Comparison of Use, Barriers, Treatment Seeking, and Mental Health Problems in Residential Methamphetamine Users

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RESUMEN

Introducción: el consumo de metanfetamina ha aumentado en Aguascalientes desde el 2013 al 2020, por lo que el gobierno implementó el programa *Reintegra* con el objetivo de iniciar la rehabilitación voluntaria en lugar de tomar el camino legal usual para las personas implicadas en el sistema de justicia por delitos menores. **Objetivo:** comparar la historia de consumo, problemas asociados a consumo, el uso de servicios de salud y las barreras para el acceso al tratamiento, así como depresión y conducta suicida entre los consumidores de metanfetamina que ingresaron a tratamiento residencial a través del Grupo *Reintegra*, con los que iniciaron tratamiento por otras circunstancias. **Método:** el estudio fue descriptivo, comparativo y transversal con 865 personas en centros residenciales. Los participantes fueron categorizados en el Grupo *Reintegra* (*n* = 453) y el Grupo No *Reintegra* (*n* = 412). Los datos se recolectaron mediante un cuestionario. Se realizaron estadísticas descriptivas e inferenciales, incluidos análisis de regresión logística. **Resultados:** los participantes de Grupo *Reintegra* mostraron una mayor prevalencia de hábitos de consumo, consideraron su consumo menos peligroso, reportaron menos problemas asociados con el consumo de metanfetamina, expresaron menos intención de dejar el consumo y buscaron ayuda en menos lugares en comparación con el Grupo No *Reintegra*. La regresión logística identificó diferencias entre los grupos, relacionadas con el número total de sustancias consumidas, el número de lugares donde se buscó ayuda y la gravedad de los problemas relacionados con el consumo. **Discusión y conclusiones:** los hallazgos resaltan diferencias entre los participantes según su ingreso al tratamiento, muestran desafíos y subrayan la importancia de intervenciones personalizadas para mejorar su eficacia.

Palabras clave: metanfetamina, perfiles de usuarios, trastornos relacionados con sustancias, centros de rehabilitación, barreras de acceso a los servicios de salud.

ABSTRACT

Introduction: methamphetamine use has increased in Aguascalientes between the years 2013 to 2020, thus the government has implemented the Reintegra Program with the purpose to begin voluntary rehabilitation instead of taking the usual legal path for the individuals involved with the justice system for minor offenses. **Objective:** to compare the consumption history, associated problems, use of health services, barriers to access treatment, as well as depression and suicidal behavior in methamphetamine users who entered residential treatment by the Reintegra Program with those who began undergoing treatment due to other circumstances. **Method:** the study was descriptive, comparative and cross-sectional with 865 individuals in residential centers. Participants were categorized into the Reintegra Group (*n* = 453) and Not-Reintegra Group (*n* = 412). Data were collected using a questionnaire. Descriptive and inferential statistics were performed, including logistic regression analyses. **Results:** Reintegra Group participants showed higher prevalence of using habits, considered their use less dangerous, reported fewer associated problems with meth use, expressed less intention to quit using meth and sought help in fewer places when compared to the Not-Reintegra Group. Logistic regression identified differences between the groups, related to the total number of substances used, number of places where they sought help, and severity of problems related to meth use. **Discussion and conclusions:** findings highlight differences between participants based on their enrollment in the program, displaying unique challenges and underscoring the importance of personalized interventions to enhance their effectiveness.

Keywords: methamphetamine, user profiles, substance-related disorders, rehabilitation centers, barriers to access of health services.

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INTRODUCTION

The United Nations Office on Drugs and Crime (UNODC) reports a global expansion in the methamphetamine market, with amphetamine-type stimulants being highly used among people in treatment (UNODC, 2023). In Aguascalientes, Mexico, methamphetamine consumption has risen significantly among the population, increasing from 9.6% in 2013 to 38.8% in 2018, surpassing the national average (Centros de Integración Juvenil [CIJ], 2018).

