Lifestyle Modification Nursing Intervention For Patients With Substance Use Disorder

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ABSTRACT

Background: Substance use disorder is a chronic disease. Managing it after rehabilitation requires lifestyle changes, regular therapist visits and, from time to time, changes in treatment plan, Lifestyle typically reflects an individual's attitudes, way of life, values, or world view. Therefore Lifestyle is the key ingredients that make up a person's health and wellbeing, including (but not limited to) relationships, employment status and accommodation.

Aim: This study aimed to develop a Lifestyle modification nursing intervention for modifying the lifestyle of patients with substance use disorder.

Design: A quasi-experimental design (one group pre/posttest) was used to achieve the aim of this study.

Setting: The study was conducted in the out-patient addiction clinic at Al- abbasia Mental Health Hospital.

Subject: A purposive sample of 50 adult patients.

Tools of data collection: 1) A structured interview questionnaire 2) Semi-structured interview for the brief psychiatric rating scale 3) The substance use disorder patients' lifestyle questionnaire.

Results: The results of this study showed there was significant difference in the post test after implementation of the lifestyle modification nursing intervention compared to the pretest where the mean score of pretest was 157.98 ±8.91and for posttest was 261.68 ± 4.79.

Conclusion: The current study concluded Lifestyle modification nursing intervention on patients with substance use disorder had positive effect on Patients with substance use disorder.

Recommendations: The current study recommended that, setup educational training programs for addiction nurses to recognize the healthy lifestyle, lifestyle modification program for patient with substance use disorder.

INTRODUCTION

People who are addicted can't stop using drugs even when they really want to. Their priorities change and getting drugs can become more important than their loved ones, responsibilities, and life goals. Substance use disorder can be treated, but recovery can take time—sometimes a long time. Like other chronic diseases such as heart disease, drug addiction often requires treatment throughout a person's life. **(Szalavitz, 2017)** Substance use disorder is a chronic disease. Managing it after rehabilitation requires lifestyle changes, regular therapist visits and, from time to time, changes in treatment plan. A relapse could be a sign that it's time for a new approach; one of the most effective ways to prevent a relapse is to establish new, healthy habits in recovery – especially ones you are motivated to do and are excited about. You can make a number of changes to promote a drug-free lifestyle **(Wagener, Patterson, Saavedra, Houchins, Brande, Villa, Maldonado, Doutaz, Crane, Watkins and Condon, 2018).**

Many who develop a substance use problem have depression, attention deficit disorder, post-traumatic stress disorder, or another mental problem. A stressful or chaotic lifestyle and low self-esteem are also common **(Thomas McLellan, 2017).**

Recovery is characterized by continual growth and improvement in one's health and wellness that may involve setbacks. Because setbacks are a natural part of life, resilience becomes a key component of recovery.

(Hunsleyand Eric. J, 2018) Lifestyle typically reflects an individual's attitudes, way of life, values, or world view. Therefore, a lifestyle is a mean of forging a sense of self and to create cultural symbols that resonate with personal identity. Surrounding social and technical systems can constrain the lifestyle choices available to the individual and the symbols she/he is able to project to others and the self **(Genova, 2015).**

Lifestyle is the controlled behavior and activities of a person. Lifestyles play a role in preventing diseases which in turn decreases health care expenses .

Lifestyle factors include dieting and fasting, exercising and physical activities, stress level and sleeping, smoking and medications and drugs **(Al-kotb, Ibrahim, 2016).**

SIGNIFICANCE OF THE STUDY:

According to the National Survey for Mental Health in Egypt the most prevalent disorders are mood disorders (specifically major depressive

disorders) and substance use disorderdisorders (43.7% and 30.1% of the sample respectively).

The prevalence of substance use disorder2%; which is again similar to the results of the national survey of addiction and also explains the importance of the increased attention in planning the services for managing addiction **(Abd-el-MaksoudRabie, Sabry, M.Shaker, Sally Noby and Ali, 2017).**

Lifestyle is the key ingredients that make up a person's health and wellbeing, including (but not limited to) relationships, employment status and accommodation. The impact that lifestyle balance can have on SUD cannot be over stated. For example, aspects of lifestyle imbalance, such as unemployment, relationship breakdowns and homelessness, are likely to increase the risk of and exposure to substance use as a coping mechanism **(Davies, Elisonr, Ward and Laudet, 2015).**

AIM OF THE STUDY:

This study aimed to develop a Lifestyle modification nursing intervention for modifying the lifestyle of Patients with substance use disorder.

