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ORIGINAL

Spirituality, Emotional Intelligence, and Knowledge about Drugs Associated with Cognitive-Behavioral Change in Men with Problematic Substance Use

Espiritualidad, inteligencia emocional y conocimiento sobre drogas asociados al cambio cognitivo-conductual de hombres con consumo problemático

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ABSTRACT

Introduction: addiction treatment has progressed toward more comprehensive approaches. Cognitive-behavioral change strategies have proven effective in addressing problems related to drug use, but the role of factors such as spirituality, emotional intelligence, and drug knowledge still require greater understanding.
Objective: to analyze the relationship between spirituality, emotional intelligence, knowledge about drug use, and cognitive-behavioral change processes in men undergoing treatment for problematic substance use.
Method: an observational, correlational study was conducted of northern Mexico with 88 men in residential treatment for problematic substance use. Sociodemographic variables, spirituality, emotional intelligence, substance knowledge, and severity of use were analyzed. Descriptive and correlational analyzes using Spearman's coefficient were used.
Results: spirituality ($r = 0,210$, $p < 0,05$), emotional intelligence ($r = 0,363$, $p < 0,01$), and drug knowledge ($r = 0,320$, $p < 0,01$) were positively and significantly correlated with change processes. Globall scores on alcohol ($r = -0,268$, $p < 0,05$) and illicit drug use ($r = -0,264$, $p < 0,05$) showed negative and significant correlations with change processes.
Conclusions: the findings support the implementation of integrated interventions that consider these factors in the treatment of addictions.

Keywords: Emotional Intelligence; Spirituality; Cognitive; Drugs.

RESUMEN

Introducción: el tratamiento contra las adicciones ha progresado hacia enfoques más integrales. Las estrategias de cambio cognitivo-conductual han demostrado ser efectivas en la intervención de problemas relacionados con el consumo de drogas, pero el papel de factores como la espiritualidad, la inteligencia emocional y el conocimiento sobre drogas aún requiere una mayor comprensión.
Objetivo: analizar la relación entre la espiritualidad, la inteligencia emocional, el conocimiento sobre el consumo de drogas y los procesos de cambio cognitivo-conductual de hombres en tratamiento por consumo problemático de sustancias.
Método: se realizó un estudio observacional de tipo correlacional en el norte de México con 88 hombres en

tratamiento residencial por consumo problemático de sustancias. Se analizaron variables sociodemográficas, espiritualidad, inteligencia emocional, conocimiento sobre sustancias y gravedad del consumo. Se utilizaron análisis descriptivos y correlacionales mediante el coeficiente de Spearman.
Resultados: la espiritualidad (r = 0,210, p < 0,05), la inteligencia emocional (r = 0,363, p < 0,01) y el conocimiento sobre drogas (r = 0,320, p < 0,01) correlacionaron de manera positiva y significativa con los procesos de cambio. El puntaje global en el consumo de alcohol (r = -0,268, p < 0,05) y drogas ilícitas (r = -0,264, p < 0,05) mostraron correlaciones negativas y significativas con los procesos de cambio. Conclusiones: los hallazgos apoyan la implementación de intervenciones integradoras que consideren estos factores en el tratamiento de las adicciones

Palabras clave: Inteligencia Emocional; Espiritualidad; Cognitivo; Drogas.

INTRODUCTION

The use of legal and illegal substances is a priority public health issue due to its multifactorial nature and the physiological, psychological, and social repercussions it has on the health of users. This phenomenon not only directly affects the individual, but also impacts family dynamics and the community environment, contributing substantially to the global burden of disease.[1]

Over the last decade, treatments for substance use disorders have intensified, particularly in response to the increase in poly-drug use and the crisis related to opioids and methamphetamines.[2,3] Men represent one of the groups with the greatest associated repercussions, both due to biological factors and cultural norms that tend to normalize consumption.[3] This sector of the population tends to exhibit compulsive patterns, lower adherence to treatment programs, and a higher probability of relapse, which increases chronicity and treatment dropout.[4]