Methamphetamine, particularly in its crystalline form, known as meth, crystal or crystal meth, is a stimulant drug with a highly addictive potential, low cost, and wide availability (National Institute on Drug Abuse [NIDA], 2023; Winslow et al., 2007). Its high potency and ability to induce addiction quickly can lead to severe consequences for users. Meth use has been associated with negative effects, including cognitive impairments, cardiovascular problems, and a high risk of addiction and relapse. Prolonged use can result in consequences such as anorexia, insomnia, aggression, weight loss, and dermatological and dental problems begin to emerge (Meredith et al., 2005; Winslow et al., 2007). Chronic use can even lead to irreversible neurological changes and psychiatric disorders, like anxiety, depression, paranoia, psychosis, and suicidal behavior (Winslow et al., 2007). Despite these consequences, it takes an average of 10 years before people with substance use disorders seek treatment, and only 17.7% do so (Borges et al., 2007). Some difficulties when seeking treatment include a negative perception of health services by users, stigma, and structural barriers such as the cost of consultation, transportation, and the distance to service locations (Martínez et al., 2023a; 2023b; 2024).

In Mexico, the government provides treatment opportunities through Specialized Medical Units - Primary Care Centers for Addictions (UNEME-CAPA, for its acronym in Spanish) and the Centers for Youth Integration (CIJ, for its acronym in Spanish). Meanwhile, non-government providers offer care through residential centers or "Annexes". In 2020, 2,694 people, most of them adults with an average age of 28.9 years, sought substance use treatment in Aguascalientes (Comisión Nacional Contra las Adicciones [CONADIC], 2020). Of these, 1,690 individuals sought care in non-governmental centers with meth (66.9%), alcohol (21%), and cannabis (6.2%) as their primary substances used (Sistema de Vigilancia Epidemiológica de las Adicciones [SISVEA], 2020).

The governmental *Reintegra* Program, which aims to reduce crime and help substance users reintegrate into society, has offered rehabilitation program, which lasts five years, to those involved with the justice system for minor offenses related to meth use. Post-detox, detainees are referred to UNEME-CAPA for assessment and potential enrollment in certified residential centers (Secretaría General de Gobierno [SEGGOB], 2019). Government reports showed a decrease in residential robberies and vehicle theft in 2019, and a 22% drop in health-related arrests compared to the previous year since 2019 and lowered recidivism rates among participants (Secretariado Ejecutivo del Sistema Nacional de Seguridad Pública [SESNSP], 2019; Gobierno del Estado de Aguascalientes, 2018; 2019).

It is important to mention that the information regarding the people that seek help for meth use is limited, therefore this study aims to describe and compare consumption history and associated problems, the use of health services and barriers to access treatment, as well as depression and suicidal behavior in methamphetamine users of the *Reintegra* Group against the group of those who started treatment due to other circumstances.

METHOD

Study design

A descriptive, comparative and cross-sectional study was designed for individuals in residential centers. To carry out the comparison between the variables of interest, two groups were organized: the *Reintegra* Group (RG), and the Not-*Reintegra* Group (NRG).

Participants

The sample was selected by convenience, considering the residential centers that utilize the *Reintegra* Program. The study included 13 residential centers certified by CONADIC and 10 undergoing certifications. The sample consisted of 865 participants, divided into RG (n = 453) and NRG (n = 412). The inclusion criteria were that participants utilized meth as their drug of impact and the voluntary acceptance to participate in the study.

Instrument

We designed a brief survey (BS) with a total of 69 questions, divided into sociodemographic data (6 questions), variables like consumption history (9), problems associated with consumption (1), seeking help and use of services to deal with meth use (12), barriers to seeking services (1), depression (35) and

suicide attempts (5). Depression was measured with the revised version of the Center for Epidemiologic Studies' Depression Scale CES-D-R), chosen for its global and local use (Fried et al., 2022; González-Forteza et al., 2008; 2011). Data reporting focused on participant description, as mentioned in previous studies by Martínez et al. (2023a; 2023b).

The CES-D-R section of the BS was applied using the Google Forms software on a tablet. No personal identification data was collected.

Procedure

The application of the BS was carried out in each residential center by a team of researchers. The objectives of the research were verbally explained to the participants, and their signed informed consent was requested in order to answer the BS.

