

EFFECT OF INTERVIEWING PROGRAM ON THAI PATIENTS' MOTIVATION TO CHANGE ALCOHOL CONSUMPTION BEHAVIOR

EFEITO DE UM PROGRAMA DE ENTREVISTA NA MOTIVAÇÃO DE PACIENTES TAILANDESES PARA A MUDANÇA DO COMPORTAMENTO DE CONSUMO DE ÁLCOOL

EFFECTO DE UN PROGRAMA DE ENTREVISTA SOBRE LA MOTIVACIÓN DE PACIENTES TAILANDESES PARA CAMBIAR EL COMPORTAMIENTO DE CONSUMO DE ALCOHOL

Rattikorn Muangnang¹
Mullika Singhasuriya²

Amâncio António de Sousa Carvalho³

How to cite this article: Muangnang R, Singhasuriya M, Carvalho AAS. Effect of interviewing program on Thai patients' motivation to change alcohol consumption behavior. Rev baiana enferm. 2024;38:e64367.

Objective: To assess the effectiveness of a motivational interviewing program in encouraging patients to change their alcohol consumption behaviors. **Method:** This quasi-experimental, longitudinal study involved a sample of men from a hospital in Northeast Thailand. Data were collected using a questionnaire. Data processing was conducted using SPSS. **Results:** In the Action Domain of the SOCRATES-8A scale, the mean score before the intervention was 35.27 for the Control Group (CG) and 25.73 for the Experimental Group (EG). The post-intervention scores increased significantly, with a notable improvement in the EG (Mann-Whitney: $p = 0.000$), in across all domains, including the Taking Steps (Action) domain. **Conclusion:** The motivational interviewing program significantly increased patients' motivation to change their alcohol consumption behavior, resulting in a reduction in their intake.

Descriptors: Mental health. Motivation. Ambulatory care. Alcoholism. Consumer behavior.

Objetivo: Avaliar a eficácia de um programa de entrevistas motivacionais para alentar a los pacientes a cambiar sus conductas de consumo de alcohol. Método: Este estudio longitudinal cuasi-experimental involucró a una muestra de hombres de un hospital en el noreste de Tailandia. Los datos se recogieron mediante un cuestionario. El

Corresponding author: Amâncio António de Sousa Carvalho, amancioc@utad.pt

¹ Doctor of Philosophy (Psychiatric and Mental Health Nursing), Boromarajonani College of Nursing, Udon Thani. Orcid <https://orcid.org/0009-0006-0850-8425>.

² Master of Nursing Science (Psychiatric and Mental Health Nursing), Udon Thani Hospital. Orcid <https://orcid.org/0009-0002-5900-6696>.

³ Doutor em Estudos da Criança, Universidade de Trás-os-Montes e Alto Douro, Escola Superior de Saúde, Centro de Investigação em Estudos da Criança (CIEC), Universidade do Minho. Orcid 0000-0002-1573-5312.

procesamiento de datos se realizó utilizando SPSS. Resultados: En el Dominio de Acción de la escala SOCRATES-8A, la puntuación media antes de la intervención fue de 35,27 para el Grupo de Control (GC) y de 25,73 para el Grupo Experimental (GE). Las puntuaciones posteriores a la intervención aumentaron significativamente, con una mejora notable en el GE (Mann-Whitney: $p = 0,000$), en todos los dominios, incluido el dominio de Tomar medidas (Acción). Conclusión: El programa de entrevistas motivacionales aumentó significativamente la motivación de los pacientes para cambiar su conducta de consumo de alcohol, lo que resultó en una reducción de su consumo.

Descriptor: Salud mental. Motivación. Atención ambulatoria. Alcoholismo. Comportamiento del consumidor.

Objetivo: Avaliar a eficácia de um programa de entrevista motivacional para encorajar pacientes a mudar seus comportamentos de consumo de álcool. Método: Este estudo longitudinal quase experimental envolveu uma amostra de homens de um hospital no nordeste da Tailândia. Os dados foram coletados usando um questionário. O processamento de dados foi conduzido usando o SPSS. Resultados: No Domínio de Ação da escala SOCRATES-8A, a pontuação média antes da intervenção foi de 35,27 para o Grupo Controle (GC) e 25,73 para o Grupo Experimental (GE). As pontuações pós-intervenção aumentaram significativamente, com uma melhora notável no GE (Mann-Whitney: $p = 0,000$), em todos os domínios, incluindo o domínio Taking Steps (Ação). Conclusão: O programa de entrevista motivacional aumentou significativamente a motivação dos pacientes para mudar seu comportamento de consumo de álcool, resultando em uma redução de sua ingestão.

