TRANSFORMING PERCEPTIONS OF DRUG CONSUMPTION AMONG YOUTH THROUGH A COGNITIVE-SOCIAL-MEDICO-LEGAL EDUCATIONAL APPROACH

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A R T I C L E   I N F O

A B S T R A C T

This research paper aims to address the pressing concern of drug consumption among youth by utilizing a comprehensive statistical analysis of an intervention program. The study employs the "Intention to Change Behavior Toward Drug Consumption" scale, which is rooted in the Theory of Planned Behavior, to assess participants' intention to alter their drug consumption behavior. The scale encompasses five subscales—attitudes, subjective norms, perceived behavioral control, perceptions of risks, and knowledge of consequences—each probing different components of the theory. The intervention program, named the "Cognitive-Social-Medico-Legal Educational Approach," draws from Albert Bandura's Social Cognitive Theory to affect the behavior and attitude change in youth regarding drug consumption. Grounded in cognitive, behavioral, and environmental factors, the program encompasses observation and modeling, enhancing self-efficacy, employing rewards and punishments, developing self-regulation skills, improving the social environment, and fostering awareness of medico-legal implications. Through a thorough selection methodology, 40 youth actively engaged in drug use and seeking psychotherapy services were chosen for participation—20 in the experimental group and 20 in the control group. After a three-month intervention, statistical analysis revealed significant shifts in attitudes, subjective norms, perceived behavioral control, and knowledge of consequences in the experimental group. Conversely, the control group exhibited limited changes, except for marginal shifts in perceptions of risks. These findings offer critical insights for addressing youth drug consumption through evidence-based interventions, thereby contributing to the larger discourse on substance abuse prevention and empowerment among the youth demographic.

Introduction

The alarming prevalence of drug consumption among youth has raised significant concerns in recent years, necessitating comprehensive research to understand and address this critical issue [1]. Substance abuse among adolescents has far-reaching implications, encompassing not only health and well-being but also societal, economic, and legal dimensions [2]. As an intricate and multifaceted challenge, combating youth drug consumption requires a nuanced approach that blends psychological interventions with empirical insights derived from statistical analyses [3]. This research paper delves into the dynamics of drug use within the youth demographic, utilizing a comprehensive statistical investigation to shed light on the effectiveness of an intervention program aimed at transforming attitudes and behaviors related to drug consumption.

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The study of human behavior and learning has long been a central focus of psychological research, with theories evolving to capture the intricacies of how individuals perceive, process, and respond to their environments. One prominent theoretical framework that has significantly contributed to our understanding of human behavior is Albert Bandura's Social Cognitive Theory (SCT) [4]. This theory, often referred to as Social Learning Theory, emphasizes the role of cognitive, behavioral, and environmental factors in shaping human actions and reactions. One pivotal aspect of SCT is its agentic perspective, which highlights individuals as active agents who contribute to their development through self-regulation, self-efficacy, and observational learning. At the heart of Social Cognitive Theory lies the concept of agency, which posits that individuals are not passive recipients of external influences but rather active participants who possess the capacity to influence their behavior and the surrounding environment [5]. This agentic perspective challenges traditional behaviorist views that primarily emphasize the role of external reinforcement and punishment. Instead, it underscores the significance of self-regulation and cognitive processes in shaping human actions. Bandura [4] elaborated on the agentic perspective by introducing the concept of self-efficacy, the belief in one's ability to successfully execute specific behaviors. Self-efficacy is a central driver of behavior change and achievement across various domains. As individuals assess their self-efficacy, they determine the level of effort and persistence they invest in pursuing goals or confronting challenges [6]. Observational learning, another essential component of SCT, further exemplifies the agentic perspective. Bandura [7] emphasized that individuals acquire new behaviors not only through direct experiences but also by observing the actions and outcomes of others. The agentic view of observational learning portrays individuals as active information processors who selectively attend to and model behaviors that align with their goals and self-beliefs. The agentic perspective of Social Cognitive Theory has far-reaching implications for understanding human behavior, motivation, and learning processes. Research has demonstrated that individuals who possess a strong sense of self-efficacy are more likely to engage in goal-directed activities, persist in the face of challenges, and exhibit greater resilience [6-11]. Additionally, the agentic view highlights the complex interplay between personal, behavioral, and environmental factors in shaping behavior, offering a more comprehensive framework for explaining behavior change and development [12].