Ethical considerations

The participants signed an informed consent document where they were informed about the objectives of the study and the use of their data exclusively for research purposes and managed only by the research team. It was clarified that their participation would be neither punished nor rewarded by the residential center at any time. For information protection, we followed the Universidad Autónoma de Aguascalientes's ethical standards. Additionally, the ethics and scientific aspects of the protocol used in this study were approved by the Institutional Committee of Bioethics of the University.

Data analysis

The data analysis included the variables specified in Table 1. The CES-D-R was analyzed according to González-Forteza et al. (2011). First, we used descriptive statistics for each variable, and then we used Pearson's correlation statistical test to explore the relationship between suicidal behavior and meth use. Then we used the Mann-Whitney U tests (for ordinal variables and those that did not meet the assumptions of normality and equality of variances) and Student's t-test (for those variables that met the assumptions of normality) to discover if there

Table 1
Variables description

Variable	*Type*	*Description*
Belonging to the *Reintegra* Program	Categorical	It indicates if the participant enrolled in the treatment through the *Reintegra* Program or due to other reasons.
Years consuming meth	Continuous	It is the result of subtracting the age of first consumption from the current age to obtain the number of years the participant has consumed meth.
Total substances used	Continuous	It is the sum of each of the substances consumed by the participant at least once in the lifetime.
Total problems	Continuous	The sum of the problems due to meth consumption that the participant reported according to the list provided in the questionnaire. There was an option to include other problems not mentioned in the list.
Total consumption habits	Continuous	The sum of the scores that the participant has reported for their substance use both in the last year and in the last month.
Intention to quit	Interval	It is the integration of whether the participant has ever tried to stop using meth, if they want to reduce or stop using meth, and if they have sought help to stop consumption.
Number of places where they sought help	Continuous	The sum of the instances in which the participant reported seeking help according to the list provided.
Consideration of meth consumption	Ordinal	It evaluates whether the participant considers the consumption as not dangerous, dangerous or very dangerous.
Suicide attempt	Categorical	It assesses whether the participant has ever hurt, cut, or otherwise inflicted harmed to take their own life.
Total barriers	Continuous	The sum of the difficulties that the participant encountered when seeking professional help.

Table 2
Sociodemographic characteristics of participants

	Total		*RG*		*NRG*	
Variable	*n = 865*	*%*	*n = 453*	*%*	*n = 412*	*%*
Sex						
Man	734	84.9	398	87.8	336	81.5
Woman	124	14.3	54	11.9	70	17
Prefer not to say	7	.8	1	.3	6	1.5
State of residence						
Aguascalientes	795	91.9	433	95.6	362	87.8
Other	70	8.1	20	4.4	50	12.2
Municipality						
Aguascalientes Capital	463	58.2	200	44.1	263	63.8
Other	332	41.8	253	55.9	149	36.2
Age						
Younger than 20 years	217	25.1	126	27.9	91	22.1
21 to 30 years	411	47.5	210	46.3	201	48.8
31 to 40 years	162	18.7	90	19.9	72	17.5
41 to 50 years	60	6.9	24	5.3	36	8.7
More than 50 years	15	1.8	3	.6	12	2.9

Note: RG = *Reintegra* Group; NRG = Not-*Reintegra* Group; *n* = number of participants.

were differences in the variables measured between groups, based on results of the Shapiro-Wilk test, skewness (establishing a range between -2 to 2) and Kurtosis measures. Additionally, we calculated the effect size given by utilizing Cohen's d for the Student's t-test, and the rank-biserial correlation (RBC) for the Mann-Whitney U test.

Finally, we carried out a logistic regression in order to identify the variables that would best detect the participants that belonged to RG. All analyses were made with Jeffrey's Amazing Statistics Program (JASP), with a significant level of $\alpha = .05$.

RESULTS

Of the 865 total participants, 453 (52.37%) were part of the RG, while the remaining 412 (47.63%) belonged to the NRG. 84.9% were men ($n = 734$), 14.3% were women ($n = 124$), and 0.8% ($n = 7$) preferred not to indicate their gender.

