

Original article

Congruence and self-esteem of patients receiving treatment for methamphetamine use at a substance dependency treatment center in Thailand

Chotiporn Prompa^a, Rasmon Kalayasiri^{b,*}^aProgram in Mental Health, Department of Psychiatry, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand^bDepartment of Psychiatry, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand

Background: Congruence, a state of being able to communicate within oneself and with others, is classified as one of the main structures of the Satir's model for psychotherapy. High self-esteem and congruence are important indicators of fully functioning human beings, especially of patients who used drugs such as methamphetamine (meth).

Objectives: The study's purposes were to explore the congruence, self-esteem, and related factors among individuals who used meth and received treatment at a substance dependency treatment center in Thailand.

Methods: Levels of congruence, self-esteem, and family relationship were collected from 340 patients with meth use problems at the largest substance dependency treatment center in Thailand by using the Family Relationship Questionnaire, the Congruence Scale, and the Coopersmith Self-Esteem Inventory Adult Form, respectively.

Results: Of 340 subjects, 218 (64.1%) had slightly high congruence and 260 (76.5%) had moderate level of self-esteem. Congruence significantly positively correlated with self-esteem ($r = 0.657, P < 0.001$). Factors that related to decrease congruence included having history of using crystal meth (ice), current meth use, and having psychiatric disorders during drug use. However, having good family relationship could increase congruence. Factors that were related to high self-esteem included using meth for less than 11 years and having a good family relationship.

Conclusion: Having good family relationship predicts having high levels of congruence and self-esteem in individuals who used meth. Developing programs or activities that are related to their families are important to improve psychological well-being of patients with meth use problems.

Keywords: Congruence, family relationship, methamphetamine, Satir's model, self-esteem.

World Drug Report 2019 showed that 35 million people had used drugs. According to a report in 2019, Thai people who had ages ranging from 12 to 65 years were in the risk group to have problems with drugs. Methamphetamine (meth) is the most popular illegal drug for drug abusers in Thailand⁽¹⁾ after cannabis and kratom are no longer listed as illegal drugs in Thailand in 2021 - 2022. Recent data on 2021⁽²⁾, meth was the major cause of illness among patients with

drug abuse. These issues must be solved and paid more attention in every section. The substance dependency treatment center should provide effective treatment programs for individuals with drug problems.

Treatment programs for drug dependence should consist of both physical and psychological treatments. Mental treatment that focuses on psychological support is an effective procedure. According to Satir's perspective, individuals who used drugs had many negative characteristics such as helplessness, less power, lack of responsibility, avoidance, and psychological trauma. However, their minds, still need love, care, and acceptance. Satir's objective of psychotherapy included improved self-esteem, potential decision, responsibility, and congruence.⁽³⁾

*Correspondence to: Rasmon Kalayasiri, Department of Psychiatry, Faculty of Medicine, Chulalongkorn University, Bangkok 10330, Thailand.

E-mail: rasmon.k@chula.ac.th

Received: April 29, 2022

Revised: May 15, 2022

Accepted: June 20, 2022

Congruence is classified as one of the main Satir's structure model. It is a state of being able to communicate within oneself and with others. Moreover, high self-esteem and congruence are two of the important indicators of more fully functioning human beings.⁽⁴⁾ The low level of both factors can lead people to a lack of development and a tendency to have problems with drugs.

Another one of essential factors is family. Parents play an important role in every aspect such as longevity in love, caring, and encouragement. According to the parenting styles, individuals were raised in a different style that affects them for their whole life. A family with good communication or an authoritative parenting style will lead their family to a better family relationship. Conversely, the uninvolved parenting style exhibit behaviors in different ways, e.g., neglect, instability, and domestic violence. Thus, the family relationship is one of potential factors in every step of drug dependence treatment; before, during, and after receiving the treatments.⁽⁵⁻⁷⁾

Regarding Satir's psychotherapy, previous studies focused on the experiment with drug use was limited. Especially in Thailand, there was no study on congruence of the individuals with meth use problems. The authors aim to examine the congruence, self-esteem, and related factors among patients with meth use at the Princess Mother National Institution on Drug Abuse Treatment (PMNIDAT), the largest substance dependency treatment center in Thailand. The results from the current study could be valuable for effective treatment programs for people who use meth.

Materials and methods

Subjects

The convenience sampling was used to recruit 340 patients receiving treatment for meth use from December 2021 to February 2022 at the PMNIDAT. The population was selected following inclusion criteria, e.g., aged ≥ 18 years and receiving treatments within rehabilitation phase. The exclusion criteria were having poor level of communication, vision, and hearing, and having history of severe psychiatric symptoms including psychosis, mania, dementia.

