การเปลี่ยนแปลงความฉลาดทางอารมณ์หลังจากการเรียน 5 ปี ในหลักสูตรเภสัชศาสตรบัณฑิต มหาวิทยาลัยศิลปากร

CHANGE OF EMOTIONAL INTELLIGENCE AFTER 5 YEARS OF COURSE WORK IN DOCTOR OF PHARMACY PROGRAM, SILPAKORN UNIVERSITY

นันทลักษณ์ สถาพรนานนท์[1]* และ วารุณี ดอกไม้งาม[2]

[1]ภาควิชาเภสัชกรรม และ [2]งานกิจการนักศึกษาและศิษย์เก่าสัมพันธ์ คณะเภสัชศาสตร์ มหาวิทยาลัย ศิลปากร พระราชวังสนามจันทร์ นครปฐม

*ติดต่อผู้นิพนธ์ : sthapornnanon_n@su.ac.th

NUNTHALUXNA STHAPORNNANON[1]* AND WARUNEE   DOKMAINGAM[2]

[1]Department of Pharmacy and [2]Student and Alumni affairs Faculty of Pharmacy, Silpakorn University, Sanamchandra Palace, Nakhon Pathom

*Corresponding author: sthapornnanon_n@su.ac.th

บทคัดย่อ

เป้าหมายของการศึกษาไม่เพียงแค่ต้องการให้บุคคลมีความรู้เท่านั้นแต่ควรทำให้บุคคลมีความ ฉลาดทางอารมณ์ด้วย มหาวิทยาลัยศิลปากร ได้มีการนำหลักสูตรเภสัชศาสตรบัณฑิตที่เป็นหลักสูตร เภสัชศาสตร์ 6 ปี มาใช้ในปี พ.ศ. 2552 ในหลักสูตรนี้ นักศึกษาเภสัชศาสตร์ จะมีการเรียนรายวิชาตาม หลักสูตรทั้งหมด 5 ปี และฝึกปฏิบัติงานวิชาชีพอีก 1 ปี การศึกษานี้มีวัตถุประสงค์ เพื่อวัดการเปลี่ยน แปลงของความฉลาดทางอารมณ์ของนักศึกษาเภสัชศาสตร์ หลังจากที่เรียน 5 ปีตามหลักสูตรใหม่ โดย มีกลุ่มตัวอย่างคือนักศึกษารุ่นแรกทุกคนที่ได้เข้ามาศึกษาในหลักสูตรใหม่ เภสัชศาสตรบัณฑิต 6 ปี มหาวิทยาลัยศิลปากร ที่สมัครใจเข้าร่วมการศึกษา ใช้แบบประเมินความฉลาดทางอารมณ์ที่พัฒนาโดย กรมสุขภาพจิต ประเทศไทย เป็นเครื่องมือในการศึกษา ความฉลาดทางอารมณ์ของนักศึกษาแต่ละคน ถูกวัด 2 ครั้ง เมื่อปีหนึ่งของการเป็นนักศึกษาและหลังจากเรียนรายวิชาครบตามหลักสูตรในเวลา 5 ปีต่อมา ผลการศึกษาพบว่ามีนักศึกษา 127 คนที่ทำแบบประเมินความฉลาดทางอารมณ์ครบทั้ง 2 ครั้ง คะแนนรวมของความฉลาดทางอารมณ์เมื่อปีที่ 1 และหลังจากการเรียนตามหลักสูตรไปแล้ว 5 ปี นั้นไม่แตกต่างกัน (168.97 $\pm$ 13.78 และ 168.20 $\pm$ 15.27 ตามลำดับ, P=0.485) แต่พบความแตกต่าง อย่างมีนัยสำคัญของคะแนนความฉลาดทางอารมณ์ในด้านความเข้าใจ/เห็นใจผู้อื่นและความภูมิใจใน ตนเอง (20.11 $\pm$2.09 และ 19.51$\pm$ 2.32, P= 0.005; 13.00 $\pm$ 1.69 และ 12.17 $\pm$ 1.79, P < 0.001 ตามลำดับ)