The participants' ages ranged from 12 to 66 years, with an average of 26.9 years. The mean age of participants in the RG was 27.8, and 26 in the NRG. There was a statistical difference in the age between groups ($U_{863} = 102723.5$, $p < 0.01$, RBC = .101). Table 2 shows the sample's demographic characteristics.

Figure 1 shows the distribution of participants by their residence: 91.9% resided in Aguascalientes state and the other 8.1% in another state. Of the 91.9% who resided in Aguascalientes, 58.2% of them lived in the capital city, while the rest in other municipalities.

Drug use

Participants in the total sample reported the following cases of concurrent substance use: 87.5% used tobacco; 84.7% alcohol, and 82.3% cannabis (Table 3), and the results were similar between groups. Participants in the total of the sample used 4.8 substances on average ($SD = 1.7$), meanwhile the RG used 4.8 ($SD = 1.7$) and the NRG used 4.9 ($SD = 1.6$). No significant differences were found in the substances used ($U_{863} = 89220$, $p = .256$, RBC = -.04).

Participants in the total sample reported the start of meth use at age 15, and the average age of first use for the whole sample was 19.8 years. The RG had an average age of initiation of consumption of 19.2 years, with a range of 8 to 54 years, and the NRG had an average age of initiation of 20.45, with

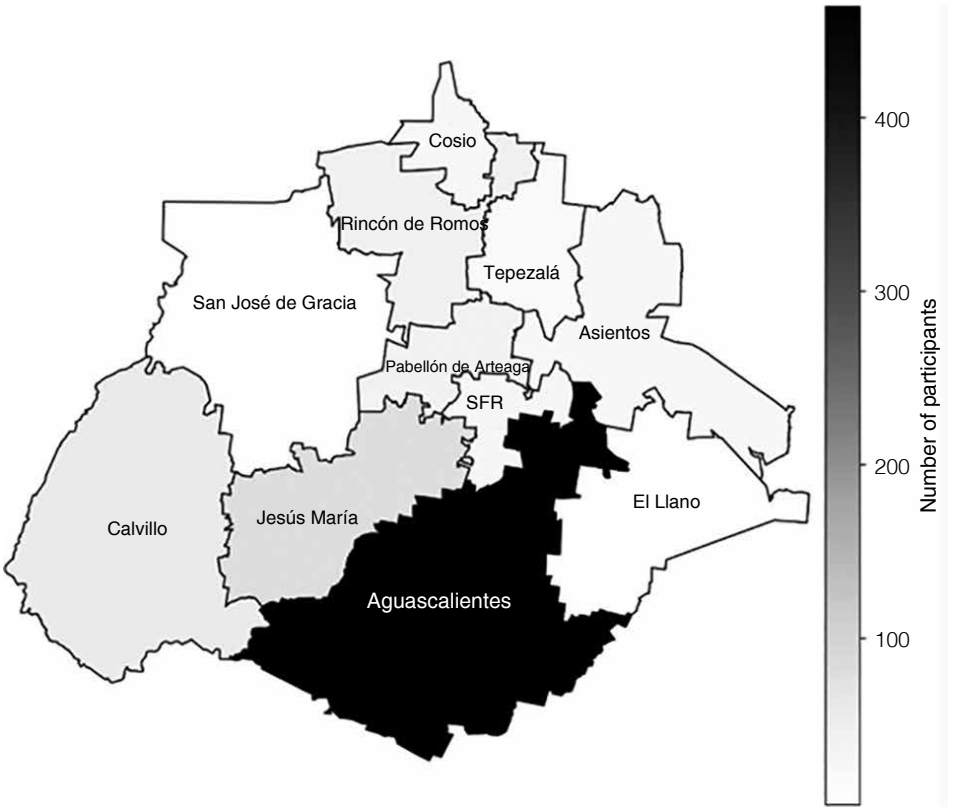

Figure 1. *Distribution of participants by county of residence.*

Note: The gray scale represents the number of participants residing in each municipality, indicating more concentration by a darker color; SFR = San Francisco de los Romo.