All subjects in this study were inpatient and outpatient department and received treatments within the rehabilitation phase at PMNIDAT. According to main programs in this institution, i.e., the FAST model and Matrix program, were applied to both groups within 4 months. The matrix program was practical

for the outpatient department and the FAST model was used among inpatient departments. Both programs might not be different. Also, the Matrix program's principle was brought with the FAST model to rehabilitate patients.⁽⁸⁾

Measures

All subjects were asked to complete four questionnaires by self-reporting using the following questionnaires:

Demographic information

The 23-item of Demographic information asked about personnel information, family information, drug use, treatments for drug use and psychiatric disorders during drug use.

Family Relationship Questionnaires

The 20-item Family Relationship Questionnaires was developed by Intichoti N.⁽⁹⁾ Responses were made on Likert-scale at 1 (strongly disagree) and 5 (strongly agree). The raw score ranged from 20 to 100. The criterion score ranged from 4.5 to 5.0 was the highest family relationship, 3.5 - 4.49, 2.5 - 3.49, 1.5 - 2.49, and 1.0 - 1.49, subjects had high, moderate, low, and lowest family relationship, respectively. The overall Cronbach's α coefficient was 0.93.

Congruence Scale

The Congruence Scale is a 21-item self-report questionnaire. The original version from Boonnie Lee was developed into the Thai version by Srikosai S. and Taweewattanaprecha S.⁽¹⁰⁾ containing 4 dimensions; spiritual, intrapsychic-interpersonal dimension, internal resources, and interpersonal dimension. Responses were made on Likert-scale at 1 (strongly disagree) and 7 (strongly agree). The score ranged from 21 to 147. The score that ranged ≥ 131 was the highest congruence and 109 - 130, 87 - 108, 65 - 86, 43 - 64, and 21 - 42 had high, slightly high, slightly low, low, and lowest congruence, respectively. The overall Cronbach's α coefficient was 0.86.

Coopersmith Self-Esteem Inventory Adult Form (1984)

Self-esteem was assessed by using the Coopersmith Self-Esteem Inventory Adult Form (25 items). Thai version was developed by Supreda B.⁽¹¹⁾ The questionnaire contains 3 components; personal, family-derived, and social self-esteem.

Responses were made on Likert-scale at 1 (strongly disagree) and 5 (strongly agree). The raw score ranged from 25 to 125. The criterion score ranged from 4.6 to 5.0 was the highest self-esteem and 3.6 - 4.5, 2.6 - 3.5, 1.6 - 2.5, and 1.0 - 1.5 had high, moderate, low, and lowest, respectively. The overall Cronbach's α coefficient was 0.81.

Statistical analysis

The SPSS statistical package version 25.0 was used for data analysis. The cross-sectional descriptive study was explained by descriptive statistics used for describing the subject's characteristics, e.g., number, percentage, mean, standard deviation (SD), min, max, odds ratio (OR), and 95% confidence interval (CI). Chi-square, Pearson's correlation, and Logistic regression (Forward likelihood ratio) were applied to analyze the inferential statistics. $P < 0.05$ was considered a significant difference.

Results

Of 340 subjects, the majority were male ($n = 300$, 88.2%), single ($n = 216$, 63.5%), employed ($n = 108$, 31.8%) and had the age ranged from 31 to 40 years ($n = 140$, 41.2%) and The highest education was in secondary or high school level ($n = 139$, 40.9%). Regarding the family relationship, 47 (13.8%), 189 (55.6%), 99 (29.1%) and 5 (1.5%) subjects had the

highest, high, moderate, and low levels of family relationship, respectively. No subject was in the lowest level of family relationship. The majority of the subjects had a slightly high level of congruence ($n = 218$, 64.1%) and moderate level of self-esteem ($n = 260$, 76.5%). No subject was in the lowest level of congruence or the highest and lowest levels of self-esteem (Table 1).

Congruence score were used to divided subjects into two groups, following the Congruence Scale criterion, including low ($n = 61$, score ≤ 86) and high ($n = 279$, score ≥ 87) congruence groups for the purpose of further analyses. The results showed a significant association between high congruence and related factors, e.g., having 4 - 6 members in the family, higher family income, ever used yaba but not crystal meth (ice), ever used cigarette, higher days of meth use within a week, current treatment as outpatient, being able to stop meth uses currently, and no psychiatric disorders during drug use ($P < 0.05$). Other demographics were not associated with congruence in the sample population ($P > 0.05$) (Table 2).