Interventions based on the transtheoretical model of change (TTM) proposed by Prochaska and DiClemente[5] have proven effective in the treatment of addiction. This model understands change as a dynamic process composed of progressive stages—precontemplation, contemplation, preparation, action, and maintenance—which are in turn regulated by processes that facilitate progress between phases.[6] This theoretical perspective has promoted understanding of the phenomenon and, in combination with cognitive-behavioral strategies, has shown positive results in the treatment of various substance use disorders.[7,8] In this work, cognitive-behavioral change is operationalized in terms of the stages of the transtheoretical model, considering the transition between them during the treatment period as an indicator of therapeutic progress.

However, the effectiveness of these interventions depends not only on the technique, but also on individual variables that act as catalysts or barriers in the process of change. Among these are spirituality, emotional intelligence, and knowledge about drugs, factors that have been identified as influential in treatment adherence and outcomes.[7,8]

Spirituality, as distinct from religiosity in that it is not restricted to the practice of a specific creed, is defined as the search for life purpose, existential meaning, and transcendent connection.[9] From this perspective, it operates as a protective factor by providing a framework of meaning that strengthens resilience and facilitates coping with adversity.[10,11] Its hypothetical influence can be explained on several levels: a) it promotes subjective resources, such as a renewed sense of purpose; b) it stimulates emotional regulation by activating neurobiological circuits linked to reward and self-control; and c) it generates community support networks that increase therapeutic adherence and reduce the risk of relapse.[9,12,13]

On the other hand, emotional intelligence refers to the ability to perceive, understand, use, and regulate one's own and others' emotions in an adaptive manner.[14,15,16] In the field of addiction, its facets are critical for different mechanisms: emotional perception allows craving to be identified in its early stages; the use and understanding of emotions facilitates decision-making and motivation for change; and emotional regulation is an essential resource for managing impulsivity and frustration during abstinence. Longitudinal studies have confirmed that strengthening these skills is associated with greater adherence, sustained motivation, and lower relapse rates.[7,13,17]

Finally, knowledge about drugs encompasses a range of dimensions, from understanding the risks associated with use and the phases of abstinence to identifying appropriate responses to overdose, basic pharmacological aspects, and harm reduction strategies.[18] Such knowledge is not limited to information: it constitutes a psychoeducational input that enhances risk awareness, promotes self-efficacy, and facilitates relapse prevention. In terms of change, it is expected to increase progression between stages of TTM by providing clarity on the benefits of quitting use and on available coping strategies. However, the severity of use can modulate these effects: in some cases, it increases awareness of the need for change, but in others, it limits cognitive capacity and adherence due to associated comorbidities.[19] Thus, the objective of the study is to

analyze the relationship between spirituality, emotional intelligence, knowledge about drug use, and cognitive-behavioral change processes in men undergoing treatment for problematic substance use.

METHOD

A quantitative, observational, correlational, cross-sectional study was conducted between August 2023 and December 2024. The population consisted of individuals undergoing residential treatment for problematic drug use in northern Mexico. The sample consisted of 88 men, selected through non-probabilistic convenience sampling, considering the following inclusion criteria: being male, over 18 years of age, undergoing outpatient treatment for alcohol or drug use, ability to read and understand the assessment instruments, and voluntarily signing the informed consent form to participate in the study. Participants with active psychotic disorders or severe cognitive impairment that prevented them from understanding the instruments were excluded.

A sociodemographic questionnaire was administered, which included age, marital status, educational level, employment status, religion/religiousness and declared spirituality, number of children, age of onset and years of use, previous episodes of treatment, and actions taken to obtain substances, recorded using a checklist.