โดยสรุปการเรียน 5 ปีตามหลักสูตรเภสัชศาสตร์ไม่มีผลต่อคะแนนรวมของความฉลาดทาง อารมณ์ ผลการศึกษานี้จะช่วยสร้างความตระหนักให้อาจารย์คณะเภสัชศาสตร์ มหาวิทยาลัยศิลปากร ในการออกแบบรายวิชาหรือกระบวนการสอนให้เหมาะสมเพื่อเพิ่มความฉลาดทางอารมณ์ของนักศึกษา

คำสำคัญ : ความฉลาดทางอารมณ์, เภสัชศาสตร์ศึกษา, อีคิว

Abstract

The aim of education is not only to develop individuals to have knowledge but also to have people with emotional intelligence (EI). Silpakorn University was implemented Doctor of Pharmacy Program which is the 6-year pharmacy curriculum in the year 2009. In this program, pharmacy students have to study course work for 5 years and practice their professional training for another 1 year. This study aimed to evaluate the change of EI of pharmacy students after the 5-year course work of the new curriculum. The samples were all students who were the first generation of the new 6-year Doctor of Pharmacy Program at Silpakorn University and volunteered to enroll. Thai Emotional Intelligence Screening test (EIST) developed by the Department of Mental Health of Thailand was used as a tool. Individual EI of each student was measured 2 times, at the first year and after the pharmacy course work was completed 5 years later. There were 127 students who completed 2 times of EI evaluations. The total scores of EI at the first year and after 5-year course work were not different. (168.97 $\pm$ 13.78 vs 168.20 $\pm$ 15.27 respectively, P = 0.485) However, it was found that there were significant differences of EI scores in the empathy and self-pride sub-domain. (20.11 $\pm$ 2.09 vs 19.51 $\pm$ 2.32, P= 0.005; 13.00 $\pm$ 1.69 vs 12.17 $\pm$ 1.79, P < 0.001 respectively).

In conclusions, there was no effect of 5-year pharmacy course work on the total EI scores. This result may be helpful for Silpakorn pharmacy instructors to recognize how to design appropriate course or teaching process to foster students' EI.

Keywords: emotional intelligence, emotional quotient, pharmacy education, EQ

Introduction

Emotional intelligence (EI) is a type of social intelligence that involves the ability to monitor one's own and others' emotions, to discriminate among them, and to use the information to guide one's thinking and actions.[1] EI is a set of 4 abilities: 1 perceiving emotions; 2 using emotions; 3 understanding emotions and 4 managing emotions. According to the meta-analysis report[2], EI is a set of abilities that enable a person to generate, recognize, express, understand, and evaluate their own, and others' emotions in order to guide thinking and action that successfully cope with environmental demands and pressures. EI is such a vital tool for success. It is reported that EI skills are key factors in the academic achievement of college students.[3] EI has also been measured and correlated with healthy conflict management strategies in nursing students.[4] The concept of emotional intelligence is widely applied in health care education.[5-7] Carrother RM et al.[5] had used emotional intelligence instrument to

measure those attributes that indicated desirable personal and interpersonal skills in medical school applicants. Birks Y.[6] found that students in different health profession course (dental, nursing, graduate mental health workers and medical) did not show any significant difference of EI.

There is a fact that EI was related to some aspects of caring.[7] In general, students with higher EI can accurately perceive and manage their own and others' emotions. This can improve leadership qualities and prevent stress. EI was positively associated with lower perceived stress.[8] EI is interesting in pharmacy education since it can provide better learning, working and caring atmosphere. However, EI is a concept rarely discussed in the field of Thai pharmacy education.

The curricula of all Thai pharmacy schools have expanded from 5-year to 6-year program since 2009. As a result, the pharmacy curriculum of Silpakorn University has been changed to Doctor of Pharmacy Program (Pharm.D.).[9] According to the 6-year Pharm.D. Program of Silpakorn University, students have to study course work for 5 years and spend another one year practicing their pharmacy skills. The fifth year students have to select their subspecialties and also study their subspecialty content in the course work. Then the sixth year students have to practice their subspecialty professional

training at various practice sites. There were 4 main subspecialties in Silpakorn University pharmacy curriculum; pharmaceutical science, clinical pharmacy, social and administrative pharmacy (include community pharmacy) and pharmacy informatics.[9] Clinical pharmacy is one of the subspecialty which higher EI is required because clinical pharmacist must respond to patients' emotions. Higher EI is more proficient in coping and dealing with stressful situations, and may improve academic performance as well as patient satisfaction.[8,10] It is interesting to evaluate how EI had been changed. The objective of this study was to evaluate the change of EI of pharmacy students after the 5-year course work. The research hypotheses were verified:

1. Pharmacy students' EI scores differed between the first and after 5-year course work.

2. Students who studied in clinical pharmacy subspecialty, EI scores differed between the first and after 5-year course work.