The congruence scores were positively correlated with the self-esteem scores on a moderate level with statistical significance (Pearson's correlation, $r = 0.659$, $P < 0.001$) and the family relationship score ($r = 0.467$, $P < 0.001$) in a positive direction.

Table 1. Levels of congruence and self-esteem among individuals with methamphetamine use.

Variables	N	Percentage
Level of congruence (n = 340)		
Highest	8	2.4
High	53	15.6
Slightly high	218	64.1
Slightly low	57	16.8
Low	4	1.2
Lowest	-	-
Mean = 97.1 \pm SD 13.9 (Min = 49, Max = 147)		
Level of self-esteem (n = 340)		
Highest	-	-
High	65	19.1
Moderate	260	76.5
Low	15	4.4
Lowest	-	-
Mean = 81.5 \pm SD 10.2 (Min = 52, Max = 112)		

Table 2. The number and percentage of demographic information and Chi-square test results of the association between congruence and related factors.

Characteristics	Congruence				P-value
	Lower congruence (n = 61)		Higher congruence (n = 279)		
	N	%	N	%	
Gender					
Male	50	82.0	250	89.6	0.093
Female	11	18.0	29	10.4	
Age (years)					
≤30	29	47.5	110	39.4	0.116
31 -40	18	29.5	122	43.7	
≥41	14	23.0	47	16.8	
Education					
Less than Bachelor Degree	47	78.3	191	69.5	0.169
≥ Bachelor Degree	13	21.7	84	30.5	
Marital status					
Single	41	67.2	175	62.7	0.180
Married	13	21.3	86	30.8	
Separated/divorced/death	7	11.5	18	6.5	
Occupation					
Unemployed/student	22	40.0	67	26.2	0.058
Career	33	60.0	189	73.8	
Parents' marital status					
Cohabiting	31	50.8	150	53.8	0.787
Divorced/separated	13	21.3	66	23.7	
Death	16	26.2	63	22.6	
Number of family members					
1-3	23	37.7	90	32.3	0.047*
4-6	32	52.5	182	65.2	
7-9	4	6.6	5	1.8	
Average family income/month (THB)					
≤10,000	17	27.9	35	12.5	0.009**
10,001–30,000	20	32.8	111	39.8	
≥30,001	23	37.4	133	47.7	
Living type					
living alone	7	11.5	29	10.4	0.625
living with parents	28	45.9	146	52.3	
living with a relative/sibling/friend	26	42.6	102	36.6	
First substance					
Yaba	28	45.9	152	54.5	0.438
Crystal meth (ice)	12	19.7	36	12.9	
Cigarette	19	31.2	78	28.0	
Alcohol/Cannabis/Kratom	2	3.3	13	4.7	
Drugs of abuse					
Yaba	46	75.4	243	87.1	0.021*
Crystal meth (ice)	39	63.9	131	47.0	0.016*
Cigarette	40	65.6	143	51.3	0.042*
Alcohol	26	42.6	104	37.3	0.436
Cannabis	19	31.2	62	22.2	0.138
Kratom	11	18.0	33	11.8	0.191
Volatile	4	6.6	11	3.9	0.368

Table 2. (Cont.) The number and percentage of demographic information and Chi-square test results of the association between congruence and related factors.

Characteristics	Congruence				P-value
	Lower congruence (n = 61)		Higher congruence (n = 279)		
	N	%	N	%	
Type of meth use					
Yaba	24	39.3	161	57.7	0.033*
Crystal meth (ice)	15	24.6	47	16.9	
Both	22	36.1	71	25.5	
The onset of first drug use (years)					
≤20	40	65.6	161	57.7	0.363
21 -40	19	31.2	111	39.8	
≥41	2	3.3	5	1.8	
Frequency of meth use times/day					
≤ 5	54	88.5	250	89.6	0.637
6 -10	6	9.8	20	7.2	
≥11	1	1.6	9	3.2	
Frequency of meth use (days/week)					
1 -2	18	29.5	43	15.4	0.029*
3 -4	16	26.2	100	35.8	
5 -7	27	44.3	136	48.8	
Duration of meth use (years)					
≤ 10	42	68.9	175	62.7	0.287
≥ 11	18	31.2	104	37.3	
Current type of patient					
IPD (inpatient)	14	23.0	32	11.5	0.018*
OPD (outpatient)	47	77.1	247	88.5	
Quitting/stopping meth					
Yes	41	67.2	241	86.4	<0.001***
No	20	32.8	38	13.6	
Psychiatric disorders during drug use					
No	35	57.4	231	82.8	<0.001***