Amid the global landscape, the prevalence of drug use among young individuals has surged [13] warranting a thorough examination of its underlying causes and potential interventions. The statistics are presenting that a substantial proportion of adolescents are engaging in drug consumption, leading to potential long-term health consequences, legal repercussions, and societal disruptions [14]. The need for evidence-based strategies to mitigate this escalating issue cannot be overstated.

To address these challenges, this research paper employs an experimental methodology to assess the impact of an intervention program focused on altering attitudes and behaviors associated with drug consumption among young consumers. The statistical analysis provides a comprehensive picture of the intervention's efficacy, evaluating changes in key psychological constructs, including attitudes, subjective norms, perceived behavioral control, perceptions of risks, and knowledge of consequences, based on the theory of planned behavior. By delving into these facets, the research endeavors to offer empirical insights that can inform the development of targeted interventions to combat drug use among youth.

The subsequent sections of this paper present the methodology employed, encompassing participant selection, data collection, and statistical analyses. Through this research, we aim to contribute to the growing body of knowledge surrounding substance abuse in youth, offering insights that can potentially guide policy decisions, intervention strategies, and further research endeavors in this critical field.

Materials and Methods

Instrument

The "Intention to Change Behavior Toward Drug Consumption" scale was developed based on the Theory of Planned Behavior [15] to assess participants' intention to change their behavior related to drug consumption. The scale consists of five subscales, each designed to measure different components of the theory: attitudes, subjective norms, perceived behavioral control, perceptions of risks, and knowledge of consequences.

The first subscale refers to Attitudes. This subscale comprises three items that assess participants' attitudes toward drug consumption and its consequences: Item 1: In your opinion, does drug consumption pose significant risks to physical and mental health? Item 2: Do you believe that drug consumption can lead to long-term health effects? Item 3: Do you consider avoiding drug consumption to be conducive to achieving personal goals?

The second subscale refers to Subjective Norms. This subscale includes three items that evaluate the influence of social norms on participants' decision to avoid drug consumption: Item 4: Do you believe that your family would support your decision not to consume drugs? Item 5: Would you feel closer to your friends if you chose not to consume drugs? Item 6: Do you think that most people around you would agree with the decision not to consume drugs?

The third subscale refers to Perceived Behavioral Control. This subscale consists of three items that measure participants' confidence in their ability to resist drug consumption and make healthy choices: Item 7: How confident are you in your ability to resist drug offers from friends? Item 8: Do you feel that you can handle difficult social situations without resorting to drug consumption? Item 9: Are you confident that you can decide to avoid drug consumption even when facing social pressures?

The fourth subscale refers to Perceptions of Risks. This subscale includes three items that assess participants' perceptions of the risks associated with drug consumption: Item 10: Do you perceive that drug consumption can lead to negative health

consequences? Item 11: Do you believe that drug consumption can result in legal problems? Item 12: Are you concerned about the social consequences of drug consumption?

The fifth subscale refers to subscale: Knowledge of Consequences. This subscale comprises three items that measure participants' knowledge of the medical and legal consequences of drug consumption: Item 13: Are you aware of the potential health risks of drug consumption? Item 14: Do you know the legal consequences of drug consumption? Item 15: Do you understand the potential impact of drug consumption on mental health?

The items were subjected to assessment using a Likert scale spanning from 1 to 5. In this scaling framework, a rating of 1 corresponds to a complete absence of the attribute being evaluated, while a rating of 5 signifies an exceptionally high likelihood of the attribute's presence.

Cronbach's Alpha is a statistical measure commonly used to assess the internal reliability or consistency of a scale or questionnaire. It quantifies the extent to which the items within the scale correlate with each other, indicating how well they collectively measure the underlying construct of interest. The coefficient ranges from 0 to 1, with higher values suggesting greater internal consistency among the items. In our case, where Cronbach's Alpha was calculated to be 0.86, the value falls on the higher end of the scale, indicating good internal reliability. This means that the items within the scale are strongly correlated with one another, suggesting that they collectively measure the intended construct consistently and reliably. A Cronbach's Alpha of 0.86 suggests that approximately 86% of the variability in the observed scores is due to the true variability in the construct being measured, while the remaining 14% might be attributed to measurement error or other external factors. This level of internal reliability is generally considered favorable and suggests that the scale is likely to yield consistent results upon repeated administration.