This would be helpful as it provided the information for pharmacy instructors to develop curriculum or teaching process in the future.

Definition of emotional intelligence (EI)

In this study, we defined EI the same as the definition of EI, in the result from the study of Wongpiromsarn Y.[11] They proposed that EI was the set of competencies that

determine how effectively individuals perceived, managed their own emotions and understand others'. EI was also the person's ability to resolve the conflict. EI portrayed the desirable behavior possessed by emotionally mature person.[11] In this study we measured EI by using Thai emotional intelligence screening test (EIST) published by the Department of Mental Health, Thailand. It has been developed for Thai population aged 18 to 60 years.[12] EIST divided EI into three domains;1) virtue; 2) competence and 3) happiness. Each domain has 3 sub-domains.[12] (appendix1)

1) In the virtue domain, it comprised self-awareness/ self control, empathy and conscientiousness/social responsibility.

2) In the competence domain, it comprised self-motivation, decision & problem solving and handling social relationships.

3) The last domain is happiness. It comprised self-pride, self-satisfaction and peaceful mind.

Materials and Methods

A five year prospective study was performed. The subjects were all students who were the first generation of the 6 year Pharm.D. Program at Silpakorn University and volunteered to enroll. Individual EI of each student was measured 2 times, at the first year and after the course work was completed at the fifth year of Pharm.D. program. EI scores were compared using a paired t-test.

The instrument used in this study was EIST. It has been developed for Thai population aged 18 to 60 years. EIST is a self-administerd questionnaire with 52 test items. Each item has 4 choices representing the degree to which the student agrees with the items. (1 = strongly disagree; 4 = strongly agree). There are 2 groups of items. The first group includes twenty eight items and they were scored directly (1 = strongly disagree; 4 = strongly agree). The second group is another twenty four items. The scores of this group are reversed (4 = strongly disagree; 1 = strongly agree). The total scores are calculated. The higher the scores, the higher EI the students perceived. EIST in this study demonstrated a high degree of reliability (Cronbach's alpha = 0.87). The detail of EIST; domain, sub-domains and its items are presented in appendix 1.

Results

General characteristics

After 5-year course work there remained 163 Pharm.D. students who registered as the fifth year pharmacy student (77.25%). There were 127 students who completed 2 times of EI evaluations (127/163, 77.91%). The characteristics of those students are shown in Table 1. Ninety-eight students who were volunteered to complete the EIST two times were female (77.17%). All students' grade points at the high school were above 3.00. The

average grade point after the 5-year course   work was 2.93$\pm$0.36. (range 2.09-3.68)

Table1 General characteristics of the students.

Data at the first year		Frequency	Percent (Total 127)
Gender	Male	29	22.83
	Female	98	77.17
Average grade at the high school		3.73$\pm$0.23	range 3.00-4.00
Data at the fifth year			
Subspecialty			
	Pharmaceutical science	35	27.56
	Clinical pharmacy	32	25.20
	Social and administrative pharmacy including community pharmacy	54	42.52
	Pharmacy informatics	0	0
	Missing data	6	4.72
Average grade after 5-year course work		2.93$\pm$0.36	range 2.09-3.68

EI scores from EIST

EIST were applied to assess students' EI 2 times, at the first year and after the course work was completed at the fifth year of Pharm.D. Program. There were 3 groups of students after grouping by the range of EI scores,[12] those were students who had below, above and normal EI value (Table 2). Students' EI was generally normal in all sub-domains, except in self-awareness /self-control sub-domain that majority of students had EI scores above the normal range.

Table 2 Students with various ranges of EI score at the first and the fifth year.