SUBJECTS AND METHODS:

A- Research design:

A quasi-experimental (one group pre/posttest) research design was conducted to achieve the aim of this study.

B- Setting:

The data was collected from the out-patient addiction clinic at Al- abbasia Mental Health Hospital..

C- Subject:

• The sample was chosen as the number of available patients with substance use disorder of the present study were 50 patient who meet the following criteria:-
• Gender: males and females.
• Age: more than 18 years.
• Different educational levels.
• Acceptance of participation in the program.

Exclusion criteria:

- Patient who are having psychiatric diagnosis.

D-Tools of data collection

Interview questionnaire sheet was developed by the researcher based on literature review to assess:-

A-the demographic data of patient with substance use disorder such as (Age, Sex, Education, etc…).

B-The clinical data & patient history of (substance use, dependent substance, previous setbacks, etc….)

C-Semi-structured interview for the brief psychiatric rating scale) adopted from Ventura J, et al., Intrenational Journal of Methodolgical Psychiatric research,1993), that assess the psychiatric symptoms .this form consists of 24 symptom constructs, each to be rated in a 7- point scale of severity ranging from "not present" to "extremely severe" if a specific symptom is not rated, it is marked "NA" (not assessed).

Tool (2): The substance use disorder patients' lifestyle questionnaire (pre/posttest format) was developed by the researcher including 103 statements that was grouped into 7 sections that include 1-diet (17 item), 2- sleep & rest (10 item) 3- physical activity (10 item), 4-Dealing with pain and anger (10 item), 5-dealing with problems (12 item), 6- relationships, effective communication (12 item) & assertiveness (20 item) and the last item 7-work environment (12 item). Scoring System for

The scoring system : The substance use disorder patients' lifestyle questionnaire consist of 103 statements, the response to each statement was Frequently (given 3) sometimes (given 2 and never (given 1) The total score for every section was calculated by summing the patient responses ,and then the total score for the entire questionnaire were calculated.

The total scores for every section and the total score for the questionnaire were categorized into unsatisfied, moderately satisfied and satisfied as follow.

The lifestyle sections	No. of items	≤50 unsatisfied	>50->75 moderately satisfied.	>75 satisfied.
1-Diet	17	0-17	18-25	26-34
2-sleep &rest	10	0-10	11-15	16-20
3-Physical activity (exercise)	10	0-15	11-15	16-20
4- Dealing with pain and anger	10	0-15	11-15	16-20
5-Dealing with Problems	12	0-12	13-18	19-24
6- Relationships&effective communication,	12	0-12	13-18	19-24
(B)Assertiveness skills	20	0-20	21-30	31-40
7-Work environment	12	0-12	13-18	19-24
Total of lifestyle	103	0-103	104-154	155-206

Tools validity.

Jury Opinionaire to Assess Validity was done by 5 experts in nursing and psychiatry and then translated into English language by language experts and back translated to ensure its accuracy.

Administrative design:

The researcher contacted the Research Department, which requested a list of requirements to pass the Ethics Committee of the General Secretariat for Mental Health. These requirements include

1 -An Arabic and English protocol signed and sealed by the researcher's college.

2 -Tools and questionnaires used in the research

3-Determine the setting & sample size.

4 -The program to be applied.

5 -Informed consent and the researcher implemented the required, which took approximately two months, then handed over the requirements to the research department and waited for the result of the ethics committee of the General Secretariat of Mental Health, which was to approve the implementation of the research and the researcher received an official letter to that.

Ethical consideration:

Prior conducting the pilot study, ethical approval was obtained from the scientific ethical committee of Faculty of Nursing Ain Shams University. In addition oral and written informed consent was

obtained from each participant prior to data collection. They were assured that anonymity and confidentiality would be guaranteed and the right to withdraw from the study at any time without giving any reason. Ethics, values, culture and beliefs were respected.

Operational design

The operational design includes preparatory phase, pilot study, and field work.

Phase I: Preparatory phase (data collection).

