor that has more than 1 Eigen Value; finding 7 factors in total. The cumulative percentage value of all seven factors is equal to 63.81. It means that the factor of spirituality as a medical teacher consists of seven factors. All of the seven factors can be a factor of spirituality as medical teachers with 63.81 percent.

Factor Loading criteria must have a value greater than 0.30 and then consider the composition and select only the variables with the highest Factor Loading of that element and consider the number of variables together to measure the variance of each. According to the Factor Analysis, the 7 appropriate factors are analyzed for spirituality as a medical teacher, and finds that the first element has the highest number of variables of 27 variables and the seventh element has the least number of variables of four variables. The details of the seven elements are shown in the Tables 3 to 9.

**Table 3** Rotated Factor Matrix of First Factor.

Factor name	Statement	Factor Loading
S7_1.2.1	Make oneself a good role model for society.	.464
S10_1.2.4	Knowledgeable and moral	.449
S15_2.1.1	Teaching management to develop students with determination.	.553
S16_2.1.2	There is systematic planning and preparation in advance.	.542
S17_2.1.3	Have techniques and methods to teach students appropriately.	.598
S18_2.1.4	Teach students to have critical thinking.	.654
S19_2.1.5	Teach students to be able to do it.	.629
S20_2.1.6	Ability in teaching and learning process and knowledge transfer.	.480
S21_2.1.7	Teaching students by covering the knowledge that should be used in the profession.	.633
S22_2.1.8	Support and encourage students to be creative.	.672
S23_2.1.9	Solve problems based on students' potential.	.700
S24_2.1.10	Ensure assessments are correct.	.589
S25_2.1.11	Psychology used in teaching, reinforcement, and motivation for students.	.644
S26_2.2.1	Treat students with good friendships.	.569
S27_2.2.2	Respect and treat students with humanity.	.596
S28_2.2.3	Accepting the opinions from students.	.637

**Table 3** Rotated Factor Matrix of First Factor.

Factor name	Statement	Factor Loading
S29_2.2.4	Keep students' secrets.	.533
S30_2.2.5	Give attention, support and encourage students.	.640
S31_2.2.6	Understand and find methods for students to change unwanted behavior.	.690
S32_2.2.7	Observe abnormalities or defects of students.	.698
S33_2.2.8	Ready to provide immediate assistance.	.655
S34_2.3.1	Promote and guide the development of each student according to his or her aptitude, interests, and potential.	.534
S35_2.3.2	Promote the emotional development of students.	.703
S36_2.3.3	Encourage students to comply with professional ethics.	.576
S37_2.3.4	Promoting joint activities between teachers and students.	.445
S38_2.3.5	Encourage students to work together effectively as a group.	.564
S39_2.3.6	Train students to realize the importance of working ethically and with knowledge and morality.	.559
	Eigen Value	43.18
	% of Variance	44.98

Kaiser-Meyer-Olkin Measure of Sampling Adequacy= 0.95 Bartlett's test of Sphericity was a significant level of  $p < 0.05$ .

From Table 3, 27 variables are found with Factor Loading between 0.445 - 0.703. Eigen Value is 43.18 and the percentage of covariance is 44.98. Call this factor Roles and Duties as a Medical Teacher.

**Table 4** Rotated Factor Matrix of Second Factor.

Factor name	Statement	Factor Loading
S12_1.2.6	Disciplinarian	.376
S47_3.3.1	Being honest with oneself and others.	.665
S48_3.3.2	Do not seek benefits from the work of others or those of colleagues as their own.	.785
S49_3.3.3	Refrain from lying, cheating, or stealing.	.755
S50_3.3.4	Be punctual	.518
S51_4.1.1	Perform duties without seeking improper interests.	.771
S52_4.1.2	Respect the academic opinions of others.	.634
S53_4.1.3	Honest and virtuous in academic matters.	.827
S54_4.1.4	Not seeking bribes	.653
S55_4.1.5	Have academic freedom	.604
S56_4.2.1	Treat others without discrimination	.594
S57_4.2.2	Perform academic tasks with the benefit of the department.	.628
S58_4.2.3	Treat students equally	.571
S63_5.1.5	Bring what you have learned to improve yourself and work efficiently.	.493
S73_6.2.1	Be aware of the terms of professional ethics.	.455
S75_6.2.3	Comply with the terms and conditions of the professional specialty.	.504
	Eigen Value	4.61
	% of Variance	4.80

Kaiser-Meyer-Olkin Measure of Sampling Adequacy= 0.95 Bartlett's test of Sphericity was a significant level of  $p < 0.05$ .