		Normal range	Students\ (EI scores Range)	Number of students (N=127)					
				Below		Normal		Above	
					%		%		%
Virtue	Self- awareness/ self-control	13-18	At the first year (13-24)	0	0.00	37	29.1	89	70.08
			After 5-year course work (12-23)	5	3.94	36	28.4	86	67.72

Table 2 Students with various ranges of EI score at the first and the fifth year. (continued)

		Normal range	Students\ (EI scores Range)	Number of students (N=127)					
				Below	%	Normal	%	Above	%
Virtue	Empathy	16-21	At the first year (14-24)	4	3.15	90	70.90	33	25.98
			After 5-year course work (13-24)	5	3.94	95	74.80	27	21.26
	Conscientiousness/ social responsibility	17-23	At the first year (13-24)	7	5.51	108	85.00	12	9.45
			After 5-year course work (16-24)	6	4.72	114	89.80	7	5.51
	Self-motivation	15-21	At the first year (11-24)	16	12.60	104	81.90	7	5.51
			After 5-year course work (10-24)	16	12.60	89	70.10	22	17.32
Competence	Decision & problem solving	14-20	At the first year (12-24)	6	4.72	109	85.8	12	9.45
			After 5-year course work (13-23)	8	6.30	107	84.3	12	9.45
	Handling social relationships	15-20	At the first year (12-24)	9	7.09	107	84.30	11	8.66
			After 5-year course work (11-25)	10	7.87	98	77.20	19	14.96
Happiness	Self-pride	14-Sep	At the first year (7-16)	4	3.15	99	78.00	24	18.90
			After 5-year course work (6-16)	6	4.72	109	85.80	12	9.45
	Self-satisfaction	16-22	At the first year (14-24)	3	2.36	105	82.70	19	14.96
			After 5-year course work (13-25)	5	3.94	97	76.40	25	19.69
	Peaceful mind	15-22	At the first year (14-24)	6	4.72	89	70.10	32	25.20
			After 5-year course work (13-26)	6	4.72	79	62.20	42	33.07

Paired-t test was calculated. The result showed that the total EI score did not differ significantly before and after the 5-year course work (168.97 $\pm$ 13.78 vs 168.20 $\pm$ 15.27 respectively, P=0.485). The detail of EI score in each domain and sub-domain are presented in Table 3,

Table 3 EI scores of each domain and its sub-domains of all students.

		At the first year		After 5-year course work		
		Average	SD	Average	SD	P
Virtue		60.68	4.74	59.77	5.10	0.026*
	Self- awareness/self-control	19.45	1.96	19.20	2.27	0.164
	Empathy	20.11	2.09	19.51	2.32	0.005*
	Conscientiousness/ social responsibility	21.12	2.01	21.06	1.82	0.731
Competence		55.29	6.28	55.77	6.55	0.346
	Self-motivation	18.59	2.60	18.72	2.76	0.534
	Decision & problem solving	18.24	2.36	18.51	2.45	0.246
	Handling social relationships	18.46	2.54	18.54	2.75	0.764
Happiness		53.00	4.92	52.66	5.74	0.454
	Self-pride	13.00	1.69	12.17	1.79	0.000*
	Self-satisfaction	20.15	2.11	20.24	2.52	0.632
	Peaceful mind	19.85	2.31	20.24	2.57	0.089
Total EI scores		168.97	13.78	168.2	15.27	0.485

As shown in Table 3, the EI score of virtue domain was decreased significantly after 5-year course work (60.68 $\pm$ 4.74 vs 59.77 $\pm$ 5.10, P = 0.026). The scores of empathy, the sub-domain of virtue and self-pride, the sub-domain of happiness of the fifth year students were less than those of the first year. (19.51 $\pm$ 2.32 vs 20.11 $\pm$ 2.09 vs, P= 0.005; 12.17 $\pm$ 1.79 vs 13.00 $\pm$ 1.69 vs, P < 0.001 respectively).

Among the students who studied in clinical pharmacy subspecialty, the result was inconsistent with the result of the whole class. The changes of EI scores were not different significantly in all domains and sub-domains as shown in Table 4.

Table 4 EI scores of the students in clinical pharmacy subspecialty.

