

Exploring cognitive patterns underpinning drug offending among incarcerated men: an interpretative phenomenological analysis

Received: 10 March 2026

Accepted: 3 August 2026

Published online: 08 August 2026

Cite this article as: Syasyila K., Kamaluddin M.R., Abdullah Mohd. Nor H. *et al.* Exploring cognitive patterns underpinning drug offending among incarcerated men: an interpretative phenomenological analysis. *Sci Rep* (2026). <https://doi.org/10.1038/s41598-026-65690-3>

Kalaivanan Syasyila, Mohammad Rahim Kamaluddin, Hilwa Abdullah Mohd. Nor, Ashlee Curtis, Kartini Abd Ghani, Lim L. Gin & Ratna Yunita Setiyani Subardjo

We are providing an unedited version of this manuscript to give early access to its findings. Before final publication, the manuscript will undergo further editing. Please note there may be errors present which affect the content, and all legal disclaimers apply.

If this paper is publishing under a Transparent Peer Review model then Peer Review reports will publish with the final article.

Exploring Cognitive Patterns Underpinning Drug Offending Among Incarcerated Men: An Interpretative Phenomenological Analysis

Kalaivanan Syasyila¹, Mohammad Rahim Kamaluddin^{1*}, Hilwa Abdullah @ Mohd. Nor¹, Ashlee Curtis², Kartini Abd Ghani³, Lim L. Gin¹, Ratna Yunita Setiyani Subardjo⁴

- 1 Centre for Research in Psychology and Human Well-Being, Faculty of Social Sciences and Humanities, Universiti Kebangsaan Malaysia, Bangi 43600, Malaysia
- 2 School of Psychology, Deakin University, 75 Pigdons Road, Waurin Ponds Vic. 3216, Australia
- 3 Faculty of Cognitive Sciences and Human Development, Universiti Malaysia Sarawak, 94300 Kota Samarahan, Sarawak, Malaysia
- 4 Department of Psychology, Faculty of Economics, Social Sciences and Humanities, Universitas Aisyiyah Yogyakarta, Indonesia

*Corresponding author: Mohammad Rahim Kamaluddin - rahimk@ukm.edu.my

Abstract

Purpose: Drug-related crimes are a multifaceted issue with significant social consequences. With rising recidivism rates, it is crucial that more emphasis is placed on the cognitive patterns that underlie such offences to enable effective behavior change. This study sought to explore how cognitive processes are associated with drug-related offences in incarcerated males in Malaysia. **Methods:** Semi-structured interviews were conducted with 27 incarcerated males. **Results:** Interpretative phenomenological analysis (IPA) captured (i) cognitive rationalizations, (ii) cognitive rigidity, and (iii) fatalistic thinking. These cognitive patterns were not distinct from one another; rather, they reinforced one another, resulting in a psychological framework that facilitated continued drug use and criminal behavior. **Conclusion:** These findings highlight the need to look beyond behavioral models of addiction and include the underlying cognitive biases that influence the actions of the incarcerated population. Addressing these cognitive rationalizations may provide a more targeted, psychologically informed, and long-term approach to therapeutic intervention and the prevention of recidivism.

Keywords: Biased thought pattern; Cognitive rigidity; Fatalistic thinking; Drug-related crime; Interpretative phenomenological analysis

Background

Criminal justice and public health systems worldwide continue to face significant challenges as a result of drug-related offences. Drug-related offences include those that are directly or indirectly motivated by substance use, such as theft or other acquisitive behaviors carried out to maintain drug use, as well as direct participation with restricted drugs, such as use, possession, or distribution. Globally, illicit drug use is widespread, with an estimated 292 million individuals reporting use in the past year (UNODC, 2024). Global imprisonment rates are mostly influenced by drug-related offences, with Southeast Asia noted for particularly harsh punitive measures, such as lengthy imprisonment sentences for narcotic crimes (Chan, 2025). This crisis is especially pressing in Malaysia, given that drug-related convictions accounted for between 60 and 65 per cent of prison admissions as of 2024, a percentage that has been steadily increasing (Hassan et al., 2024). According to the Department of Statistics Malaysia (DOSM, 2024), over 95 per cent of people in prison for drug-related crimes are adult men from low-income urban origins, with many

cycling in and out of prison, struggling to sustain long-term abstinence from drug use and community reintegration. This ongoing pattern has strained correctional institutions' capacity and reduced the efficacy of carceral rehabilitation services, leading to a major increase in prison overcrowding (Hassan et al., 2024).

Despite the implementation of institutional rehabilitation programs within correctional settings, recidivism and relapse into drug-related offending remain persistent challenges (Cheah et al., 2019; Muhammad Syafiq & Lukman, 2025). This suggests that structural and behavioral interventions alone may be insufficient to explain or address continued offending patterns among individuals with substance use histories. One potential explanation lies in the ways individuals interpret, justify, and make sense of their drug use and related offending behavior (Syasyila et al., 2024).

Existing research has largely focused on socio-environmental and criminogenic risk factors, such as childhood maltreatment, peer pressure, or criminogenic needs (Ismail et al., 2022; Ismail et al., 2024; Mohammad Rahim et al., 2021; See Mey et al., 2020). While these factors are important, comparatively less attention has been given to the subjective meaning-making processes through which individuals understand their own substance use and offending trajectories. Quantitative studies have identified associations between substance use disorders and cognitive tendencies such as impaired decision-making, heightened reward sensitivity, and reduced future-oriented thinking (Anderson & Verdejo-Garcia, 2023). However, less is known about how these processes are experienced, narrated, and interpreted by individuals themselves in custodial settings.