From Table 4, 16 variables with Factor Loading are found between 0.376 – 0.827. Eigen Value is 4.61 and the percentage of covariance is 4.80. Call this factor Operating in an Integrity Profession.

**Table 5** Rotated Factor Matrix of Third Factor.

Factor name	Statement	Factor Loading
S40_3.1.1	There are efforts to perform the assigned work to the best of their ability.	.400
S41_3.1.2	Perseverance, getting things done.	.397
S42_3.1.3	Have patience and never give up on obstacles, even if the operation is difficult.	.483
S43_3.1.4	With the intention to work to meet set goals.	.422
S76_7.1.1	Respect, honor and respect the privacy rights of colleagues.	.643
S77_7.1.2	Maintain friendships between colleagues.	.664
S78_7.1.3	Give a feeling of warmth and support for colleagues.	.662
S79_7.1.4	Giving sincere assistance to colleagues without expecting anything in return.	.610
S80_7.1.5	Good human relations with colleagues.	.672
S81_7.1.6	Have a courtesy with colleagues.	.678
S82_7.2.1	Exchange knowledge and give advice among colleagues in good faith.	.581
S83_7.2.2	Have care and support to colleagues.	.626
S84_7.2.3	Praise and respect for those with knowledge, ability and good behavior.	.613
S85_7.2.4	Promote the progress of colleagues creatively.	.460
S86_8.1.1	Maintain the reputation and benefits of the university.	.520
S87_8.1.2	Do not use the names and resources of the university for personal gain or for groups.	.580
S91_8.2.1	Use wisdom in daily life according to Thai culture.	.444
S92_8.2.2	Have a conscience and monitor the society responsibly.	.389
S93_8.2.3	There is work forwarding and ready to transfer academic knowledge to colleagues.	.421
	Eigen Value	4.11
	% of Variance	4.28

Kaiser-Meyer-Olkin Measure of Sampling Adequacy= 0.95 Bartlett's test of Sphericity was a significant level of  $p < 0.05$ .

From Table 5, 19 variables with Factor Loading are found between 0.389 - 0.678. Eigen Value is 4.11 and the percentage of covariance is 4.28. Call this factor Responsibility.

**Table 6** Rotated Factor Matrix of Fourth Factor.

Factor name	Statement	Factor Loading
S64_5.2.1	Academic production that meets standards and meet the needs of the country.	.472
S65_5.2.2	Allocate time for creating academic works.	.522
S66_5.2.3	Utilize the results of research.	.469
S67_6.1.1	Be aware of research agreements with research support agencies or affiliated agencies.	.572
S68_6.1.2	Have knowledge in the research field.	.633
S69_6.1.3	Responsible for what is used in research -- Either living things or non-living things.	.637
S70_6.1.4	Respect the dignity and human rights of the research sample.	.548
S71_6.1.5	Do research without bias.	.529
S72_6.1.6	The research results have been utilized as specified.	.606
S74_6.2.2	Have knowledge in a specific professional field.	.394
S88_8.1.3	Participate in development Improve the university to progress.	.421
	Eigen Value	2.77
	% of Variance	2.88

Kaiser-Meyer-Olkin Measure of Sampling Adequacy= 0.95 Bartlett's test of Sphericity was a significant level of  $p < 0.05$ .



From Table 6, 11 variables with Factor Loading are found between 0.394 - 0.637. Eigen Value is 2.77 and the percentage of covariance is 2.88. Call this factor Innovation and Academic Works.

**Table 7** Rotated Factor Matrix of Fifth Factor.

Factor name	Statement	Factor Loading
S1_1.1.1	Support the honor of being a medical teacher.	.668
S2_1.1.2	Behave appropriately as a medical teacher.	.482
S3_1.1.3	Appreciate the medical teacher career.	.519
S4_1.1.4	Happy to act as a medical teacher.	.388
S5_1.1.5	Is a good member of the professional organization of teachers	.665
S6_1.1.6	Protecting the prestige of teachers and teacher professional organizations.	.717
S8_1.2.2	Act in accordance with good culture and traditions.	.654
S9_1.2.3	Acting as a trusted person.	.469
S11_1.2.5	Talk politely, creatively, and consider the consequences for students and society.	.533
S13_1.2.7	Respect for rules and social tradition.	.558
S14_1.2.8	Personality, dress appropriately	.419
	Eigen Value	2.65
	% of Variance	2.76

Kaiser-Meyer-Olkin Measure of Sampling Adequacy= 0.95 Bartlett's test of Sphericity was a significant level of  $p < 0.05$ .