It includes reviewing of the past and current related literature and different studies covering the various aspects of life styles of patient with substance use disorder by using books, articles, periodicals, magazines and online references to get acquainted with the research problem and develop the study tools. The study tools were developed by the researcher and Jury Opinionaire to Assess Validity was done by 5 experts in nursing and psychiatry and then translated into English language by language experts and back translated to ensure its accuracy.

Phase II: (Exploratory phase):

1-Sample size:

The required sample size calculated based on the following equation (Buderer, 1996):

$n=[(Z_{(\propto/2)}+Z_{\beta})/(P_1-P_2)]^2 (p_1 q_1+p_2 q_2)$

n = required sample size per group

$Z\propto/2$ = 1.96 (The critical value that divides the central 95% of the Z distribution from the 5% in the tail)

$Z\beta$ = 0.84 (The critical value that separates the lower 20% of the Z distribution from the upper 80%)

P 1 = prevalence of the drug abuse in intervention group = 41% (Hovhannisyan et al. 2020).

P 2 = prevalence of the drug abuse in intervention group = 59% (Hovhannisyan et al. 2020).

q = 1- p

Thus, the calculated sample size will be 13 participants. By calculating the non-response rate which is 10% based on previous studies, the required sample size will be at least 14 participants in each group.

2-The pilot Study:

A pilot study was carried out after the adaptation of the tools and before starting the data collection. It was conducted on (10%) of the expected sample size to test the clarity, feasibility and applicability of the study tools. In addition, it served to estimate the approximate required time for interviewing the substance user patient as well as to find out any problems that might interfere with data collection. After obtaining the result of the pilot study, there were no modifications of tools. The participants in the pilot study were excluded from the main study sample .

3-Testing the reliability through Cronbach's Alpha reliability analysis: Table (1):

Tool	Items	Reliability		Face validity	Internal consistency
		Reliability Coefficient	Cronbach's Alpha		
Lifestyle scale	91	0.69	0.72	94	Good
Brief psychiatric scale	24	0.78	0.84	90	Good

Field work :

The actual process of data collection consumed one month started from September to October 2020, data were collected twice weekly (Saturday, Tuesday) two group for every day .

Before conducting the program, participating patients were asked to give a written agreement to participate in the study and the researcher explained the aim and objectives of the study to participating patients. All patients were informed that participation is voluntary.

The lifestyle modification intervention was implemented during the period from November 2020 until March 2021 in the form of small group sessions for patient, each group range from 5 to 7 patient.

Evaluation of the intervention:

After conducting the intervention the patients were thanked for their participation and asked to fill the post-test that consumed about one month Abril 2021 .

The evaluation of the effectiveness of the intervention was done immediately after its implementation by comparing the change in patients through applying the same tool of the pre-test.

All the process of the pre and posttest implemented at the outpatient clinic for Addiction at Abbasia for Mental Health Hospital in Saturday and Tuesday at 9 am to 12pm and intervention consisted of 14 sessions. To ensure that every participating patient understands the session's content, sessions started with objectives, taking into consideration using a simple language to suit personal differences. Each session lasted from 30– 50 minutes according to patient's responses and active participation, as well as the time available and the content of each session.

Statistical design

The collected data were organized, analyzed using appropriate statistical significant tests. The data were collected and coded using the Computer Statistical Package for Social Science (SPSS), version 20, and was also used to do the statistical analysis of data.

Quantitative data were expressed as mean± standard deviation (SD). Qualitative data were expressed as frequency and percentage.

The following tests were done:

- Chi-square (x^2) test of significance was used in order to compare proportions between qualitative parameters.
- Pearson and (t) tests were used to compare frequencies and correlation between study variables and using a nova test for measuring quantity.
- Pearson's correlation coefficient (r) test was used to assess the degree of association between two sets of variables
- The confidence interval was set to 95% and the margin of error accepted was set to 5%. So, the p-value was considered significant as the following:
  - Probability (P-value)
  - P-value <0.05 was considered significant.
- P-value <0.001 was considered as highly significant.
- P-value >0.05 was considered insignificant.

Limitation of the study:

One of the challenges that the researcher faced in this study was the Corona pandemic and the consequent difficulty of data collection, which made the researcher obliged to change the study setting from Okasha Psychiatric Center to Abbasiya Hospital

After that, implementing the requirements of the Ethics Committee of the General Secretariat of Mental Health, which took nearly three months, due to the routine.

RESULTS

Table (1): distribution of the studied patients with substance use disorder   according to their sociodemographic characteristics (N=50).