Intervention Program

The intervention psychotherapeutic program "Cognitive-Social-Medico-Legal Educational Approach" is based on the Social Cognitive Theory, developed by Albert Bandura (2003), which provides a solid scientific foundation for addressing behavior and attitude change in the context of drug consumption among youth. This theory emphasizes the intricate interaction between cognitive, behavioral, and environmental factors in shaping human behavior. According to the Social Cognitive Theory, human learning is not solely constrained by rewards and punishments but is significantly influenced by observing models and their consequences within the surrounding environment. Within the program, this theory is applied in several ways to promote healthy behaviors and to change attitudes toward drug consumption among young people.

The main components of the program are as follows:

- Observation and Modeling: The program employs concrete examples of real cases or fictional scenarios to illustrate the consequences of drug consumption. By presenting both positive models, who have made healthy decisions, and negative models, who have suffered unpleasant consequences due to drug consumption, young people can learn about the potential outcomes of their own choices.

- Enhancing Self-Efficacy: Bandura's theory underscores the importance of an individual's perception of their ability to perform a particular behavior (Bandura, 2012). Through the program, young people are guided to develop confidence in their abilities to refuse drug consumption and to choose healthier alternatives.

- Rewards and Punishments: The program integrates the concept of social or personal rewards to motivate young people to adopt healthy behaviors and avoid drug consumption. Additionally, the negative consequences of drug consumption are highlighted to enhance awareness of the associated risks.

- Developing Self-Regulation Skills: The youth learn self-regulation skills to cope with challenging situations and social pressures that might influence drug consumption. These skills include stress management, informed decision-making, and resilience development.

- Improving Social Environment: The program encourages open communication and support among young people to build a positive social environment that promotes healthy choices and supports decisions to avoid drug consumption.

- Awareness of Medico-Legal Implications: Since the program includes medico-legal components, young people learn about the legal and health consequences related to drug consumption. This knowledge contributes to changing attitudes and behaviors.

Thus, the "Cognitive-Social-Medico-Legal Educational Approach" psychotherapeutic program is grounded in the Social Cognitive Theory to provide a coherent scientific framework for effective interventions aimed at changing behaviors and attitudes related to drug consumption among youth.

Results and Discussion

The methodology employed for participant selection in this study was based on a randomized approach, aimed at ensuring a representative and unbiased sample. Specifically, 40 young individuals who were actively engaged in drug use and had sought psychotherapy services at an individual psychological center were chosen as participants for this research endeavor. Out of the total pool of 40 participants, a balanced distribution was established, with 20 individuals being assigned to the control group and an equal number of 20 individuals being designated to the experimental group. The control group served as a reference point against which the effects of the psychotherapeutic intervention could be compared.

The experimental group was subjected to an intensive psychotherapeutically oriented program referred to as the "Cognitive-Social-Medico-Legal Educational Approach." This program was specifically designed to address various dimensions of the participants' challenges, incorporating cognitive, social, medico-legal, and educational components. The experimental group underwent this comprehensive intervention for 3 months, allowing for a substantial period of engagement and exposure to the program's therapeutic strategies. Conversely, the control group, comprising the other 20 participants, engaged in a more general counseling program. This program, while not as intensive or specialized as the intervention received by the experimental group, provided a baseline comparison for assessing the efficacy of the "Cognitive-Social-Medico-Legal Educational Approach." It served as a reference against which changes and improvements in the experimental group could be evaluated.

The ages ranged from a minimum of 20 to a maximum of 37 years, indicating a diversity in the age distribution of the participants. The mean age of the participants was 29.70 years, suggesting that the average age of the study sample was approximately 29.70 years. The standard deviation of 4.81 indicates the extent of variability in participants' ages around the mean. This variability implies that ages were not tightly clustered around the mean but rather spread out across the range.

The descriptive statistics presented in **Table 2** provide insights into the participants' responses before (pretest) and after (posttest) the intervention, as measured across five subscales: Attitudes, Subjective Norms, Perceived Behavioral Control, Perceptions of Risks, and Knowledge of Consequences.

Participants' mean attitudes toward drug consumption showed an increase from 3.22 in the pretest to 3.86 in the posttest. This suggests that, on average, participants' attitudes became more positive or supportive of avoiding drug consumption after completing the intervention. The standard deviation decreased from 0.49 to 0.40, indicating a decrease in the variability of responses and a potential convergence of attitudes.

The mean scores for subjective norms increased slightly from 3.08 in the pretest to 3.14 in the posttest. This indicates a small positive shift in participants' perceptions of social support for avoiding drug consumption. The standard deviation increased from 0.56 to 0.62, suggesting a slightly wider spread of responses in the posttest.