From Table 7, 11 variables with Factor Loading are found between 0.388 - 0.717. Eigen Value is 2.65 and the percentage of covariance is 2.76. Call this factor Soulful of Faith in the Profession of Medical Teachers.

**Table 8** Rotated Factor Matrix of Sixth Factor.

Factor name	Statement	Factor Loading
S44_3.2.1	Sacrificing personal time to complete tasks	.608
S45_3.2.2	Dedication to work	.530
S46_3.2.3	Waiving property or labor to complete work	.610
S89_8.1.4	Participate in meetings, training, and seminars both inside and outside the university.	.545
S90_8.1.5	Help and rejoice with colleagues that are involved in university development.	.468
S94_8.2.4	Uphold the common good	.422
S95_8.2.5	Being a leader in change for social development.	.618
S96_8.2.6	Promoting and creating unity among teachers, students and others.	.462
	Eigen Value	2.14
	% of Variance	2.23

Kaiser-Meyer-Olkin Measure of Sampling Adequacy= 0.95 Bartlett's test of Sphericity was a significant level of  $p < 0.05$ .

From Table 8, 8 variables with Factor Loading are found between 0.422 - 0.618. Eigen Value is 2.14 and the percentage of covariance is 2.23. Call this factor Consideration of Benefits for the Work and Altruism.

**Table 9** Rotated Factor Matrix of Seventh Factor.

Factor name	Statement	Factor Loading
S59_5.1.1	Striving for serious and consistent science development	.507
S60_5.1.2	Pursuing academic knowledge both domestically and internationally.	.465
S61_5.1.3	Seek new methods to keep up with ongoing changes.	.383
S62_5.1.4	Develop the ability to manage teaching, learning and continually transferring their knowledge.	.534
	Eigen Value	1.81
	% of Variance	1.88

Kaiser-Meyer-Olkin Measure of Sampling Adequacy= 0.95 Bartlett's test of Sphericity was a significant level of  $p < 0.05$ .

From Table 9, 8 variables with Factor Loading are found between 0.383 - 0.534. Eigen Value is 1.81 and the percentage of covariance is 1.88. Call this factor Focus on Self-Development and Journey to Excellence.

### Discussion

Factor analysis of spirituality as medical teachers can be discussed as follows.

1. Roles and duties of being a medical teacher is the first important element which can explain the variance 43.18% with the variable describing the element. The variables describe components as follows: teaching the students to their fullest potential and treat them with compassion by promoting physical, mental, emotional and social development for students, including being a good model for medical students as The Office of the National Education Commission (1999) gives the definition of "teacher" as a person who has a primary role in teaching and learning and promoting the learning of students by various methods in both public and private educational institutions. This shows that those who teach medical students have to be aware of the importance in understanding their roles as medical teachers and to be a good role model for medical students. This will aid medical students to learn and then slowly absorb good qualities. With regards to Kesan, et al. (2015) who studied Developing Indicators of Spirituality of Teachers under the Office of the Basic Education Commission, it was found that the factor loading of the highest component was the performance of roles and responsibilities. In addition, Mitroff and Denton (1999) described spirituality as a highly personal and intricately connected to issues such as caring, hope, kindness, love and optimism and the spiritual lack of life will lead them toward insecurity and confusion (Gawain, 2000). In addition, Janesawang, et al. (2012) studied the Experience of Spirituality in Teachers: A

Phenomenological study and found that the characteristics of good teachers with teacher's spirit includes being aware of being a teacher, aiming to work for children, acting on the path of being a teacher and treating children with love and compassion. In addition, Vajayanon (2010) states that if a medical teacher has 3 qualifications, being a teacher, a doctor and a scientist at one time, these will help to promote teaching to medical students and home physicians better. In addition, Udompetch (2018) found from the study of the experience of being a medical teacher who had the spirit of being a medical teacher, namely the awareness of being a medical teacher, behavior and self-development to build faith with the aim of organizing teaching and learning activities to promote medical students.

2. Operating in an integrity profession can explain the variance 4.80%. The variables describe components such as; discipline, honesty, not dominated by influence or interests, no discrimination and professional ethics. In addition, those who are spiritual teachers will have justice, honest and disciplines which leads to ethical work. In addition, Somrung (2013) states that the spirituality is the individual's identity, which is the result of thoughts, feelings, and decisions that reflect one's own desires, leading to beliefs leading to behavior or practice, morality, ethics and conscience. The Office of the Teacher Civil Service and Educational Personnel Commission (2004) also states that teachers must be well equipped with morals and behavior. With regards to the Office of the Basic Education Commission (2012) which stipulates that the teacher's duty is to be responsible for cultivating the consciousness of the students and teachers must be ethical, spiritual leader or spiritual adviser. These are included in the curriculum of general education only.