Table 3

Other substances consumed currently to methamphetamine

	Total		*RG*		*NRG*		*Odd ratio*	*95% CI*		
Drug	*n = 865*	*%*	*n = 453*	*%*	*n = 412*	*%*		*Lower*	*Upper*	*p*
Meth	865	100	453	100	412	100	1.654	.275	9.948	.579
Tobacco	757	87.5	422	93.1	335	81.3	3.129	2.013	4.863	<.001
Alcohol	733	84.7	404	89.18	329	79.85	2.08	1.42	3.047	<.001
Cannabis	712	82.3	381	84.1	331	80.3	1.295	.913	1.838	.147
Cocaine	436	50.4	215	47.4	221	53.64	.781	.598	1.02	.069
Inhalants	284	32.8	146	32.2	138	33.4	.944	.711	1.254	.692
Ecstasy	98	11.3	32	7	66	16	.398	.255	.622	<.001
Heroin	44	5.1	22	4.8	22	5.3	.905	.493	1.66	.747
Barbiturates	39	4.5	12	2.6	27	6.5	.388	.194	.776	.006
Phencyclidine (PCP)	32	3.7	15	3.3	17	4.1	.796	.392	1.614	.526
Fentanyl	19	2.2	10	2.2	9	2.1	1.011	.407	2.513	.982
Others	201	23.2	126	27.8	138	33.4	1.731	1.252	2.393	.001

Note: RG = *Reintegra* Group; NRG = Not-*Reintegra* Group; *n* = number of participants; CI = Confidence Interval for the mean; *p* = the *p*-value from the logistic regression.

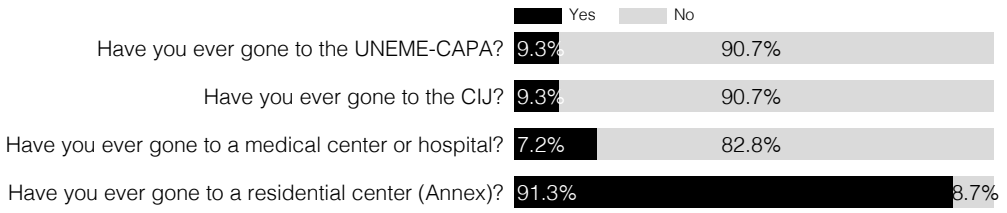

Figure 2. *Request of services at governmental and non-governmental providers.*

a range of 9 to 62 years. This difference was found to be statistically significant (U_{863} = 100864.5, p = .039, RBC = .08).

We found that the median consumption for the RG (Mdn = 6, Range = 6) was higher than the NRG (Mdn = 5, Range = 6) in the variable total of consumption habits. The RG represented more consumption in the last year and last month. This difference was statistically significant (U_{863} = 75617.5, p < .001, RBC = -.19).

The results regarding how participants view their meth use show that 30.4% of the RG and 39.3% of the NRG consider their meth consumption as very dangerous; 44.8% of the RG and 38.8% of the NRG as dangerous, and 22.5% of the RG and 21.6% of the NRG as not dangerous. We found a statistical difference (U852 = 97687, p < .001, RBC = .073) between groups, where the NRG (M = 2.2) considered their consumption more dangerous than the RG (M = 2.0).

Associated Problems and Use of Health Services

The most common problems related to meth use were weight loss (94.9%), sleep problems (80.4%), anxiety (75.3%), and violent behavior (64.7%; see Martínez et al., 2023a, for an in-depth description). The RG reported less associated problems (M = 5.6, *SD* = 2.6) than the NRG (M = 6.3, *SD* = 2.5), and this difference was statistically significant (t_{863} = 3.559, p < .001, d = .242). Despite the problems mentioned, the highest percentage of people who use meth do not use governmental services like CIJ, UNEME-CAPA or hospitals (Figure 2).

The RG and the NRG reported that 89.1% and 91.7% of participants, respectively, had tried to quit using meth once in their life; 96.9% and 97.3% wanted to stop consuming at the time of the interview, and 68.8% and 78.1% sought help in order to achieve their goal of quitting. There was a significant higher intention to quit meth use in the NRG (M = 2.7) than the RG (M = 2.55; U_{863} = 102296, p = .005, RBC = .096).