Items	N	%
Age		
18≥30	24	48
31 ≥40	26	52
Mean ± SD	27.9 ±5.83	
Sex		
Male	40	80
Female	10	20
Residence		
Rural	3	6
Urban	47	94
Education level		
reads and writes	24	48
Intermediate education	22	44
University education	4	8
Employment status		
free-employment	34	68
Government work	2	4
Does not work	8	16
Others	6	12
Marital Status		
Single	8	16
Married	24	50
Divorced	17	34
living at home		
Alone	27	54
with family	23	46

Table (1): shows that more than half (52%) had 30 > 40 years old, with mean and standard deviation 27.9 ±5.83 and majority of the study sample was male (80.0%) and 94% from urban area. As regard qualification, slightly less than half (48%) reads and writes and 44% of the study sample had intermediate education and more than two thirds (68%) had free employment. Also, 50% had married. While more than half of patients were lived alone.

Table (2): distribution of the studied patients with substance use disorder   according to their history (N0= 50).

Items	N	%
Began smoking at the age of		
10>15	31	62
15>20	19	38
Mean ± SD	14.46 ±2.25	
Began drug at the age of		
10>15	21	42
15>20	29	58
Mean ± SD	15.54 ± 2.28	
The dependency		
Hashish	22	44
Heroin	12	24
Tramadol	16	32
Number of previous relapses		
1	2	4
2	20	40
3	23	46
>3	5	10
Number of hospital admissions		
1	4	8
2	24	48
3	21	42
>3	1	2

Table (2) reveals that, less than two thirds (62%) of the studied patients began smoking at the age of 10 > 15 years old and began drugs at 15 > 20 years old. Less than half (44%) dependent on hashish and (46%) relapsed for three times. Adding to that, less than half (48%) hospitalized for twice.

Table (3): distribution of the studied patients with substance use disorder   according to their clinical data (N=50).

Items	N	%
Do you suffer from chronic diseases		
Yes	33	66
No	17	34
If yes, what are these diseases (N=33)		
Hepatitis Pandemic	4	87.9
Hypertension or diabetes	29	12.1
The presence of any of these diseases affect your commitment to the recovery regime? N=33		

Yes	18	54.5
No	15	45.5
Do you take medications to treat a disease		
Yes	20	74
No	13	26
If yes, what are these medications? N=20		
Medicines to treat hypertension or diabetes	16	80
Medicines to treat the liver	4	20
Current weight approximately		
50-60 kgm	30	60
60-70 Kgm	20	40
Current height approximately		
140-150cm	12	24
150-160 cm	19	38
160-170cm	19	38

Table (3): demonstrates that, nearly two thirds of the studied patients (66%) had chronic diseases, majority (87.9%) Hypertension or diabetes, more than half (54.5%) had an effect on their commitment to recovery regime, slightly less than three quarters (74%) had taken medication to treat the disease and 80% took a medication to treat hypertension or diabetes . More than half (60%) weighted 50-60 kgm. Besides, less than one third, (38%) were between 150-160 cm and 160-170cm.

Figure (1): The effect of lifestyle modification nursing intervention for patients with substance use disorder.
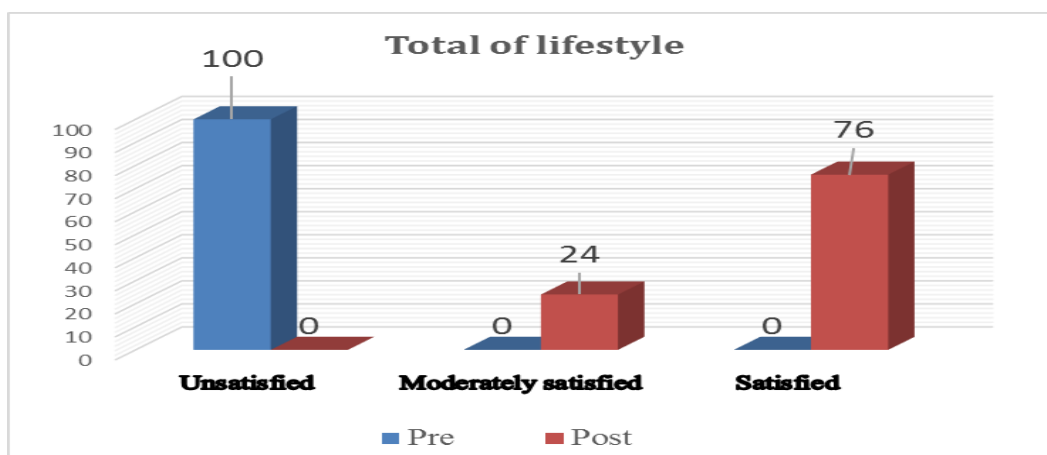

Figure (1): demonstrates to an improvement in patients' lifestyle from zero% before the intervention to 76% post-intervention.