Descritores: Saúde mental. Motivação. Assistência ambulatorial. Alcoolismo. Comportamento de consumidor.

Introduction

Motivational Interviewing (MI) is a well-known brief treatment strategy or recovery technique that was originally developed to work with patients suffering from alcohol abuse-induced disorders. It is a direct, client-centered approach to increasing intrinsic motivation for behavior change by working through and resolving ambivalence. This motivational strategy adopts a conversational style that promotes behavioral changes to improve health. It is a therapy based on the principles of motivational psychology, designed to produce rapid internally motivated changes. Treatment is based on a non-authoritarian empathetic approach that encourages clients to take personal responsibility for change, provides objective, personalized assessment results on the relative magnitude of problem behavior, provides explicit advice on the direction to follow, and outlines a menu of options for change, employing motivational strategies to mobilize the clients own resources⁽¹⁾.

According to the World Health Organization (WHO), approximately 400 million people, or 7% of the world's population aged 15 and over, have been affected by alcohol use disorders. Of these, 209 million individuals (3.7% of the world's adult population) struggled with alcohol dependence.

The total number of deaths attributed to alcohol consumption remained alarmingly high, reaching 2.6 million in 2019. Mortality rates from alcohol consumption per liter were highest in low-income countries and lowest in high-income countries. In 2019, around 1.6 million alcohol-attributable deaths were associated with non-communicable diseases, including cardiovascular disease and cancer. Additionally, approximately 724,000 deaths were caused by injuries such as car accidents, self-harm, and interpersonal violence. Another 284 thousand deaths were associated with communicable diseases⁽²⁾. The Alcohol Research Center found that Thailand had an alcohol consumption rate of 8.3 liters per capita per year, ranking second among the Association of Southeast Asian Nations (ASEAN), equal to Vietnam and behind Laos, which had a rate of 10.4 liters per capita per year. Since the beginning of 2023, 857,582 people with alcohol consumption problems have received treatment in health facilities, representing 65.2% of people in need of treatment. This marked an increase of 63.71% in 2022⁽³⁾. According to the 2021 health behavior survey conducted by the Thai National Statistics Office, current consumers

included 15.96 million Thais aged 15 and over, representing 28% of the population^(4,5).

The Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES) is a widely used tool for assessing patients' motivation to change their substance use behavior. It was originally developed for a clinical sample of adults with alcohol use disorders receiving outpatient treatment, which aligns with the focus of the present study. There are two versions of the measure: one for alcohol (SOCRATES-8A) and another for other drugs (SOCRATES-8D). Both versions consist of three subscales, referred to as domains: Recognition, Ambivalence, and Taking Steps. The Recognition domain reflects an individual's cognitive awareness of substance use as a problem in their life. The Ambivalence domain captures the uncertainty an individual feels about addressing the substance issue, while the Taking Steps domain represents the actions an individual takes to change their substance use behavior⁽⁶⁾.

Motivation is crucial for changing substance use behavior. Several studies have focused on MI, which is one of the most well-validated and widely used psychosocial interventions for alcohol use disorders⁽⁷⁻¹⁾. It specifically emphasizes eliciting and reinforcing the client's own expressed motivations for change⁽⁷⁾. MI could be a method for minimizing alcohol-related harm⁽⁸⁾ and is based on the principles of person-centered counseling that focus on helping clients resolve ambivalence about changing their substance use and other health-risk behaviors⁽⁹⁾. It is reasonable to assume that contemporary therapists recognize the importance of Rogers contributions. Empathic understanding, unconditional acceptance, and genuineness from the therapist are crucial factors in establishing effective therapeutic relationships⁽¹⁰⁾. Moreover, MI can be used as a framework to promote safe drinking and reduce alcohol-related harm. This method is an empirically supported intervention that combines client-centered therapy with behavioral reinforcement strategies to elicit and strengthen a client's own reasons for changing their behavior⁽¹¹⁾. Based on this knowledge

and taking these assumptions into account, we developed our interventions, which consisted of four activities that focused on motivation, strengthening the capacity for change, objectives, steps and strategies for self-change.

The initial research question was: What was the effect of a Motivational Interviewing program on the motivation of Thai patients at an outpatient clinic to change their alcohol consumption behavior?

In Thailand, there are few studies investigating the context of outpatient clinics, and even fewer that evaluate the effects of motivational programs^(12,13). Research at a regional level is particularly scarce or non-existent. This study was developed to address this gap, aiming to evaluate the effectiveness of a Motivational Interviewing program in motivating patients to change their alcohol consumption behavior.