	At the first year		After 5-year course work		
	Average	**SD**	**Average**	**SD**	**P**
Virtue	60.88	4.63	60.25	4.39	0.451
Self- awareness/self-control	19.34	1.96	19.16	2.23	0.625
Empathy	20.16	1.89	19.91	1.84	0.508
Conscientiousness/social responsibility	21.38	2.27	21.19	1.64	0.638
Competence	56.00	5.92	57.03	6.19	0.339
Self-motivation	18.97	2.57	19.19	2.79	0.654
Decision & problem solving	18.41	2.05	18.63	2.43	0.648
Handling social relationships	18.63	2.49	19.22	2.70	0.247
Happiness	53.75	4.19	53.94	5.14	0.827
Self-pride	12.94	1.68	12.66	1.38	0.343
Self-satisfaction	20.69	1.99	20.78	2.37	0.799
Peaceful mind	20.13	2.03	20.50	2.31	0.416
Total EI score	170.63	12.52	171.22	13.71	0.779

Discussion

In this study, EIST was applied to measure and assess EI. This tool is developed to be applied for Thai population aged 18 to 60 years.[12] The reliability coefficient of all subjects in this study represented as Cronbach's alpha were 0.87. It demonstrated a high degree of reliability the same as the report of Wongpiromsarn Y, et al.[11]

In this study, it was found that pharmacy students' EI was generally normal in all sub-domains except in self-awareness/self-control. EI scores of self-awareness/self-control sub-domain were above the normal range. The total EI scores of pharmacy students did not differ between the first and after 5-year course work. However, the scores in the sub-domain of empathy and self-pride were decreased. Focusing on clinical pharmacy students, the comparison between the EI scores of the first and the fifth year was also done. It was shown that there was no significant difference in terms of all domains and sub-domains.

There were many reports showing that EI scores tend to get higher as people grow older.[4,11,13,14] In this study, it is

interesting that as the students got older, the EI scores seemed to be stable. However, the scores in the sub-domain of empathy and self- pride decreased. This might become a problem for a pharmacy student who would work as caring profession in the future. Since the capacity to develop a patient-health care personnel relationship may be facilitated by one's EI, especially empathy.[4,15] There were some studies showing that pharmacy students often lack empathy.[10,16,17] Some researchers have recognized that decreased empathy was associated with progression in education programs.[10,18] The result of the decline in empathy is consistent with the empathy of the third year medical students in Hojat M.'s study[19] described that there were several factors including lack of role models, a high volume of materials to learn, time pressure, and environmental factors such as students' over reliance on computer. Those factors should be concerned whether Silpakorn University Pharm.D. students had too many materials to learn or spent too much time on computer.

In this study, self pride, as one sub-domain in EIST, was significantly different after 5-year course work. Self pride in this study is a certain attitude and a perception of one's self as the items shown in appendix 1 (not feel inferior to others, serve well in any role, do one's best in one's assigned work and be confident in the

difficult work). There were concepts of both self efficacy and self esteem in self pride sub-domain. In general, self-efficacy is an individual's belief in their ability to perform well in a variety of situations and self-esteem is how one value himself, it can be also defined as confidence.[20,21] People with a high level of self-efficacy approach difficult tasks as a challenge to be mastered rather than a threat to be avoided.[22,23] In addition, people with high self esteem not only achieve more but tend also to lead more satisfying lives.[21]

Cady PS and Larson LN.[24] found that students in the third professional year of a pharmacy curriculum exhibited higher levels of self-efficacy than first or second-year students which is inconsistent with the result of this study. In that study, the self efficacy in the specific context as performing clinical tasks was evaluated. However, in this study, it was measured in general.

About self pride, we thought that students might be proud to be the first year pharmacy student, based on their success from university entrance examination. Self pride scores decreased as students grew-up and they began to compare themselves to others. Students spent 5 years studying so hard during the course work of the Pharm.D. Program, they might become discouraged, self pride was subsequently decreased. These were our opinions; it should be proven by the future study.

When the data was calculated using the EI scores of the students who studied in clinical pharmacy subspecialty, the changes of EI scores in all domains and sub-domains were not different significantly. EI was stable. It was different from the result of the whole class. Previous research found that medical students who studied in people-oriented specialties scored higher on empathy than those who studied in more technology-oriented specialties. In addition, Scheffer C. found that interactions with patients in medical practice promote empathy.[25] Silpakorn University pharmacy students who studied in clinical pharmacy subspecialty in the Pharm.D. Program had to study about patient-oriented content.[9] Clinical pharmacy students had to study at bedside and work in the hospital wards for several weeks before going to practice their professional training. It should be considered whether there was a significant link between this teaching strategy and EI scores. As a result, their EI scores in empathy did not decrease.