The Parsian and Dunning Spirituality Questionnaire has been adapted into Spanish and consists of 29 items on a 4-point Likert scale, distributed across four subscales: search for meaning, life purpose, interpersonal connections, and transcendent beliefs. Previous studies in the Mexican population have confirmed its factorial validity (CFA/EFA) and internal consistency. In this study, it obtained an α = 0,83 and a coefficient ω = 0,82, which supports its reliability.[22,23,24]

The Latin American context-adapted version of the Bar-On EQ-i (133 items), developed by Ugarriza, was used. It assesses five broad dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood. In this study, an α = 0,80 and ω = 0,79 were reported.[25,26]

The AUDIT (Alcohol Use Disorders Identification Test) included 10 items (0–40 points) and the usual cut-off point was applied, where ≥ 8 represents harmful alcohol consumption. In this sample, α = 0,80 was obtained.[27,28]

The "What do you know about drugs?" test (50 T/F items) covered 10 categories of substances (alcohol, tobacco, marijuana, cocaine, amphetamines, ecstasy, hallucinogens, tranquilizers, heroin, and inhalants), each evaluated by 5 questions. The test provides an overall score that reflects the participant's level of knowledge about psychoactive substances.[29] Its content validity for the Mexican context was established by seven expert judges, obtaining a content validity index (CVI) greater than 0,85. In the pilot test (n = 30), the difficulty and discrimination of the items were calculated; after minimal adjustments, the reliability coefficient was KR-20 = 0,88.

The DAST-10 (Drug Abuse Screening Test), adapted into Spanish and applied to the Mexican population, included 10 dichotomous items. Its minimum score is 0 and maximum score is 10, where a score o≥ r 6 reflects the severity of problematic drug use. In this study, α = 0,89 was obtained.[30]

The Process of Change Questionnaire (Prochaska and DiClemente), validated in Spanish, assesses ten processes of behavioral change (awareness, self-evaluation, environmental reevaluation, dramatic relief, self-liberation, social liberation, counterconditioning, stimulus control, contingency management, and helping relationships). Each subscale showed adequate levels of internal consistency (α = 0,74–0,88). An overall score was also calculated, providing a comprehensive measure of the change processes in the participants.[5,6,31]

The data obtained were processed using SPSS version 28.0 for Mac software. In the first stage, descriptive analyses were performed, including the use of frequencies and percentages, as well as measures of central tendency such as the median and measures of dispersion such as the interquartile range (IQR) to identify the general behavior of the variables. Spirituality, emotional intelligence, knowledge about drugs, AUDIT, DAST-10, and processes for change were considered continuous variables. When applying the Kolmogorov-Smirnov test, it was observed that they did not follow a normal distribution, which led to the choice of non-parametric tests. To respond to the central objective of the study, correlations were calculated using Spearman's rho coefficient, exploring the relationships between the aforementioned variables and thus providing a more accurate view of the link between them.

This study complied with the provisions of the Regulations of the General Health Law on Health Research. Data collection was carried out with prior authorization from the higher education institution where the study was conducted and by the authorities of the addiction treatment center. Participants were informed about the objectives of the study, the confidentiality of the data, and their right to withdraw their participation at any time. They were then shown and explained the informed consent form, reiterating their voluntary participation. Immediately after obtaining written informed consent, the instruments were applied individually and anonymously, and were kept in an envelope by the research team.

RESULTS AND DISCUSSION

The sample consisted of 88 participants, ranging in age from 18 to 55 years (Mdn= 22 years [RIQ=19-31,5]). 76,2 % reported being under 30 years of age, 51,1 % reported being single and having no children (52,3 %). Most

participants professed the Christian religion (77,3 %) and had a high school education (44,3 %) (table 1).