On average, participants look at 1.8 (*SD* = 1.17) sources for help to quit using meth. In the RG, this average was 1.8 (*SD* = 1.19) and in the NRG was 2.2 (*SD* = 1.16). We found a statistically significant difference in this variable (U_{863} = 112567.5, p < .001, RBC = .207). Table 4 shows the principal sources of help mentioned by the participants.

Table 4
Sources for help to stop using methamphetamine

Source for help	*Total*		*RG*		*NRG*	
	N (865)	*%*	*n (453)*	*%*	*n (412)*	*%*
Relatives	599	69.2	268	59.2	331	80.3
Psychologist	233	26.9	94	20.8	139	33.7
Friends	139	16.1	60	13.2	79	19.2
Partner	114	13.2	103	22.7	11	2.7
Doctor	80	9.2	40	8.8	40	9.7
Psychiatrist	78	9	26	5.7	52	12.6
Priest	94	10.9	48	10.6	46	11.2
Healer	34	3.9	13	2.9	21	5.1
Does no apply	192	22.2	140	30.9	52	12.6

Note: RG = *Reintegra* Group; NRG = Not-*Reintegra* Group; *n* = number of participants.

Table 5
Barriers to seeking help for addressing substance use

	Total		RG		NRG	
Barrier	*n = 865*	*%*	*n = 453*	*%*	*n = 412*	*%*
You do not consider that this type of service is useful for you	360	41.6	207	45.7	153	37.1
It seemed unimportant to you to attend a consultation	303	35	154	34	149	36.2
You could not find the time to attend	258	29.8	127	28	131	31.8
Cost	208	24	118	26	90	21.8
Location	196	22.7	104	23	92	22.3
Transport	165	19.1	97	21.4	68	16.5
Time for the first consultation	123	14.2	52	11.5	71	17.2
Waiting time between one consultation and the next one	112	12.9	42	9.3	70	17
Therapist's attitude	112	12.9	54	11.9	58	14.1

Note: RG = *Reintegra* Group; NRG = Not-*Reintegra* Group; n = number of participants.

Barriers to Healthcare Services to Address Substance Use Disorders

Table 5 shows the main barriers for seeking help that the surveyed people faced. On average, participants reported 2.12 (*SD* = 1.9) barriers, and the most frequent were that they considered that services were aimed at other groups (41.6%), followed by minimizing the importance of receiving clinical attention (35%), and not finding time to schedule receiving healthcare (29.8%). We did not find statistical difference (U_{863} = 93578, p = .945, RBC = .003) in the number of barriers in average between the RG (M = 2.1, *SD* = 1.97) and the NRG (M = 2.14, *SD* = 2.02). A detailed analysis of barriers was made in Martínez et al. (2023a).

Depression and Suicidal Behavior

Table 6 shows the depression-related results obtained with the CES-D-R scale. We discarded 77 participants (46 from the RG, and 31 from the NRG) from this analysis because they did not complete the

Table 6
CES-D-R Depression Scale results

	Total		RG		NRG	
CES-D-R Classification	*n*	*%*	*n*	*%*	*n*	*%*
No depression	596	68.9	307	67.7	289	70.1
No clinical relevance	143	16.5	79	19.4	64	16.8
Sub-umbral depression	453	52.4	228	56	225	59.1
Depression	192	22.2	100	22.1	92	22.4
Probable MDE	96	11.1	54	13.3	42	11
Highly probable MDE	61	7.1	30	7.4	31	8.1
Clinically relevant MDE	35	4	16	3.9	19	5
No response CES-D-R	77	8.9	46	10.2	31	7.5
TOTAL	865	100	453	100	412	100

Note: TOTAL = No depression + Depression + No response CES-D-R scale; MDE = Major Depressive Episode; RG = *Reintegra* Group; NRG = Not-*Reintegra* Group; *n* = number of participants.