Method

This study is a quasi-experimental, pre-test-post-test longitudinal design with a quantitative approach, conducted with adult patients at a hospital in Northeast Thailand. Participants were receiving care at the outpatient psychiatric clinic of the hospital where the research took place⁽¹⁴⁾.

The inclusion criteria were: i) Male; ii) Adults aged between 18 and 60 years; iii) Attending the outpatient psychiatric clinic at the hospital where the research was conducted. The exclusion criteria were: (i) Inability to read, write, and communicate normally in Thai language; (ii) Alcohol withdrawal symptoms that would interfere with treatment, as assessed by the Alcohol Withdrawal Scale (AWS) with a score <5; (iii) Psychiatric symptoms, including hallucinations, paranoia, delusions, or inability to control one's thoughts, emotions, and behaviors; (iv) Serious comorbid conditions that would prevent participation in the study, such as alcohol-related physical illnesses requiring hospitalization.

The population included patients diagnosed with Alcohol Dependence (ICD-10 code: F10.2) by psychiatrists according to the criteria of the World Health Organization. This diagnosis is

equivalent to Alcohol Use Disorder according to the DSM-5-TR criteria⁽¹⁵⁾, approximately 491 patients in 2023.

After applying the exclusion criteria and conducting random selection from the patient population, the sample consisted of 60 patients, with 30 patients in the Control Group (CG) and 30 in the Experimental Group (EG). A convenience sample was used to select 30 individuals for the EG, who participated in a motivational interviewing program. Another 30 individuals were assigned to the CG, receiving standard care according to hospital protocols. For ethical reasons, after the study was completed, the MI program was extended to the CG.

As a data collection instrument, we selected a form consisting of three parts: i) the first part included sociodemographic information about the sample (age, marital status, educational level, occupational status); ii) the second part included the AUDIT scale, designed to assess patterns of alcohol consumption; iii) the third part consisted of the SOCRATES-8A Scale, which evaluates motivation to stop drinking. In this study, we focused exclusively on data from the SOCRATES-8A Scale.

The SOCRATES-8A tool does not determine the patient's specific "stage of change" but provides scores on three subscales or domains—Recognition, Ambivalence and Taking steps (Action).⁽⁹⁾

The "Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES-8A): For Alcohol Drinkers" was developed by Miller and Tonigan⁽¹⁶⁾, and was translated into Thai by Saengcharnchai and Kittirattanapaibul⁽¹⁷⁾, who also refined the language to suit the target group. The scale was reviewed for content validity and structural validity by two experts, who are psychiatrists specializing in alcohol addiction treatment, before it was used in routine work at Suan Prung Psychiatric Hospital in 2004. Therefore, the researcher did not conduct further content validity checks as no alterations were made to the content. The tool is divided into three domains: "Recognition" with 7 items, "Ambivalence" with 4 items, and "Taking Steps" with 8 items. The questions are on a 5-point rating scale ranging from Strongly Disagree to Strongly Agree, totaling 19 questions. The scoring levels are as follows: 1 point - Strongly

Disagree; 2 points - Disagree; 3 points - Unsure; 4 points - Agree; 5 points - Strongly Agree.

The scoring criteria for the Recognition Domain are as follows: 7-28 points - Very Low; 29-31 points - Low; 32-34 points - Moderate; 35 points - High. Individuals scoring high in Recognition directly acknowledge having problems related to their drinking. They typically express a desire to change and recognize that failing to do so could result in harm.

The scoring criteria for the Ambivalence Domain are as follows: 4 -11 points - Very Low; 12-14 points - Low; 15-16 points - Moderate; 17-18 points - High; 19-20 points - Very High. High scores in Ambivalence indicate uncertainty about changing behavior. A low Ambivalence score should be interpreted alongside the Recognition score.

The scoring criteria for the Taking Steps Domain are as follows: 8-29 points - Very Low; 30-32 points - Low; 33-35 points - Moderate; 36-38 points - High; 39-40 points - Very High. High scores in Taking Steps indicate that patients are actively working to make positive changes in their drinking habits and may have already experienced some success. These high scores are predictive of a greater likelihood of successful change⁽⁹⁾.

The reliability of the tool was indicated by a Cronbach's Alpha Coefficient of 0.82⁽¹⁷⁾. The test-retest method for SOCRATES-8A was 0.84⁽¹⁸⁾.

Data collection was conducted by the researchers, who administered the form to patients during their psychiatric outpatient consultations in a suitable environment. Patients were informed about the objectives of the study and were asked to participate voluntarily and that they could refuse to participate at any time, without suffering any consequences. Informed consent was requested in advance. Collection took place from December 2023 to March 2024. After the first data collection, patients participated in the MI program to enhance the reduction of alcohol consumption among individuals with alcohol dependence. This program consisted of four sessions over eight weeks, with each session lasting approximately 15 to 30 minutes and included four activities, as described below.