Table 1. Sociodemographic characteristics of participants

Variable	Category	*f*	%
Age			
	18-20 years	32	36,4
	21-30	35	39,8
	31-40 years	15	17
	41-55 years	6	6,8
Marital status			
	Single	45	51,1
	Common-law marriage	16	18,2
	Married	10	11,4
	Separated	11	12,5
	Divorced	4	4,5
	Widowed	2	2,3
Number of children			
	0	46	52,3
	1	11	12,5
	2	24	27,3
	4	7	8,0
Religion			
	Christian	68	77,3
	Atheist	13	14,8
	Catholic	7	8,0
Educational level			
	High school	39	44,3
	Middle school	29	33,0
	Primary	11	12,5
	Bachelor's degree	7	8,0
	None	2	2,3

Note: n = 88, f = frequency, % = percentage

Regarding the age of onset of substance use, 19,3 % of participants began drinking alcohol at age 13. 14,8 % and 13,6 % reported starting to use illicit drugs between the ages of 13 and 14. When asked about how they obtained the substances, 34,1 % stole to obtain alcohol and 42 % stole to obtain illegal drugs. Likewise, 9,1 % and 13,6 % reported having prostituted themselves to obtain alcohol and drugs, respectively.

Regarding risk perception, 40,9 % considered alcohol to be a very significant problem, and 15,9 % felt the same way about illicit drug use. 79,5 % of participants had received preventive information about substances in the last 12 months, through friends (39,8 %), the internet (27,3 %), and family members (22,7 %).

Table 2 presents the descriptive statistics for the study variables. Participants in the spirituality questionnaire obtained a median score of 93,18 points. With regard to emotional intelligence, they obtained a median score of 385,0 points. Knowledge about drugs had a median of 32,5. The AUDIT (Mdn=20,0) and DAST-10 (Mdn=8,00) scores reflected significant levels of problematic alcohol and drug use. In relation to the process of change questionnaire, a median of 75,5 was obtained.

Table 2. Descriptive statistics for continuous variables

Variable	Mdn	RIQ	Minimum	Max	Skewness	Kurtosis
Spirituality	93,18	86,25-100,00	52,0	104,0	-0,23	-0,45
Emotional intelligence	385,0	358,75-421,00	245,0	435,0	-0,12	-0,38
Knowledge about drugs	32,5	28,00-36,00	4,0	50,0	-0,94	3,52
AUDIT	20,0	8,00-29,00	4,00	40,0	0,45	-0,23
DAST-10	8,0	7,00-9,00	4,0	10,0	-0,12	-0,56
Processes for change	75,59	60,75-84,25	37,0	101,0	-0,42	-0,35

Note: n = 88, AUDIT = Alcohol Use Disorders Identification Test; DAST-10 = Drug Abuse Screening Test-10

Table 3 shows that the process score for change correlated positively and significantly with spirituality (ρ = ,210, p = ,049), emotional intelligence (ρ = ,363, p = ,001), and knowledge about drugs (ρ = ,320, p = ,002).

Likewise, it can be seen that the AUDIT correlated negatively with emotional intelligence (ρ = -0,234, p < 0,05) and with processes for change (ρ = -0,268, p < 0,05). The DAST-10 showed negative correlations with emotional intelligence (ρ = -0,287, p < 0,01), drug knowledge (ρ = -0,245, p < 0,05), and processes for change (ρ = -0,264, p < 0,05). Additionally, a positive correlation was observed between AUDIT and DAST-10 (ρ = ,567, p < ,01), suggesting a pattern of poly-drug use.

A collateral finding is that emotional intelligence showed significant positive associations with spirituality (ρ = ,245, p = ,028) and with knowledge about drugs (ρ = ,278, p = ,001).

Table 3. Spearman's Correlation Matrix between Main Variables

Variable	1	2	3	4	5	6
1. Spirituality	-					
2. Emotional intelligence	,245*	-				
3. Knowledge about drugs	,189	,278**	-			
4. AUDIT	-,156	-,234*	-,198	-		
5. DAST-10	-,178	-,287**	-,245*	,567**	-	
6. Processes for change	,210*	,363**	,320**	-,268	-,264*	-

Note: n = 88, **p < ,01, *p < ,05

DISCUSSION

The findings suggest that spirituality, emotional intelligence, and knowledge about drugs are positively associated with change processes in men undergoing residential treatment for alcohol and other drug use, while the severity of use (AUDIT and DAST-10) is negatively related and constitutes a frequent obstacle to progress in the stages of behavioral modification.