* $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$

In addition, our findings indicated the correlation between the family relationship score and the self-esteem score ($r = 0.437$, $P < 0.001$) in a positive direction. Average self-esteem score was then used to divide subjects into two groups, low self-esteem, and high self-esteem group, low ($n = 275$, score ≤ 3.5) and high ($n = 65$, score ≥ 3.6). The results illustrated a significant association between self-esteem and related factors including higher income/month, using a cigarette as the first substance of use, ever using crystal meth (ice) and alcohol, and duration of using meth for less than 11 years. Other demographics were not associated with self-esteem in the sample population ($P > 0.05$) (Table 3). For the current type of patient, it showed an insignificant related to the congruence and self-esteem (Table 2, 3).

The Forward Likelihood ratio was used to control the external factors in the logistic regression analysis. Subjects with a history of using ice (OR = 0.504, $P < 0.05$), currently using meth (OR = 0.415, $P < 0.05$), and a history of having psychiatric disorders during drug use (OR = 0.319, $P < 0.01$) were predicted to have low level of congruence. Subjects who had a high score of family relationship was predicted to have high congruence (OR = 3.823, $P < 0.001$) (Table 4).

Regarding self-esteem, subjects who used meth for ≤ 10 years can predict a high self-esteem (OR = 1.970, $P < 0.05$) compared to the subjects who used meth for ≥ 11 years. Subjects who had a high score of family relationship was predicted to have high self-esteem (OR = 11.883, $P < 0.001$) (Table 5).

Table 3. The number and percentage of demographic information and Chi-square test results of the association between related factors and self-esteem.

Characteristics	Self-esteem				P - value
	Lower self-esteem (n = 275)		Higher self-esteem (n = 65)		
	N	%	N	%	
Gender					
Male	241	87.6	59	90.8	0.481
Female	34	12.4	6	9.2	
Age (years)					
≤ 30	116	42.2	23	35.4	0.341
31 - 40	108	39.3	32	49.2	
≥ 41	51	18.6	10	15.4	
Education					
Less than Bachelor Degree	198	73.3	40	61.5	.060
≥ Bachelor Degree	72	26.7	25	38.5	
Marital status					
Single	176	64.0	40	61.5	0.476
Married	77	28.0	22	33.9	
Separated/divorced/death	22	8.0	3	4.6	
Occupation					
Unemployed/Student	76	29.8	13	23.2	0.323
Career	179	70.2	43	76.8	
Income (month/THB)					
≤ 10,000	147	53.5	22	33.9	0.016*
10,001 – 30,000	107	38.9	35	53.9	
≥ 30,001	21	7.6	8	12.3	
Parents' marital status					
Cohabiting	143	52.0	38	58.5	0.396
Divorced/separated	68	24.7	11	16.9	
Death	63	22.9	16	24.6	
Number of family members					
1 - 3	93	33.8	20	30.8	0.722
4 - 6	171	62.2	43	66.2	
7 - 9	8	2.9	1	1.5	
Average family income/month (THB)					
≤ 10,000	47	17.1	5	7.7	0.068
10,001 – 30,000	108	39.3	23	35.4	
≥ 30,001	119	43.3	37	56.9	
Living type					
Living alone	29	10.6	7	10.8	0.858
Living with parents	143	52.0	31	47.8	
Living with a relative/sibling/friend	102	37.1	26	40.0	
First substance					
Yaba	159	57.8	21	32.3	0.001**
Crystal meth (ice)	37	13.5	11	16.9	
Cigarette	67	24.4	30	46.2	
Alcohol/Cannabis/Kratom	12	4.4	3	4.6	
Drugs of abuse					
Yaba	237	86.2	52	80.0	0.209
Crystal meth (ice)	127	46.2	43	66.2	
Cigarette	141	51.3	42	64.6	0.052
Alcohol	97	35.3	33	50.8	0.021*
Cannabis	62	22.6	19	29.2	0.255
Kratom	34	12.4	10	15.4	0.514
Volatile	12	4.4	3	4.6	0.929

Table 3. (Cont.) The number and percentage of demographic information and Chi-square test results of the association between related factors and self-esteem.