3. Responsibility can explain the variance 4.28%. The variables describe the following components; job responsibility, friends and associates/colleagues, promote and support colleagues/careers, responsibility for others to society and to the nation. Those are the responsibility for work, to others, to the university and society. As the Teacher Civil Service and Educational Personnel Commission (2004) noted, teachers must perform their role in learning management to the fullest with the capacity and awareness of being a teacher. Therefore, Teachers should have the responsibility to both the university and to society. The university has a role as an academic organization for the community, including opening a public space or a learning area of

the community, being a part of the community and connecting with educational institutions in the form of a network of study for a place to exchange knowledge with one another (Raksamtham, 2010).

4. Innovation and academic works can explain the variance 2.88%. The variables describe the following components: monitoring academic progress and participating in the development, improvement of the university to progress including ethics for researchers. In addition, the teachers must have both science and art to be educators until they specialize in the principles, theories, methods and practices and be able to research and develop new knowledge endlessly. In accordance with the views of Phra Maha Wutichai (Wor. Wachira Methi) (2015) who mentioned that teachers with a spiritual spirit must be outstanding in academic matters (Deep knowledge, true knowledge, wide knowledge).

5. Soulful of faith in the profession, medical teachers can explain the variance 2.76%. the variables describe the following components; love of being a teacher, being a good role model and on issues related to having a personality of a good medical teacher, these can be seen in the spirit of being a medical teacher. In addition to being skilled in their own science, they must also have love of the teaching profession. The development of teachers to be professionals must develop teachers to have psychology to look after, help, develop students naturally according to the potential of students and develop teachers to know, understand nature, and discover the unique talents of each child. Besides, it needs to develop teachers to have a spirit of being a teacher so that teachers will love and to be soulful of faith in the profession. (The Secretariat of the Council of Education, 2009). With regards to Photiwat (2011) who states that the important competencies of professional teachers are faith in the teaching profession, happiness in teaching, self-determination and the constant pursuit of new knowledge. In addition, Kaensan, et al. (2015) also found that the indicators of spirituality of teachers are to have good human relations and friendliness, to be a good example, to have psychology in teaching, love and professed faith, morality and ethics, and the bond between teachers and students.

6. Consideration of benefits for work and altruism can explain the variance 2.23%. The variables describe the following components; sacrifice for work and ideology for others, including participation in organizing meetings, training, seminars both inside and outside the university, helping and rejoicing with

colleagues who are involved in the development of the university, upholding the common good as a location, being a leader in change for social development, including promotion and creating unity among teachers, students and others. As the Office of the Basic Education Commission (2012) has set the important mission of teachers to develop pupils, the teachers must be dedicated, sacrificed, dedicated to the provision of education to students and have goodwill to all students so that they can gain academic, moral, and ethical ability to survive in the midst of globalization and future changes. Although there are many media and learning resources available today, students can search for knowledge on their own but teachers are still the first priority in teaching and they are the guideline for thought processes and judgment that they can choose to receive useful information and be a role model for society.

7. Focus on self-development and journey to excellence can explain the variance 1.88%. The variables describe the following components: continuous self-development which means that they must be diligent due to the rapid changes in technology and education. As the Quality Learning Foundation (2014) described the characteristics of qualified teachers in raising the quality level of teachers in the 21st century is to be teachers with the spirit of being a teacher. Consistent with Darbavasu (2016) who conducted research on Strategies for Developing Teacher Spirituality to Enhance Professional Teacher of Students in Faculty of Education, the results of the research revealed that the guidelines for the development of teacher spirit should instill consciousness first, emphasizing knowledge creation through practices that are consistent with 21st century skills and being professional teachers with dynamic changes.

### Suggestion

1. Research findings can be used as guidelines for developing medical teachers to have a teacher spirit that will lead to the development of education quality and produce the effective graduates.

2. Findings reveal that the first important medical teacher component is the role and duty of being a medical teacher. Therefore, the institute should promote and focus on being a teacher in order to realize the importance and understanding of the role as a medical teacher.

3. Findings reveal that the spirituality as medical teachers consists of many components. Therefore, the

institute should cultivate a teacher as a medical student. Because doctors are not only responsible for treating patients but also teaching medical students as well.

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