Jaeger AJ.[26] reported EI could be taught or learned. The Consortium for Research on Emotional Intelligence in Organizations (CREIO) developed evidence-based guideline for best practice in promoting EI development.[27] The guideline have 4 phases of EI development. Those are (1) preparation (2) training (3) transfer and maintenance, and (4) evaluation. Nelson

MH, et al.[15] provided that 4-phase process based on CREIO recommendations into pharmacy curricula. Nelson et.al. recommended that in preparation phase a student's EI should be assessed. Instructors should be well prepared for creating a positive feedback and motivating students to change. EI development should be recognized as it is for student to become an outstanding pharmacist. Training phase should support students' emotional development through activities in which instructors serve as role models for students. Instructors should provide students with clear, self-directed instructions to develop students' EI. Creating opportunities to practice EI such as empathy and providing constructive feedback should be applied. Improving EI competencies through pharmacy scenarios is another training strategy. The transfer and maintenance phase may involve incorporating EI development into an experiential program. Pharmacy practice preceptors are well-positioned to reinforce students. Pre and post-EI evaluations and/or reflection within the curriculum are important aspects of the evaluation phase. To implement EI in the curriculum, faculty development should be considered by adding EI concept to the activities.[28]

Creating course or teaching strategies could also lead to increased EI.[29] EI was positively associated with communication skills. Students who attended the training in the

fields of self-awareness, stress management, interpersonal communication, determination, time management, emotion management, and problem-solving could lead to increased EI.[29,30] Instructors might encourage students' EI by practicing students to recognize their own feelings and others', then practicing students to manage their own feelings effectively. Students should respond with action that takes into account of the feelings of others to foster EI, especially empathy. Focus on empathy, Henry-Tillman[31] conducted an educational intervention in which pre-clinical medical students accompanied and assisted patients during clinic visits. Seventy percent of students felt empathy for the patient they accompanied. DasGupta and Charan[32] found that after a 6-week seminar with reflective writing about personal experiences with illness, students self-reported greater empathy.

A self-administered by the pharmacy students is a limitation of questionnaire of this study. It might be prone to response biases such as social desirability. Individuals' responses might be influenced by their perception of situational norms and expectations. Yorra ML.[22] found that Asian students were modest, students might underestimate their capabilities.

This study aimed to evaluate the change of EI of Pharm.D. students after the 5-year course work. The results of the study showed that there was no significant difference in total EI scores of each student when those were compared. However, the EI scores of the students at the first year and after 5-year studying in Pharm.D. program were different in the sub-domain of empathy and self pride. Moreover, among clinical pharmacy students, there was no significant difference in terms of EI scores of all domains and sub-domains.

The aim of education is not only to have individuals who have knowledge but also to have people with EI. EI helps instructors to shape students' behavior. It is important for instructor to create teaching process to help pharmacy students to develop their EI to become emotionally healthy pharmacist who can work with others in the future.

Acknowledgements

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Appendix 1

แบบประเมินความฉลาดทางอารมณ์ของกรมสุขภาพจิต[12]

Thai Emotional Intelligence Screening test (EIST)

แบบประเมินนี้เป็นประโยคที่มีข้อความเกี่ยวข้องกับอารมณ์และความรู้สึกที่แสดงออกในลักษณะต่างๆ แม้ว่าบางประโยคอาจจะไม่ตรงกับที่ท่านเป็นอยู่ก็ตาม ขอให้เลือกคำตอบที่ตรงกับตัวท่านให้มากที่สุด และคำถามต่อไปนี้ไม่มีคำตอบที่ถูกหรือผิด ดีหรือไม่ดี โปรดตอบตามความเป็นจริงและตอบทุกข้อ เพื่อ ท่านจะได้รู้จักตนเองและวางแผนพัฒนาตนเองต่อไป

ตัวเลือกในแต่ละข้อคือ (1) ไม่จริง   (2) จริงบางครั้ง   (3) ค่อนข้างจริง   (4) จริงมาก

1. ดี (Virtue Domain)