Characteristics	Self-esteem				P - value
	Lower self-esteem (n = 275)		Higher self-esteem (n = 65)		
	N	%	N	%	
Type of meth use					
Yaba	156	56.7	29	44.6	0.169
Crystal meth (ice)	46	16.7	16	24.6	
Both	73	26.5	20	30.8	
The earliest age of first drug use (years)					
≤20	165	60.0	36	55.4	0.677
21 - 40	102	37.1	28	43.1	
≥41	6	2.2	1	1.5	
Frequency of meth use times/day					
≤ 5	248	90.2	56	86.2	0.233
6 - 10	21	7.6	5	7.7	
≥ 11	6	2.2	4	6.2	
Frequency of meth use (days/week)					
1 - 2	48	17.5	13	20.0	0.357
3 - 4	90	32.7	26	40.0	
5 - 7	137	49.8	26	40.0	
Duration of meth use (years)					
≤ 10	166	60.4	51	78.5	0.026*
11 - 20	94	34.2	12	18.5	
21 - 30	14	5.1	2	3.1	
Current type of patient					
IPD	40	14.6	6	9.2	0.260
OPD	235	85.5	59	90.8	
Quitting/stopping meth					
Yes	224	81.5	58	89.2	0.134
No	47	18.5	7	10.8	
Psychiatric disorders during drug use					
No	210	76.4	56	86.2	0.085

* $P < 0.05$, ** $P < 0.01$

Table 4. The prediction of the association between congruence and related factors analyzed by Logistic Regression.

Variables	B	S.E. (B)	P - value	Adjusted OR	95% CI	
					Lower	Upper
Having history of using ice	-0.685	0.323	0.034*	0.504	0.268	0.949
Currently use meth	-0.880	0.354	0.013*	0.415	0.207	0.830
Having psychiatric disorders during drug use	-1.142	0.337	0.001**	0.319	0.165	0.618
Good family relationship	1.343	0.321	< 0.001***	3.832	2.045	7.182

* $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$

Table 5. The prediction of the association between self-esteem and related factors analyzed by Logistic Regression.

Variables	B	S.E. (B)	P-value	Adjusted OR	95% CI	
					Lower	Upper
Duration of meth use ≤ 10 years	0.678	0.296	0.022*	1.970	1.102	3.521
Good family relationship	2.475	0.606	<0.001**	11.883	3.626	38.945

* $P < 0.05$ ** $P < 0.001$

Discussion

Patients with meth use at the PMNIDAT showed slightly high congruence and moderate self-esteem that is consistent with previous study.⁽¹²⁾ The congruence showed positive correlation with self-esteem in moderate level. Furthermore, the family relationship was correlated with congruence and the self-esteem. The related factors which can predict the decrease of congruence were having history of using crystal meth (ice), currently use meth or cannot quit, having psychiatric disorders. On the other hand, having a high level of family relationship would increase congruence. Additionally, a high self-esteem was predicted by the duration of using meth for ≤ 10 years and having a good family relationship.

People with meth use who had high self-esteem were positively predicted by having a higher congruence. More congruence might help them to the fairly accurate congruence between self-concept and reality closer to the ideal self.⁽¹³⁾ In contrast, being incongruent showed the differences between the selves that could negatively impact one's self-esteem. When people who use meth have more congruence in their life, have more good energy, calm, uplifting spirit, self-worth, self-respect, willing to trust themselves and others, consequently, self-esteem will increase. Therefore, the treatment program should encourage the congruence through providing effective programs or activities that influence higher self-esteem.

Previous study⁽¹⁴⁾ showed a significant association between self-esteem and illegal drug use. Alavi HR, *et al.*⁽¹⁵⁾ found individuals who were involved in addiction had lower self-esteem compared with general population. They did not value themselves at a high level which could lead them to be at high risk of addiction.⁽¹⁶⁾ People with low self-esteem might take on behaviors that reinforce their feelings of inadequacy, i.e., drug use. They used drugs as a reinforcer to uplift self-esteem in situations where they lack confidence. Unfortunately, drug use could

lead them to self-esteem issues.⁽¹⁷⁾ Thus, increasing self-esteem is essential for preventing physical, mental, and behavioral disorders. The result from previous study⁽¹²⁾ recommended that strengthening spiritual programs can uplift the self-esteem and spiritual of people who used drugs.

According to the current results, a good family relationship can predict an increase in congruence and self-esteem. Family is an important factor for every member that will affect one's self in direct and indirect ways. In the family that has a member using drugs, the family remains crucial to support the individual to receive the treatments. The treatment should have the potential to promote reconciliation.⁽¹⁸⁾ As this study was a cross-sectional descriptive study conducted only at the PMNIDAT, the results may not be generalized to other population. Lastly, the subjects were recruited within the COVID-19 pandemic, so the results may not be generalized to be used in the normal situation.