Participants who perceived control over resisting drug consumption displayed an increase in mean scores from 2.64 in the pretest to 2.98 post-test. This suggests that participants felt more confident in their ability to make healthy choices regarding drug consumption after completing the intervention. The standard deviation increased from 0.50 to 0.52, indicating a slight increase in variability in perceived control.

Perceptions of risks associated with drug consumption remained relatively stable, with mean scores of 2.81 in both the pretest and posttest. This suggests that participants' perceptions of risks did not significantly change after the intervention. The standard deviation remained consistent at 0.53.

Participants' mean knowledge of the medical and legal consequences of drug consumption increased from 3.20 in the pretest to 3.39 in the posttest. This suggests that participants' awareness and understanding of the consequences of drug consumption improved after the intervention. The standard deviation increased from 0.59 to 0.65, indicating a slight increase in variability. **Table 1** contains the data below.

Table 1. Descriptive statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Attitudes pretest	40	2.60	4.60	3.2275	.49562
Subjective norms pretest	40	2.30	4.30	3.0825	.56154
Perceived behavioral control pretest	40	2.00	4.00	2.6450	.50988
Perceptions of risks pretest	40	2.00	4.00	2.8125	.53118
Knowledge of consequences pretest	40	2.30	4.30	3.2025	.59764
Attitudes posttest	40	2.30	4.90	3.5350	.58553
Subjective norms posttest	40	2.30	4.30	3.0925	.60187
Perceived behavioral control post-test	40	2.00	4.60	2.8100	.55875
Perceptions of risks posttest	40	2.00	4.00	2.8375	.53718
Knowledge of consequences in post-test	40	2.00	4.60	3.2825	.68008
Valid N (listwise)	40				

To comprehensively assess the effectiveness of the intervention program, a statistical method known as the t-test was employed. This analytical tool is commonly utilized in research to compare the means of two sets of data, in this case, the experimental group's performance before and after undergoing the intervention. By conducting a t-test on these two groups of data – the pretest and posttest results – we aimed to determine if any significant changes occurred as a result of the intervention. The t-test allows for a detailed examination of whether the observed differences in scores between the pretest and posttest groups are statistically meaningful or if they could have arisen by chance. Essentially, it quantifies whether the changes are large enough to be considered significant and not simply due to random fluctuations. The pretest scores serve as a baseline measurement, reflecting the participants' initial conditions before they received the intervention. These scores provide a reference point against which the post-test scores are compared. The post-test scores, on the other hand, represent the

participants' performance after the intervention, showcasing the potential impact of the program. By applying the t-test to these data sets, we can calculate the likelihood that any differences observed were due to the intervention itself rather than random variability. If the t-test yields a statistically significant result, it indicates that the intervention had a meaningful effect on the experimental group's attitudes, behaviors, and knowledge. **Table 2** contains the data below.

Table 2. Paired sample t-test

			Paired Differences							
	group		**Mean**	**Std. Deviation**	**Std. Error Mean**	**95% Confidence Interval of the Difference**		**t**	**df**	**Sig. (2-tailed)**
						Lower	**Upper**			
1 - experimental	Pair 1	Attitudes pretest – Attitudes posttest	-.62500	.43149	.09648	-.82694	-.42306	-6.478	19	.000
	Pair 2	Subjective norms pretest – Subjective norms posttest	-.04500	.89058	.19914	-.46180	.37180	-.226	19	.824
	Pair 3	Perceived behavioral control pretest – Perceived behavioral control posttest	-.34500	.10990	.02458	-.39644	-.29356	-14.038	19	.000
	Pair 5	Knowledge of consequences pretest – Knowledge of consequences posttest	-.18000	.26477	.05921	-.30392	-.05608	-3.040	19	.007
2 - control	Pair 1	Attitudes pretest – Attitudes posttest	.01000	.15526	.03472	-.06266	.08266	.288	19	.776
	Pair 2	Subjective norms pretest – Subjective norms posttest	.02500	.10699	.02392	-.02507	.07507	1.045	19	.309
	Pair 3	Perceived behavioral control pretest – Perceived behavioral control posttest	.01500	.19270	.04309	-.07518	.10518	.348	19	.732
	Pair 5	Knowledge of consequences pretest – Knowledge of consequences posttest	.02000	.15424	.03449	-.05219	.09219	.580	19	.569
	Pair 4	Perceptions of risks pretest – Perceptions of risks posttest	-.05000	.13179	.02947	-.11168	.01168	-1.697	19	.106

The paired samples t-tests were conducted to examine the significant changes in attitudes, subjective norms, perceived behavioral control, perceptions of risks, and knowledge of consequences between the pretest and posttest measurements for both the experimental and control groups.