The significant association between spirituality and change processes is consistent with previous research highlighting its protective role in addiction recovery. These results are similar to those reported in adults in recovery, where spirituality functioned as a framework of meaning that favored the reframing of the addictive experience.[13] However, they differ partially from studies in the United States, Brazil, Paraguay, and Italy, in which spirituality showed a more marked impact in group contexts or in 12-step programs, suggesting that its effect may depend on guided environments and community support.[11,33]

The strongest relationship was observed between emotional intelligence and change processes, which places emotional competencies as a key factor in the adoption of adaptive coping strategies. In particular, the subscales of emotional perception and regulation seem to be decisive in identifying cravings and managing impulsivity, as research in Hungary and Ukraine has pointed out.[15,16] In this regard, the possibility of reverse causality cannot be ruled out: it is plausible that those who are more advanced in the stages of change develop greater emotional resources when faced with risky situations.

With regard to knowledge about drugs, a positive association with change processes was identified, highlighting the value of integrating cognitive components into treatment programs. This trend has been confirmed in contexts in the United States and Iran, where knowledge about risks and effects not only serves an informative function but is also linked to a greater willingness to modify behavior.[14,17] Complementarily, Spanish studies have shown that those with more severe consumption tend to have less objective knowledge, probably due to cognitive biases or risk minimization.[34] This raises the question of how information can be assimilated differently depending on the stage of change the individual is in.

The severity of consumption, measured using both AUDIT and DAST-10, showed inverse relationships with change processes, a pattern already reported in England. This coincidence reinforces the idea that greater severity of consumption is associated with more difficulties in making progress, regardless of the primary substance. However, it should be emphasized that this association does not imply a definitive barrier: there are individuals with severe consumption who manage to progress, indicating that contextual and motivational factors must also be considered.

The finding on poly-use reinforces national and international estimates that more than half of people in treatment have problematic use of multiple substances.[3,4] In our sample, this pattern was associated with early onset of use, with a considerable proportion starting in mid-adolescence. This coincides with longitudinal studies in the United States that have shown that many substance use disorders began before the age of 15, creating a critical window of vulnerability.[12,35]

An interesting aspect was the association between emotional intelligence and spirituality. Both constructs share components such as self-awareness and self-regulation, which have been identified as key to preventing drug use.[11,13,14,16] The integration of emotional competencies (empathy, impulse regulation, motivation) with

spiritual resources (sense of life, transcendence, purpose) seems to enhance the willingness to self-care and seek professional help. However, it should be noted that the opposite could also occur: it is possible that greater progress in the processes of change facilitates both spiritual reflection and the development of emotional competencies, suggesting a bidirectional relationship that requires further study.

In terms of limitations, it should be acknowledged that the cross-sectional design prevents the establishment of causal relationships. The associations found do not allow for the determination of directionality and, as mentioned, reverse causality is equally plausible. The sample, being non-probabilistic and composed exclusively of men in residential treatment, limits the generalization to women or those receiving outpatient or community-based care. For future studies, it is recommended to use longitudinal designs, expand the sample size, and use probabilistic techniques that allow for more robust estimates and multivariate analyses with greater explanatory power.

CONCLUSIONS

The findings show that spirituality, emotional intelligence, and knowledge about substances act as significant facilitators of cognitive-behavioral change in men undergoing treatment for problematic substance use. Meanwhile, the severity of substance use acts as a barrier.

The results support the implementation of integrative therapeutic interventions that include strategies for developing and strengthening emotional intelligence skills, spaces that facilitate spiritual exploration respectful of diversity of beliefs, psychoeducational components focused on substances, as well as specific adaptations for individuals with more severe substance use. These strategies could contribute to the development of more effective, sensitive, and personalized approaches to addiction.

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