Table (4) relation between total lifestyle and brief psychiatric symptoms among studied patients with substance use disorder at post implementation of the program (No=50).

ITEMS	Total of lifestyle						X2 P value
	Dissatisfied		Moderate N=12		Satisfied N=38		
	N	%	N	%	N	%	
Brief psychiatric symptoms.							
Mild	0	0	11	91.7	38	100	X2= 3.23
Moderate	0	0	1	8.3	0	0	P= 0.007
Severe	0	0	0	0	0	0	

Table (4) displays that there was statistically relation between total lifestyle and brief psychiatric symptoms among studied patients.

Table (5): Relationship between level of lifestyle and sociodemographic characteristics among studied patients with substance use disorder at post implementation of the program (No=50).

Items	Total of Lifestyle						X^2 P value
	Unsatisfied		Moderately satisfied		Satisfied		
	N	%	N	%	N	%	
Age							
18>30	0	0	6	50	18	47.4	X^2 0.02
30>40	0	0	6	50	20	52.6	P 0.87
Sex							
Male	0	0	10	83.3	30	78.9	X^2 0.11
Female	0	0	2	16.7	8	21.1	P 0.74
Residence							
Rural	0	0	1	8.3	2	5.3	X^2 0.15
Urban	0	0	11	91.7	36	94.7	P 0.69
Education level							
He reads and writes	0	0	4	33.3	20	52.6	X^2 1.44
Intermediate education	0	0	7	58.3	15	39.5	P 0.48
University education	0	0	1	8.3	3	7.9	
Employment status							
free-employment	0	0	8	66.7	26	68.4	X^2 0.92
Government work	0	0	0	0	2	5.3	P 0.81
Does not work	0	0	2	16.7	6	15.8	

Others	0	0	2	16.7	4	10.5	
Marital Status						
Single	0	0	1	8.3	7	18.4	X^2 1.98
Married	0	0	5	41.7	20	52.6	P 0.378
Divorced	0	0	6	50	11	28.9	
Widowed	0	0	1	8.3	7	18.4	
living at home						
Alone	0	0	8	66.7	19	50	X^2 1.02
with family	0	0	4	33.3	19	50	P 0.31
With relatives	0	0	1	8.3	7	18.4	
another to be mentioned	0	0	1	8.3	7	18.4	

Table (5) reveals that, there was not statistically significant relation between total of lifestyle score and sociodemographic characteristics "Age, Sex, Residence, Education level, Employment status, Marital Status and living at home".

Table (17): Correlation between lifestyle dimensions and total lifestyle at pre& implementation of the program (No=50).

Items	Total Lifestyle			
	Pre		Post	
	r	P-value	r	P-value
Diet	0.107	0.459	-0.940**	0.000
Sleep	0.876**	0.000	0.974**	0.000
Physical activities	-.368-**	0.009	0.957**	0.000
Dealing with pain	0.277	0.051	0.808**	0.000
Dealing with problem	0.205	0.153	0.901**	0.000
Dealing with relationship	0.783**	0.000	0.986**	0.000
Assertiveness	0.859	0.000	0.984**	0.000
Work environment	0.861	0.000	0.991**	0.000

Table (17) displays that there was strong positive correlation between total lifestyle and "Physical activities, Dealing with relationship, Assertiveness, Work environment

DISCUSSION

Part I: Demographic&& clinical characteristics among substance user's patients.

The findings of the current study revealed that, majority of the study sample was male (80.0%) &more than half of the studied sample(52%), were from 30 to 40 years old, and the rest of the sample, which represented (48%), were from 18 to 30 years old with mean and standard deviation (27.9 ±5.83)..this results came in harmony with the study conducted by Mansour **Karajibani,etal., (2017)** which entitled " Effectiveness of Educational Programs on Nutritional Behavior in Addicts Referring to Baharan Hospital, Zahedan (Eastern of IR Iran)" which Shaw that the subject was Of 36 addict patients, 91.7% were men and 8.3 % women, age ranging from 21 to 56 years.