Activity 1 (Week 1): Assessment and building motivation for change and providing

personalized feedback. The patients were assessed for drinking behaviors and evaluated for their motivation to quit drinking. They received feedback on their assessment results, including an evaluation of the severity of their alcohol-related issues. The researcher used questioning techniques to encourage the patient to articulate self-motivational statements, emphasizing the patient's responsibility in the decision to change, specifically that the decision to quit drinking alcohol or not was the patient's right to make.

Activity 2 (Week 2): Strengthening commitment to change. The patients were asked about their belief in their ability to quit drinking, providing them with an opportunity to declare their decision and commitment to quitting alcohol. The researcher engaged in a discussion with them about the pros and cons of drinking alcohol versus quitting. Patients were provided with additional information and addressed any misconceptions about alcohol consumption. Finally, the researcher and patients collaboratively summarized the change plan.

Activity 3 (Week 4): Setting goals and taking steps for self-change. The patient's goals and change plan were reviewed, along with any obstacles encountered and the key factors influencing their motivation for behavioral change. The researcher assessed whether the patient's motivation remained strong and provided reinforcement. Next, the researcher summarized the patient's commitment to change, helping to boost their confidence in their ability to quit drinking. Additionally, the researcher offered hope and encouragement to empower the patient throughout the process.

Activity 4 (Week 8): Setting goals and finding ongoing strategies for self-change (Follow Through). The patient's goals and change plan were continuously reviewed, and the key factors driving their motivation for behavioral change were revisited. The researcher reinforced the patient's commitment to change and helped enhance their confidence in their ability to stop drinking. Additionally, the researcher provided guidance on managing behaviors and

encouraged the patient to stay confident in their ability to sustain the change.

At the end of the last session of the program, the questionnaire was administered again for the second data collection.

To process the data, a database was created using the Statistical Package for the Social Sciences (SPSS version 25.0). Data were entered and analyzed using both descriptive and inferential statistics. For descriptive statistics, we calculated absolute and relative frequencies, as well as the mode for all variables under study, along with measures of central tendency and dispersion for the scalar variables. In the inferential statistics, the Mann-Whitney test was employed to analyze the research hypotheses as an alternative to the student's t-test, due to the assumptions for the latter not being met. We did not utilize tests for paired samples, as it was not feasible to match the patients in the sample. Statistically significant differences were considered when the probability was $p < 0.05$ ⁽¹⁹⁾.

The ethical principles inherent to this type of study, as set out in the Declaration of Helsinki and Vancouver, were respected, namely privacy, anonymity, confidentiality and conflict of interest, and a favorable opinion was obtained on 4 December 2023 from the Ethics Committee of the Hospital (UDH REC No.108/2566).

Results

Of the total sample ($n = 60$; 30 from the CG and 30 from the EG), the largest group of patients in the CG was in the age range of 45-54 years, while in the EG, the largest group was in the 35-44 age range (43.3%). This age group also represented 38.3% of the total sample. Regarding marital status, the majority of patients were married, with 76.7% in the CG, 86.6% in the EG, and 81.7% in the total sample, showing a significant proportion in the EG. In terms of educational level, most patients had completed primary education, with 60.0% in the CG, 70.0% in the EG, and 65.0% in the total sample. Finally, concerning occupational status, the majority of

patients were unemployed, with 46.7% in the CG, 50.0% in the EG, and 48.3% in the total

sample, with a slightly higher percentage in the EG (**Table 1**).

Table 1 – Sociodemographic characterization of the sample by group and total sample. Udon Thani, Thailand – 2023. (N = 60)

Personal Information	Control Group (n=30)		Experimental Group (n=30)		Total (n=60)	
	Af	Rf (%)	Af	Rf (%)	Af	Rf (%)
Age Group						
25-34 years old	3	10.0	3	10.0	6	10.0
35-44 years old	10	33.3	13	43.4	23	38.3
45-54 years old	11	36.7	10	33.3	21	35.0
55 years and older	6	20.0	4	13.3	10	16.7
Marital Status						
Single	4	13.3	2	6.7	6	10.0
Married	23	76.7	26	86.6	49	81.7
Widow/Divorced	3	10.0	2	6.7	5	8.3
Educational Level						
Primary school	18	60.0	21	70.0	39	65.0
Secondary school/Vocational certificate	7	3.3	4	13.3	11	18.3
Diploma/High Vocational certificate	0	0.0	1	3.4	1	1.7
Bachelor degree or Higher	5	16.7	4	13.3	9	15.0
Occupational status						
Unemployed	14	46.7	15	50.1	29	48.3
Employed	10	33.3	10	33.3	20	33.3
Government officials/state	3	10.0	1	3.3	4	3.3
Agriculturists	3	10.0	4	13.3	7	11.7