CES-D-R test. Of the 788 people who answered the CES-D-R test, 22% presented depressive symptoms and were classified as having clinically relevant major depressive episode (MDE) symptoms (4%; 16 from the RG and 19 from the NRG); highly probable MDE symptoms (7.1%; 30 from the RG, and 31 from the NRG), and probable MDE symptoms (11.1%; 54 from the RG, and 42 from the NRG). We did not find statistical differences between groups in depression (U_{786} = 77205.5, p = .89, RBC = -.004).

According to the suicidal behavior test results, we found that 33.4% of participants attempted suicide at some time in life, of which 143 belonged to the RG and 146 to NRG (31.5% and 35.4% of each group, respectively).

We utilized the Pearson's correlation test to explore the relationship between suicide and meth use by examining the possible link with age, age of onset of meth use, number of drugs used concurrently, number of consumption episodes in the last year and the previous month before entering the residential center, the number of health problems linked to meth use, and number of years consuming meth. We found a statistically significant association between the number of drugs used concurrently (r_{864} = .15, p < .001) and the number of health problems associated with meth use (r_{864} = .25, p < .001).

Predictive analysis

A logistic regression was carried out to detect which variables could best explain belonging to the RG. For this, the backward entry method was used with likelihood ratio. Seven variables were entered: total substances used, total problems, total consumption habits, intention to quit, number of places where they have sought help, total barriers, and how they classified their meth consumption.

The analysis was carried out in two steps. First, the variable intention to quit was eliminated (β = -0.27, p = .868) since it did not provide any significant contribution to belonging to the RG. Second, we established the model by six variables (R^2 = .209): total substances used (β = -.117, p = .007, OR = .889), total problems (β = .173, p < .001, OR = 1.189), total consumption habits (β = -.250, p < .001, OR = .779), number of places where they sought help (β = .474, p < .001, OR = 1.606), total barriers (β = -.262, p < .001, OR = .769) and how they classified their consumption (p = .029); all of these make a significant contribution to belonging to the RG. When considering meth consumption specifically as "very dangerous", a greater contribution to belonging to the RG is obtained, but this is not significant (β = 2.049, p = .061, OR = 7.759). The results of the analysis showed that there are some variables that, although they have statistical significance, do not present an association.

Therefore, it can be interpreted that reporting a greater number of problems due to meth consumption increases the risk of belonging to the RG by 1.189 times, and reporting a greater number of places where help has been sought increases the risk of belonging to the RG 1.606 times. We found that tobacco consumption (OR = 3.129; p < .001) increases the risk of belonging to the RG by 3.129 times and alcohol (OR = 2.08; p < .001) increases it by two times (Table 3).

The contingency table was used to analyze whether the fact of attempting suicide increased the risk of belonging to the RG, but no risk was found associated with this variable (OR = 0.840, 95% CI = 0.633 - 1.115, p = .228).

DISCUSSION AND CONCLUSIONS

The study aimed to compare the consumption history and associated problems, the use of health services and barriers to accessing treatment, as well as depression and suicidal behavior in methamphetamine users from the RG against the NRG. The results show that the age of initiation of consumption of the RG participants was older than that of the NRG participants. The earlier age of initiation in the RG suggests that individuals who start using meth at a younger age may be more likely to develop psychological problems (Brecht et al., 2007; Grant & Dawson, 1998; Poudel & Gautam, 2017; Trujillo et al., 2019) as well as legal problems (Doherty et al., 2008; Gordon et al., 2004; Karlén et al., 2020). On the other hand, the substance uses habits of the participants showed that the RG had a higher level of consumption of meth than the NRG, which is consistent with reports that point out a relationship between meth use and criminal behavior (Gizzi & Gerkin, 2010; Goldsmid & Willis, 2016; Prendergast et al., 2006). Lastly, we found that the NRG considered their meth consumption more dangerous than the RG. The age of the start of consumption and the perception of danger in the NRG could be related to the studies that show that the higher the risk perception, the less likely to start and maintain consumption (Villatoro-Velázquez et al., 2017; Mendez-Ruiz et al., 2018).