Sub-domains	Items
ด้านการควบคุมตนเอง (Self- awareness/ self control)	1. เวลาโกรธหรือไม่สบายใจ ฉันรับรู้ได้ว่าเกิดอะไรขึ้นกับฉัน
	2. ฉันบอกไม่ได้ว่าอะไรทำให้ฉันรู้สึกโกรธ
	3. เมื่อถูกขัดใจ ฉันมักรู้สึกหงุดหงิดจน ควบคุมอารมณ์ไม่ได้
	4. ฉันสามารถคอยเพื่อให้บรรลุเป้าหมายที่พอใจ
	5. ฉันมักมีปฏิกิริยาโต้ตอบรุนแรงต่อปัญหาเพียงเล็กน้อย
	6. เมื่อถูกบังคับให้ทำในสิ่งที่ไม่ชอบ ฉันจะอธิบายเหตุผลจนผู้อื่นยอมรับได้
ด้านเห็นใจผู้อื่น (Empathy)	7. ฉันสังเกตได้เมื่อคนใกล้ชิดมีอารมณ์เปลี่ยนแปลง
	8. ฉันไม่สนใจกับความทุกข์ของผู้อื่นที่ฉันไม่รู้จัก
	9. ฉันไม่ยอมรับในสิ่งที่ผู้อื่นทำต่างจากที่ฉันคิด
	10. ฉันยอมรับได้ว่าผู้อื่นก็อาจมีเหตุผลที่จะไม่พอใจการกระทำของฉัน
	11. ฉันรู้สึกว่าผู้อื่นชอบเรียกร้องความสนใจมากเกินไป
	12. แม้จะมีภาระที่ต้องทำ ฉันก็ยินดีรับฟังความทุกข์ของผู้อื่นที่ต้องการความช่วยเหลือ
ด้านรับผิดชอบ (Conscientiousness/social responsibility)	13. เป็นเรื่องธรรมดาที่จะเอาเปรียบผู้อื่นเมื่อมีโอกาส
	14. ฉันเห็นคุณค่าในน้ำใจที่ผู้อื่นมีต่อกัน
	15. เมื่อทำผิดฉันสามารถกล่าวคำ "ขอโทษ" ผู้อื่นได้
	16. ฉันยอมรับข้อผิดพลาดของผู้อื่นได้ยาก
	17. ถึงแม้จะต้องเสียประโยชน์ส่วนตัวไปบ้างฉันก็ยินดีที่จะทำเพื่อส่วนรวม
	18. ฉันรู้สึกลำบากใจในการทำสิ่งใดสิ่งหนึ่งเพื่อผู้อื่น

2. เก่ง (Competence Domain)

Sub-domains	Items
ด้านมีแรงจูงใจ (Self-mot vation)	19.ฉันไม่รู้ว่าฉันเก่งเรื่องอะไร
	20.แม้จะเป็นงานยาก ฉันก็มั่นใจว่าสามารถทำได้
	21.เมื่อทำสิ่งใดไม่สำเร็จ ฉันรู้สึกหมดกำลังใจ
	22.ฉันรู้สึกมีคุณค่าเมื่อได้ทำสิ่งต่างๆ อย่างเต็มความสามารถ
	23.เมื่อต้องเผชิญกับอุปสรรค และความผิดหวัง ฉันก็จะไม่ยอมแพ้
	24.เมื่อเริ่มทำสิ่งหนึ่งสิ่งใด ฉันมักทำต่อไปไม่สำเร็จ
ด้านตัดสินใจและแก้ปัญหา (Decision & problem solving)	25.ฉันพยายามหาสาเหตุที่แท้จริงของปัญหาโดยไม่คิดเอาเองตามใจชอบ
	26.บ่อยครั้งที่ฉันไม่รู้ว่าอะไรทำให้ฉันไม่มีความสุข
	27. ฉันรู้สึกว่าการตัดสินใจแก้ปัญหาเป็นเรื่องยากสำหรับฉัน
	28. เมื่อต้องทำอะไรหลายอย่างในเวลาเดียวกัน ฉันตัดสินใจได้ว่าจะทำอะไรก่อนหลัง
	29. ฉันลำบากใจเมื่อต้องอยู่กับคนแปลกหน้า หรือคนที่ไม่คุ้นเคย
	30. ฉันทนไม่ได้เมื่อต้องอยู่ในสังคมที่มีกฎระเบียบขัดกับความเคยชินของฉัน
ด้านสัมพันธภาพ (Handling social relationships)	31. ฉันทำความรู้จักผู้อื่นได้ง่าย
	32. ฉันมีเพื่อนสนิทหลายคนที่คบกันมานาน
	33. ฉันไม่กล้าบอกความต้องการของฉันให้ผู้อื่นรู้
	34. ฉันทำในสิ่งที่ต้องการโดยไม่ทำให้ผู้อื่นเดือดร้อน
	35. เป็นการยากสำหรับฉันที่จะโต้แย้งกับผู้อื่น แม้จะมีเหตุผลเพียงพอ
	36. เมื่อไม่เห็นด้วยกับผู้อื่น ฉันสามารถอธิบายเหตุผลที่เขายอมรับได้