Source: Own preparation

The majority of patients in both the CG and EG and the total sample began drinking alcohol between the ages of 16 and 20, all 63.3%. The average age at which patients in the EG began drinking alcohol was 19.27 ± 2.59 years. Regarding alcohol consumption frequency, the majority of patients in the CG and the total sample reported consuming alcohol more than 4 times a week, with 73.3% and 51.7%, respectively. In contrast,

the majority of patients in the EG reported consuming alcohol 2-3 times a week (53.3%), indicating a lower frequency than the other groups. As for the type of alcoholic beverage consumed, white spirits were the most commonly consumed across all groups (CG, EG, and total sample), with 83.3%, 66.7%, and 75.0% of patients reporting this preference, respectively, with a higher percentage in the CG (**Table 2**)

Table 2 - Characterization of Alcohol consumption behavior of the sample by group and total sample. Udon Thani, Thailand – 2023. (N = 60)

Variables	Control Group (n=30)		Experimental Group (n=30)		Total (n=60)	
	Af	Rf (%)	Af	Rf (%)	Af	Rf (%)
Age of beginning drinking						
Lower than 15 years old	4	13.3	8	26.7	12	20.0
16-20 years old	19	63.3	19	63.3	38	63.3
21-25 years old	6	20.0	3	10.0	9	15.0
More than 25 years old	1	3.4	0	0.0	1	1.7
Alcohol consumption frequency						
Once a month or less	0	0.0	0	0.0	0	0.0
2-4 times a month	0	0.0	5	16.7	5	8.3
2-3 times a week	8	26.7	16	53.3	24	40.0
More than 4 times a week	22	73.3	9	30.0	31	51.7
Type of alcoholic beverage						
White spirits	25	83.3	20	66.7	45	75.0
Colored liquor	3	10.0	4	13.3	7	11.7
White spirit/Beers	2	6.7	5	16.7	7	11.7
Colored liquor/Beers	0	0.0	1	3.3	1	1.6

Source: Own preparation

Regarding the median of the scores of the SOCRATES-8A Scale Domains in both groups at the two time points analyzed, we found that in the CG, the lowest median score was in the Ambivalence Domain, with 10.00 points at the pre-intervention moment and 10.00 points post-intervention. The highest mean score was in the Taking Steps Domain, with 24.00 points pre-intervention and 25.00 points post-intervention.

In the EG, the lowest median was also in the Ambivalence Domain, with scores of 10.00 points at the pre-intervention moment and 12.00 points post-intervention. Similarly, the highest mean score was in the Taking Steps Domain, with 23.50 points pre-intervention and 29.50 points post-intervention, reflecting the same pattern observed in the CG. The mean scores increased across all Domains from pre-intervention to

post-intervention, with a more pronounced increase noted in the EG (**Table 3**).

Table 3 - Measures of central tendency and dispersion of SOCRATES-8A scale Domain scores by group, Pre and Post Intervention. Udon Thani, Thailand – 2023. (N = 60)

Type of Group/Domain	N	Minimum	Maximum	Median
Control Group				
Score of Domain Recognition Pre	30	16	23	17.00
Score of Domain Recognition Post	30	17	24	19.00
Score of Domain Ambivalence Pre	30	8	12	10.00
Score of Domain Ambivalence Post	30	8	14	10.00
Score of Domain Taking Steps Pre	30	21	30	24.00
Score of Domain Taking Steps Post	30	23	32	25.00
Experimental Group				
Score of Domain Recognition Pre	30	14	21	16.50
Score of Domain Recognition Post	30	20	25	22.00
Score of Domain Ambivalence Pre	30	8	11	10.00
Score of Domain Ambivalence Post	30	9	12	12.00
Score of Domain Taking Steps Pre	30	19	25	23.50
Score of Domain Taking Steps Post	30	24	32	29.50

Source: Own preparation

When analyzing the results of the Mann-Whitney (MW) test for each Domain of the SOCRATES-8A Scale, we observed in the Taking Steps (Action) Domain, that no significant statistical differences were found between the

mean ranks of the CG and EG scores before the intervention. However, after the intervention, there was a significant difference in the mean ranks between the two groups (**Table 4**).