These results can attribute to young adults are particularly likely to be active substance users and to be affected by substance use problems **AbddelMoneim ,etal (2020)** Older people are typically not exposed as much as young people to new drugs

As regard qualification, slightly less than half (48%) reads and writes and 44% of the study sample had intermediate education and more than two thirds (68%) had free employment. From the researcher point of view this result may be due to Drugs lead to continued absenteeism from work or school, which exposes the drug user to dismissal and the loss of his educational and career future .

These results matched with **AbddelMoneim ,etal (2020**) entitled (Assessment of Addicted Cases Admitted to Addiction Management Unit of Neurology and Psychiatry Hospital at Assiut University) the educational level of subjects was secondary technical schools in 47.5% of cases. University , illiteracy, preparatory, secondary general and primary schools represented 30%, 8.75%, 7.5%3.75%, and 2.5% respectively,.

These results also in agreement with the result of study conducted by **Li Li and Shengyuan Yu (2020)** entitled "Heroin-induced headache in female heroin addicts" which represent that the educational level of the heroin dependent patients was considerably lower than that of the general Chinese female population. Quarter of them had a relatively low income.

Regarding to the current study represented that, less than two thirds (62%) of the studied patients began smoking at the age of 10 > 15 years old and began drugs at15 >20 years old. These results also in agreement with the result of study conducted by **Rajabi ,A (2019)** "entitled Association between tobacco smoking and opioid use: A meta-analysis" which represents that Opioid use or opioid use disorders were positively associated with earlier age at onset of smoking (pooled OR = 1.66; 95% CI: 1.28–2.16)

Part II: Relations between socio-demographic and clinical characteristics and lifestyles among substance user's patients. The current

study clarified that there was not statistically significant relation between total of lifestyle score and sociodemographic characteristics "Age, Sex, Residence, Education level, Employment status, Marital Status and living at home". also there was not statistically significant relation between total lifestyle and "age of beginning drug, the dependency, number of previous relapses and number of hospital admissions" also, there was no statistically significant relation between total lifestyle and "Suffer from chronic diseases, Current weight approximately, Current height approximately   . "

From the researcher point of view the chaotic & the unhealthy lifestyle of the substance user patient returns to drugs and the addictive behaviors regardless of his age ,sex or any socio demographic characteristics .also the person recovering from addiction finds himself compelled to follow a completely new lifestyle, where his social relationships change in the first place, and he becomes close to the new personalities instead of his past companions, who are often addicts, as well as he may change the place or nature of his work, and adapt to these many and radical changes and this is what the current study has proven.

Part III: Correlations between lifestyles and psychiatric symptoms among substance user's patients. The current study clarified that, there was significant positive correlation between lifestyle dimensions "Diet, Sleep, Physical activities, dealing with pain, dealing with problem, dealing with relationship, Assertiveness, and Total

Life style". On the other hand, there was negative correlation between "work environment and brief psychiatric score" and lifestyle dimensions "Diet, Sleep, Physical activities, dealing with pain, dealing with problem, dealing with relationship, Assertiveness, and Total Life style.**"**

From the researcher point of view exercise helps in maintaining a healthy attitude to problems and mental pressures and gives greater flexibility and strength, prevents boredom and helps to easy sleep, it also helps the person to find new friends and learn new skills.

Also the safety of the body is reflected in the soundness of the mind and mood, as exercise stimulates the production of the hormone endorphin, which helps to feel happy and relax, and eating healthy food helps to improve the person's external appearance, which increases his confidence, and exercise helps Reducing stress and improving a person's cognitive ability.

CONCLUSION

The current study concluded that Implementation of Lifestyle modification nursing intervention on Patients with substance use disorder had positive effect on Patients with substance use disorder.

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RECOMMENDATIONS

The result of this study projected the following recommendations:
- Replication of the current study on a larger probability sample is

recommended to achieve generalization of the results.
- Setup educational training programs for addiction nurses to recognize the healthy lifestyle, lifestyle modification program for patient with substance use disorder, and the importance of lifelong monitoring for health promotion.

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