Even with the differences observed in habitual consumption of meth, all the participants tried to stop consuming in the past or had the desire to stop consuming during the interview regardless of the

group, but the NRG have greater intentions to quit meth use. This information highlights the difficulties faced when trying to stop consuming meth that could be related with the substance's strong addictive potential (Alexander et al., 2018; Clifford et al., 2023; NIDA, 2023; Winslow et al., 2007), and it also points to the need of studies regarding the elements that most influence people's decision to avoid consumption, since there are difficulties when trying to quit said consumption despite having the intention to do it.

A variable that needs to be investigated is the perception of problems associated with meth use, since the results show that the RG reports less associated problems with meth consumption. The differences observed between the groups could also provide information regarding why the RG has sought help in less places than the NRG. It is important that meth users seek help, but it is also important for the mental health professionals and institutions to have the experience and knowledge to attend to this section of the population. The study done by Dunn et al. (2023) suggests that the places that tend to these groups could be barriers to access treatment due to their limited clinical experience, knowledge, and treatment options.

Even with the differences between where the RG and the NRG seek help, the results show that the participants face the same barriers to access treatment. Barriers like believing that services were aimed at other groups, minimization of the importance of receiving clinical attention, and not finding the time to schedule receiving healthcare. These results are similar to the ones observed in Martínez et al. (2023a), which identified that the main barriers for the patients in residential treatment in Aguascalientes were both that they did not believe that the service was for them, and they did not have time to attend appointments. The information about barriers highlights the importance of ensuring that methamphetamine users understand the benefits of receiving clinical attention. It also underscores the relevance of developing better interventions that make these users feel that services are tailored to their needs.

Another thing that needs to be considered in the meth interventions is the connection between meth use and depression and suicide attempts. This study found no differences between groups regarding depression symptoms, but 22.2% of participants experienced said symptoms and 33.4% reported suicide attempts, which are similar to the results observed in other studies (Martínez et al., 2023b). These results highlight the importance of including prevention components for suicide and other mental health disorders in treatment programs for meth consumption as well as conducting analyses of the effectiveness of their implementation.

Finally, the results show that the risk of belonging to the RG increases both according to the number of problems related to meth consumption and the number of places where the participants sought help. In the same way, the consumption of tobacco and alcohol combined with meth increases the risk of belonging to the RG. It is important to mention that the consumption of meth, as well as the use or mixing of different psychoactive substances at the same time has been related to more suicide attempts and reports of health problems (Bayazit et al., 2024; Xing et al., 2023).

The results of this research provide insight into the characteristics of participants enrolled in the RG compared to the NRG, allowing for more targeted intervention strategies. Additionally, the findings highlight the importance of developing programs that prevent substance use and increase awareness of its consequences, thereby enhancing risk perception regarding drug use. This is particularly significant given that the age of onset for substance use and the perception of associated problems in the RG is lower than in the NRG. Furthermore, the RG sought help from fewer sources than the NRG.

The results also indicate that the *Reintegra* Program attracts participants with specific characteristics, which may explain their enrollment in this program. Future efforts should focus on both evaluating the *Reintegra* Program's effectiveness, particularly due to its impact on reducing robberies and recidivism rates, and analyzing results based on participants' characteristics to assess whether the intervention meets their needs for success.

In conclusion, these results demonstrate that comparing the characteristics of meth users who enroll in interventions through different pathways can provide valuable insights for developing more comprehensive programs. Additionally, they underscore the importance of preventing meth use and considering critical information in program design.

Limitations of the Study

Some limitations of the study include the fact that data collection occurred during the intervention, which prevents us from determining whether the intervention influenced the results, particularly regarding participants' intentions to quit, the risk of consumption, and issues associated with meth use. Similarly, we could not evaluate the outcomes of the

intervention, although we gathered additional information that may help improve the program to better align with the characteristics of meth users.

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CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

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AUTHORS CONTRIBUTION

KIMM and YLOA contributed substantially to the conception, design, acquisition, analysis, interpretation of data for the work and drafting the work. ÁC contributed with statistical analysis. MEP, MAPP, and FJPC contributed by revising the work critically for important intellectual content and with drafting the text.

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