Table 4 – Comparison of Motivation scores for changing Alcohol consumption behavior (SOCRATES-8A) between the Control Group and Experimental Group before and after intervention. Udon Thani, Thailand – 2023. (N = 60)

Test measurements/ Domains of SOCRATES-8A Scale	Recognition		Ambivalence		Taking Steps (Action)	
	BI CG	AI EG	BI CG	AI EG	BI CG	AI EG
Mean Rank						
CG	36.47	19.05	33.37	22.90	35.27	22.07
EG	24.53	41.95	27.63	38.10	25.73	38.93
Z	-2.726	-5.124	-1.319	-3.517	-1.743	-3.793
p value	0.006*	0.000*	0.187	0.000*	0.081	0.000*

Caption: BI – Before intervention; AI – After intervention; CG – Control Group; EG – Experimental Group.

Source: Own preparation

Discussion

In the present study, the largest group of patients in the CG fell into the 45-54 age range,

while the largest group in the EG was in the 35-44 age range. This finding contrasts with a study conducted in India, which included 60 patients (30 in the CG and 30 in the EG) suffering

from alcohol dependence syndrome. In that study, the largest group in the CG was in the 31-40 age range (30.0%), and the largest group in the EG was in the 41-50 age range (36.6%). Although the categorization of age groups differs slightly between the two studies, with the Indian patients being younger, the CG in the present study also includes younger patients.

Regarding marital status, both studies align in showing that the majority of patients were married, with a higher percentage observed in our study and particularly in the EG.

Regarding educational level, although the categorization of this variable differs between the two studies, there is considerable similarity, as the majority of patients fall into the lowest education level, with a higher percentage in the EG. However, the patients in the study conducted in India exhibited a higher overall level of education.

Regarding occupational status, the two studies differ significantly. In our study, the majority of patients in both groups were unemployed, whereas in the comparative study, the majority of patients in the CG were self-employed, and those in the EG were engaged in manual labor⁽²⁰⁾.

The mean scores for the domains of the SOCRATES-8A Scale in our study, after the intervention, were as follows: in the CG, the scores were 19.13 for Recognition, 10.47 for Ambivalence, and 25.43 for Taking Steps. In the EG, the mean scores were 22.17, 11.37, and 28.17, respectively, all of which were higher than those in the CG. When comparing these scores to those obtained in a study conducted in Ranchi, India⁽²¹⁾, with a sample of 60 male alcohol-dependent patients from a tertiary treatment center (30 patients in the CG and 30 in the EG), we noted that the interventions differed between the two studies. In the Indian study, the mean scores for the CG were 22.80 for Recognition, 11.40 for Ambivalence, and 26.30 for Taking Steps, while in the EG, the mean scores were 24.90, 13.10, and 31.60, respectively. All scores in both groups were higher in the Indian study, with values in the EG consistently exceeding those in the CG. This suggests that Indian patients had greater awareness of their issues and recognized

the link between alcohol consumption and their current problems. They also appeared to be more engaged in the change process and had taken steps to modify their alcohol consumption behavior⁽⁹⁾. These differences may be attributed to the higher educational levels of the Indian patients and cultural variations between the two samples.

In our study, the mean ranks for the three domains of the SOCRATES-8A Scale decreased in the CG from the pre-intervention to the post-intervention moment, while they consistently increased in the EG, with significant statistical differences observed (Mann-Whitney: $p < 0.05$). In the other study conducted in India⁽²⁰⁾, we noted that in Post Test 2, the mean ranks were always higher in the EG compared to the CG. In the Recognition, Ambivalence, and Taking Steps domains, the mean ranks in the CG were 15.50, 18.25, and 15.87 points, respectively. In contrast, the EG had mean ranks of 45.50, 42.75, and 45.13 points. All of these differences were statistically significant (Mann-Whitney: $p = 0.01$), consistent with the findings of the present study.

A similar finding was reported in a study conducted in Latvia⁽²²⁾ with 108 patients diagnosed with substance use disorders who participated in a 28-day motivational program. This study revealed significant statistical differences in the Recognition domain (ANOVA: $p = 0.013$) and the Taking Steps domain (ANOVA: $p = 0.000$), but no significant differences were found in the Ambivalence domain (ANOVA: $p = 0.925$). It is important to note that this study did not include a Control Group or Experimental Group.

The main limitations of this study include the use of a non-random sample and the absence of case pairing, which may impact the generalizability of the results to our population.

However, this research has the potential to improve the practices of health professionals in the outpatient clinic setting. It offers valuable insights into the stages of the change process—specifically Recognition, Ambivalence, and Taking Steps—that patients undergo. With this understanding, healthcare providers can more effectively tailor their interventions, ultimately enhancing their impact.

Conclusion

The sociodemographic profile of the patients in this research sample is characterized by male patients aged between 35 and 54 years, who are predominantly married, have completed primary school education, and are unemployed.