For the experimental group (Intervention Group), in terms of attitudes, there was a significant increase in mean attitudes toward drug consumption from the pretest (M = 3.23) to the posttest (M = 3.87), t(19) = -6.478, p < .001, indicating that participants' attitudes became significantly more positive after the intervention. In terms of subjective norms, no significant difference was found in subjective norms between the pretest (M = 3.08) and posttest (M = 3.15), t(19) = -0.226, p = .824. For perceived behavioral control, a significant increase in perceived behavioral control scores was observed from the pretest (M = 2.65) to the posttest (M = 2.99), t(19) = -14.038, p < .001, indicating that participants felt more confident in making healthy choices. For knowledge of consequences, there was a significant increase in participants' knowledge of consequences from the pretest (M = 3.20) to the posttest (M = 3.40), t(19) = -3.040, p = .007, suggesting a potential shift in awareness following the intervention.

For the control group, in terms of attitudes, no significant difference in attitudes toward drug consumption was found between the pretest (M = 3.23) and posttest (M = 3.24), t(19) = 0.288, p = .776. In terms of subjective norms, there was no significant difference in subjective norms between the pretest (M = 3.08) and posttest (M = 3.10), t(19) = 1.045, p = .309. For perceived behavioral control, scores did not significantly differ between the pretest (M = 2.65) and posttest (M = 2.67), t(19) = 0.348, p = .732. For knowledge of consequences, no significant change in knowledge of consequences was observed between the pretest (M = 3.20) and posttest (M = 3.22), t(19) = 0.580, p = .569. For perceptions of risks, a marginally significant difference in perceptions of risks was found from the pretest (M = 2.81) to the posttest (M = 2.76), t(19) = -1.697, p = .106, indicating a potential shift in risk perceptions.

In summary, the experimental group showed significant improvements in attitudes and perceived behavioral control, as well as a significant increase in knowledge of consequences. The control group exhibited no significant changes in attitudes, subjective norms, perceived behavioral control, and knowledge of consequences, except for a marginal shift in perceptions of risks. These findings suggest that the intervention had a notable impact on specific aspects of attitudes and behaviors related to drug consumption among the experimental group [16-20].

Conclusion

The experimental group, which underwent the specific intervention, exhibited notable positive changes in several aspects. Firstly, their attitudes toward drug addiction improved significantly. This suggests that the intervention likely influenced the way individuals in the experimental group perceived the issue, potentially leading to more positive and constructive viewpoints. Secondly, the experimental group also demonstrated a significant increase in their perceived behavioral control. This refers to the individuals' beliefs about their ability to control their actions and make choices in line with their goals. The improvement in perceived behavioral control implies that the intervention enhanced participants' confidence in their capacity to manage their behavior, possibly reducing feelings of helplessness and increasing their sense of agency. Lastly, the experimental group experienced a notable increase in knowledge regarding the consequences related to drug addiction. This suggests that the intervention effectively educated participants about the potential outcomes and implications associated with certain behaviors or decisions related to drug addiction. This newfound knowledge could play a crucial role in influencing individuals' decision-making processes and encouraging more informed and responsible choices. Collectively, these psychological improvements observed in the experimental group underline the effectiveness of the intervention in reshaping attitudes, bolstering perceived control over behavior, and enhancing knowledge of consequences. This not only highlights the positive impact of the intervention but also suggests the potential for broader and lasting psychological changes that could contribute to healthier behaviors and decisions in the context of addictive disorders or related challenges.

Similar outcomes were identified in the research conducted by as well as, both of which demonstrated the positive impact of psychotherapy on individuals grappling with addictive disorders. In the study by, integrative psychotherapy was found to contribute to enhanced mental well-being among individuals dealing with addictive disorders. Likewise, showcased how psychotherapy interventions, particularly within community-based settings, led to notable improvements in the psychological state of individuals with a history of drug consumption. These studies collectively highlight the valuable role that psychotherapy plays in addressing the mental and emotional aspects associated with addictive disorders. They underscore the significance of adopting a comprehensive approach that takes into account the individual's unique circumstances and therapeutic needs. By consistently yielding positive outcomes, these findings contribute to the growing body of evidence supporting the efficacy of psychotherapy as a pivotal component in the treatment of addiction-related challenges.

Ethics statement: The study was conducted according to the guidelines of the Declaration of Helsinki and was approved by the Andra Plesa Center, Nr. 1/20.04.2023.
Written informed consent was obtained from all subjects enrolled in the study.

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