Conclusion

A good family relationship had played an important role in the congruence and self-esteem. Thus, the quality of interaction within a family was fundamental to having trust, respect and well-being of oneself that could be expanded to other psychological factors, e.g., congruence and self-esteem. Therefore, we should encourage congruence living for life, values, and perceived self, according to spiritual harmony. The patients may not be able to empower or increase energy to overcome difficult situations by themselves, therefore cooperation from various parts, e.g., family, treatment programs, and officers, are the essential factors to help them improve their self-esteem and congruence.

Conflict of interest statement

Each of the authors has completed an ICMJE disclosure form. None of the authors declare any potential or actual relationship, activity, or interest related to the content of this article.

Data sharing statement

The present review is based on the reference cited. Further details, opinions, and interpretation are available from the corresponding authors on reasonable request.

References

1. Office of the Narcotics Control Board (ONCB). Report drug prevention and problem solving performance for fiscal year 2019. Bangkok: Office of the Narcotics Control; 2019.
2. Narkdilok S. The study of incident rate with relapse use of metamphetamine at Prince Mother National Institute on Drug Abuse Treatment (PMNIDAT). *Thai J Addict* 2020;6:47-58.
3. Limsuwan N, Limsuwan Ni. *Satir Psychotherapy and Self-development 4 ed*. Bangkok: Chulalongkorn University Printing House; 2018.
4. Satir V, Banmen J, Gomori M, Gerber J. *The Satir model: Family therapy and beyond*. Palo Alto, California: Science and Behavior Books; 1991.
5. Suvannathat C. Knowledge about strengthening the family according to the strong family base for family practitioners. 2nd ed. Bangkok: Department of Woman's Affairs and Family Development in collaboration with Behavioral Science Research Institute SWU; 2012.
6. Intichoti N. Family relationship, Informational support, Hardiness, Adaption, Amphetamine abuser youth [Thesis Master of Nursing Science Program]. Bangkok: Chulalongkorn university; 2002.
7. Hiranyatheb T, Udomsubpayakul U, Kongsakon R. Factors associated with non-relapse in clients who completed the rehabilitation programme in compulsory treatment system for drug addiction. *J Psychiatr Assoc Thailand* 2013;58:157-64.
8. Pattrakorn A, Chaipichitpan N. The effect of FAST Model for addiction patient in Thanyarak Institute. *J Psychiatr Assoc Thailand* 2015;60:71-81.
9. Intichoti N. Relationships between personal factors, family relationship, informational support, hardiness, and adaptation of amphetamine abuser youth out patient department, Thanyarak hospital [Thesis]. Bangkok: Chulalongkorn University; 2002.
10. Srikosai S, Taweewattanaprecha S. Psychometric properties of the life congruence scale based on the Satir Model: Thai Version. *J Psychiatr Assoc Thailand* 2012;57:75-88.
11. Supreda B. Effects of reality group counseling on self-esteem and mental health self care behavior of amphetamine addicts [Thesis]. Chiangmai: Chiangmai University; 2003.
12. Boonruang P, Wongpanarak N, Rungreangkulkij S, Boonprakob Y, Sathonphan B, Doungsatwong D. A development of strengthening spiritual program among patients with amphetamine dependence at Thanyarak Khon Kaen Hospital. *Journal of Department of Medical Services* 2559;43:142-7.
13. Substance Abuse and Mental Health Service Administration (SAMHSA). Enhancing motivation for change in substance use disorder treatment; 2019.
14. Khajehdaluae M, Zavar A, Alidoust M, Pourandi R. The relation of self-esteem and illegal drug usage in high school students. *Iran Red Crescent Med J* 2013;15:e7682.
15. Alavi HR. The role of self-esteem in tendency towards drugs, theft and prostitution. *Addict Health* 2011;3: 119-24.
16. Gossop M. Drug dependence and self-esteem *Int J Ment Health Addict* 1976;11:741-53.
17. Hunt BR, Guindon MH. Alcohol and other drug use and self-esteem in young adults. In: Guindon MH, editor. *self-esteem across the lifespan: Issues and interventions*. New York: Routledge; 2010. 219-29.
18. Inoue L, Bellini LC, Paiano M, Haddad MD, Marcon SS. Life perceptions and future perspectives of drug users: understand to care. *SMAD, Rev Eletrônica Saúde Mental Álcool Drog* 2019;15:52-9.