The intervention consisting of the motivational interviewing program appeared to be effective in enhancing motivation to change behavior and reduce alcohol consumption among the patients in the sample. This conclusion is supported by the results, which showed that the mean rank of the CG scores decreased from the pre-intervention to the post-intervention moment across all three domains. In contrast, the mean rank of the EG scores increased from pre-intervention to post-intervention. This increase was statistically significant in the Recognition Domain at both time points, with greater significance observed in the post-intervention phase. Additionally, significant differences were found in the Ambivalence and Taking Steps Domains, though only in the post-intervention assessment.

The consistent and significant increase in mean rank for the EG suggests that these patients have a strong desire to change their alcohol consumption behavior. They recognize that failing to make this change could harm their health, reflecting an awareness of the associated risks. This recognition also indicates a level of uncertainty, suggesting a high likelihood of success in modifying their alcohol consumption behavior.

Conducting further research using a random sample and case matching would be essential to confirm or refute the hypothesis that the application of this program is effective in increasing motivation to change alcohol consumption behavior among these patients. Such research could help determine whether the program facilitates abstinence and contributes to overall health improvements.

Collaborations:

1 – Project design and planning: Rattikorn Muangnang, Mullika Singhasuriya and Amâncio António de Sousa Carvalho;

2 – Data analysis and interpretation: Rattikorn Muangnang, Mullika Singhasuriya and Amâncio António de Sousa Carvalho;

3 – Writing and/or critical review: Rattikorn Muangnang, Mullika Singhasuriya and Amâncio António de Sousa Carvalho;

4 – Approval of the final version: Rattikorn Muangnang, Mullika Singhasuriya and Amâncio António de Sousa Carvalho

Conflicts of interest

There are no conflicts of interest between the authors and any public or private entity.

Funding Sources

This study was funded by CIEC (Center for Research in Child Studies), by the Strategic Project UID/CED/00317/2013, through the National Funds of FCT (Foundation for Science and Technology), co-financed by the European Development Fund Regional (FEDER) through COMPETE 2020 – Competitiveness and Internationalization Operational Program (POCI) with the reference POCI-01-0145-FEDER-007562, Braga, Portugal.

References

1. Evadzi C. (2020). Effects of Motivational Interviewing Treatment on Alcohol Consumption among Selected Third Year Students at the University of Education. *African Research Journal of Education and Social Sciences*. 2020;7(2): 84-95. Available from: <https://arjess.org/social-sciences-research/effects-of-motivational-interviewing-treatment-on-alcohol-consumption-among-selected-third-year-students-at-the-university-of-education-winneba-g-hana.pdf>
2. World Health Organization (WHO). Alcohol. Key facts. Geneva (CH); 2024 [cited 2024 Sep 30]. Available from: www.who.int/news-room/fact-sheets/detail/alcohol
3. ThaiHealth. ThaiHealth Watch 2024. NEXT-GEN LIVING. Bangkok (TH); 2024 [cited 2024 Sep 30]. Available from: <https://www.thaihealth.or.th/wp-content/uploads/2023/12/Thaihealth-Watch-2024-1.pdf>
4. National statistical Office. Ministry of Digital Economy and Society. The 2021 Health Behavior