3. สุข (Happiness Domain)

Sub-domains	Items
ด้านภูมิใจตนเอง (Self-pr de)	37. ฉันรู้สึกด้อยกว่าผู้อื่น
	38. ฉันทำหน้าที่ได้ดี ไม่ว่าจะอยู่ในบทบาทใด
	39. ฉันสามารถทำงานที่ได้รับมอบหมายได้ดีที่สุด
	40. ฉันไม่มั่นใจในการทำงานที่ยากลำบาก
ด้านพอใจในชีวิต (Self-satisfaction)	41. แม้สถานการณ์จะเลวร้าย ฉันก็มีความหวังว่าจะดีขึ้น
	42. ทุกปัญหามักมีทางออกเสมอ
	43. เมื่อมีเรื่องที่ทำให้เครียด ฉันมักปรับเปลี่ยนให้เป็นเรื่องผ่อนคลายหรือสนุกสนานได้
	44. ฉันสนุกสนานทุกครั้งกับกิจกรรมในวันสุดสัปดาห์ และวันหยุดพักผ่อน
	45. ฉันรู้สึกไม่พอใจที่ผู้อื่นได้รับสิ่งดีๆ มากกว่าฉัน

	46. ฉันพอใจกับสิ่งที่ฉันเป็นอยู่
ด้านสุขสงบทางใจ (Peaceful mind)	47. ฉันไม่รู้ว่าจะหาอะไรทำเมื่อรู้สึกเบื่อหน่าย
	48. เมื่อว่างเว้นจากภาระหน้าที่ ฉันจะทำในสิ่งที่ฉันชอบ
	49. เมื่อรู้สึกไม่สบายใจ ฉันมีวิธีผ่อนคลายอารมณ์ได้
	50. ฉันสามารถผ่อนคลายตนเองได้ แม้จะเหน็ดเหนื่อยจากภาระหน้าที่
	51. ฉันไม่สามารถทำใจให้เป็นสุขได้จนกว่าจะได้ทุกสิ่งที่ต้องการ
	52. ฉันมักทุกข์ร้อนกับเรื่องเล็กๆ น้อยๆ ที่เกิดขึ้นเสมอ

การให้คะแนน

แบ่งประโยคตามข้อคำถามข้างต้นเป็น 2 กลุ่ม

กลุ่มที่ 1 ได้แก่ข้อ 1, 4, 6, 7, 10, 12, 14, 15, 17, 20, 22, 23, 25, 28, 31, 32, 34, 36, 38, 39, 41, 42, 43, 44, 46, 48, 49, 50

        ตอบไม่จริง   ให้   1   คะแนน

        ตอบจริงบางครั้ง   ให้   2   คะแนน

        ตอบค่อนข้างจริง   ให้   3   คะแนน

        ตอบจริงมาก   ให้   4   คะแนน

กลุ่มที่ 2 ได้แก่ข้อ 2, 3, 5, 8, 9, 11, 13, 16, 18, 19, 21, 24, 26, 27, 29, 30, 33, 35, 37, 40, 45, 47, 51, 52

        ตอบไม่จริง   ให้   4   คะแนน

        ตอบจริงบางครั้ง   ให้   3   คะแนน

        ตอบค่อนข้างจริง   ให้   2   คะแนน

        ตอบจริงมาก   ให้   1   คะแนน