- of Population Survey. Bangkok (TH); 2021 [cited 2024 Sep 30]. Available from: https://www.nso.go.th/nsoweb/nso/survey_detail/w6?set_lang=en
5. Ausanangkornchai, S. Alcohol Consumption in Thailand 2021. Bangkok (TH): Sahamit Pattana Printing Company Limited; 2021.
 6. Burrow-Sánchez JJ, Corrales C, Totsky J. Predictive Validity of the SOCRATES in a Clinical Sample of Latina/o Adolescents. *Psychol Addict Behav.* 2019; 33(2): 171–177. DOI: <https://10.1037/adb0000432>.
 7. Miller WR, Rose GS. Toward a theory of motivational interviewing. *American Psychologist.* 2009;64(6): 527–537. DOI: <https://doi.org/10.1037/a0016830>
 8. Romero-Rodríguez E, Pérula-Jiménez C, Fernández-López S, Cabello-Gracia G, Fernández-García JA, Pérula-de Torres LA, et al. Effectiveness of a brief motivational intervention in the management of risky alcohol use in Primary care: ALCO-AP20 Study Protocol. *Frontiers in Medicine.* 2023; 1-9. DOI: <http://10.3389/fmed.2022.1008832>
 9. SAMHSA. Substance Abuse and Mental Health Services Administration. Enhancing Motivation for Change in Substance Use Disorder Treatment. Treatment Improvement Protocol TIP 35. Rockville (USA); 2019 [cited 2024 Sep 30]. Available from: <https://www.samhsa.gov/about-us/contact-us>
 10. Witty MC, Adomaitis R. Carl Rogers and client-centered counseling. In: RD Parsons, N Zhang (Eds.). *Counseling theory: Guiding reflective practice* [Internet]. 1st ed. Thousand Oaks: Sage Publications Ltd; 2014. [cited 2024 Sep 30]. (pp. 171–199). DOI: <https://doi.org/10.4135/9781483399621.n7>
 11. Villarosa-Hurlocker MC, Kosorukov FD, Graham J, Hatch M. The effects of protective behavioral strategies on heavy drinking following a pure motivational interviewing intervention. *Journal of Substance Use.* 2023; 28(3): 349-354. DOI: <https://doi.org/10.1080/14659891.2022.2047806>
 12. Luamtonglang M, Dangdomyouth P. The Effect of Motivational Interviewing Program on Alcohol Drinking Behavior of Schizophrenic Patients with Alcohol Dependence. *The Journal of Psychiatric Nursing and Mental Health.* 2020;34(1): 163-178. DOI: <https://he02.tci-thaijo.org/index.php/JPNMH/article/view/241996/164682>
 13. Butpunya Y, Uthis P, Suktrakul S. The Effect of Continuing Motivational Interviewing Telephone – Based Program on Alcohol Consumption in Person with Alcohol Dependence. *J Royal Thai Army Nurses.* 2016;17(3): 123-31. Available from: <https://he01.tci-thaijo.org/index.php/JRTAN/article/view/73137>
 14. Vilelas J. *Investigação: O processo de construção do conhecimento.* 3a ed. Lisboa (PT): Edições Sílabo; 2020.
 15. American Psychiatric Association (APA). *Diagnostic and Statistical Manual of Mental Disorders: DSM-5-TR.* 5 th ed. Washington DC (USA): APA; 2024.
 16. Miller WR, Tonigan JS. Assessing drinkers' motivation for change: The stages of change Readiness and Treatment Eagerness Scale (SOCRATES). *Psychology of Addictive Behaviors.* 1996;10(2): 81-89. DOI: <https://doi.org/10.1037/0893-164X.10.2.81>
 17. Srikosai S. (2005). Effectiveness of Motivational Enhancement Therapy Among Alcohol Dependence Clients Receiving Service at Suan Prung Psychiatric Hospital. Chiang Mai (TH); 2005 [cited 2024 Sep 30]. Available from: <https://cmudc.library.cmu.ac.th/frontend/Info/item/dc:105232>
 18. Yubonpan S. Effect of Caregiver Participatory Motivational Enhancement Therapy on Alcohol Drinking Behaviors Among Persons with Alcohol Dependence, Suanprung Psychiatric Hospital. Chiang Mai (TH); 2008 [cited 2024 Sep 30]. Available from: <https://cmudc.library.cmu.ac.th/frontend/Info/item/dc:111040>
 19. Marôco J. *Análise estatística com o SPSS Statistics.* 8th ed. Pêro Pinheiro (PT): Report Number; 2021.
 20. Maneesha D, Usha VK, Mariyamma PA. Effectiveness of Multicomponent Intervention Programme on Motivation, Anxiety and Risk for Relapse among Clients with Alcohol Dependence Syndrome. *International Journal of Science and Research (IJSR).* 2019;10(2): 427-435. DOI: <http://10.21275/SR21205164336>
 21. Sahoo SK, Bhattacharjee D, Khanande DR, Pachori H, Sourav Khanra S, Das B. Effectiveness of adjunctive task-centered case work to pharmacotherapy and motivational enhancement therapy among frequently relapsing patients with alcohol dependence syndrome. *Indian*

Journal of Psychiatry. 2024; 66(9): 805-813. DOI: http://10.4103/indianjpsychiatry.indianjpsychiatry_634_21

22. Millere A, Păuce A, Millere E, Zumente Z, Sudraba V, Deklava L, et al. Treatment Motivation Factor Analysis of Patients with Substance

Use Disorders In Latvia. Procedia - Social and Behavioral Sciences. 2014; 159: 298 – 302. DOI: <http://10.1016/j.sbspro.2014.12.376>

Received: October 27, 2024

Approved: November 25, 2024

Published: February 7, 2025



The *Revista Baiana de Enfermagem* use the Creative Commons license – Attribution -NonComercial 4.0 International.

<https://creativecommons.org/licenses/by-nc/4.0/>

This article is an Open Access distributed under the terms of the Creative Commons (CC BY-NC). This license lets others remix, adapt and create upon your work to non-commercial use, and although new works must give its due credit and can not be for comercial purposes, the users do not have to license such derivative works under the same terms