From a theoretical perspective, cognitive-affective frameworks such as Coghlan's cognitive-affective-pharmacogenic (CAP) theory suggest that individuals may develop maladaptive cognitive patterns in response to chronic psychological stress, loss of control, and repeated adverse experiences (Coghlan et al., 1973; Gold & Coghlan, 1976). Within this view, substance use may initially function as a coping strategy that temporarily restores perceived control or emotional stability but may subsequently become embedded within maladaptive cycles of behavior and interpretation. In this study, CAP theory is used as a guiding interpretive framework to sensitize analysis to the ways individuals construct meaning around drug use and offending.

Drug-involved offending may occur as a consequence of the psychopharmacological effects of intoxication, as a means of obtaining drugs or financial resources to sustain substance use, or through broader lifestyle and social factors associated with involvement in drug-using networks. While each pathway warrants investigation, the present study focuses specifically on offences committed while under the influence of drugs. This focus was chosen because the study aims to examine the cognitive patterns and rationalizations associated with offending behavior occurring in the immediate context of substance use. Accordingly, an in-depth, qualitative investigation of the cognitive experiences of incarcerated individuals can shed light on how their expectations, attributions, and beliefs change in response to long-term drug use and hardships. Thus, the purpose of this study was to explore how cognitive aspects impact the engagement of Malaysian incarcerated males in drug-related offences.

Methodology

Participants

Participants were purposively chosen in consultation with prison authorities in Malaysian prison settings. Recruitment was directed by precise inclusion criteria to ensure relevance and alignment with the study objectives. Individuals had to meet certain requirements to be eligible: (i) be male inmates who are citizens of Malaysia; (ii) be at least 21 years old (since those under 21 are legally considered juveniles); (iii) not have cognitive impairments (to ensure cognitive coherence during interviews); (iv) be able to understand and speak the Malay language; and (v) have a history of drug-related offending, operationalized in this study as criminal offences committed while under the influence of drugs. This selection was made to focus specifically on situational, intoxication-linked offending, which is theoretically distinct from economically or structurally motivated drug-defined crimes (i.e., drug possession, trafficking, manufacturing).

Individuals were excluded if they were (i) non-Malaysian nationals, (ii) under the age of 21, (iii) on remand or awaiting trial, or (iv) categorized as high-risk people in prison, to ensure both the researchers' safety and the integrity of the data collection process.

The final sample consisted of 27 incarcerated adult male individuals who fulfilled the inclusion criteria. The participants' ages ranged from 27 to 59, with the majority falling into the 40–50 age range. The sample also consisted of ethnic diversity of Malay, Indian, Chinese, and Kadazandusun. The majority of the participants were widowed, divorced, or single. The majority of them had only completed primary school or had no formal education. Pre-incarceration jobs, which were primarily low-skilled and low-paying ones (e.g., security guard, lorry driver, mechanic), are included in all reported employment. All reported employment refers to pre-incarceration jobs, which were predominantly low-skilled and low-income positions. The sample also reflects a polysubstance-using population with longevity of addiction spanning 8–35 years. This table is provided to contextualize the socioeconomic and substance-use characteristics of the sample, which are relevant for interpreting the cognitive and experiential patterns described in the analysis. Table 1 provides an overview of the participants' demographic information.

Table 1 Participant Demographic Information

No.	Age	Ethnicity	Marital Status	Education Level	Employment	Type of Drug Used	Longevity of Addiction
1	37	Malay	Widower	Upper secondary education	Store attendant / Food delivery rider	Heroin, Cannabis, Methamphetamine	23 years
2	47	Chinese	Divorced	Primary education	Restaurant worker	Methamphetamine	30 years
3	42	Indian	Single	Primary education	Housekeeper	Heroin, Methamphetamine	23 years
4	47	Malay	Married	Upper secondary education	Pusher	Cannabis, Methamphetamine	32 years
5	41	Malay	Single	Primary education	Security guard	Heroin, Cannabis, Methamphetamine,	26 years

						Cocaine	
6	37	Indian	Married	No formal education	Mechanic	Heroin, Cannabis, Ketamine	27 years
7	54	Malay	Single	Upper secondary education	Security guard	Cannabis, Methamphetamine	34 years
8	52	Malay	Divorced	Primary education	Trash collector	Heroin, Methamphetamine	31 years
9	43	Indian	Single	Primary education	Scrap metal worker	Heroin, Methamphetamine	25 years
10	45	Kadazandusun	Single	Primary education	Used shoe seller	Heroin, Methamphetamine	29 years
11	54	Malay	Divorced	Primary education	Lorry driver	Heroin, Cannabis, Methamphetamine	35 years
12	46	Malay	Widower	Primary education	Driver	Cannabis, Methamphetamine	14 years
13	27	Malay	Divorced	Primary education	Night market vendor	Methamphetamine	14 years
14	40	Malay	Single	Primary education	Security guard	Heroin, Methamphetamine	12 years
15	46	Malay	Divorced	Primary education	Security guard	Heroin, Cannabis, Methamphetamine	31 years
16	50	Indian	Single	Primary education	Plumber	Heroin, Cannabis, Methamphetamine	33 years
17	36	Malay	Single	No formal education	Fisherman	Heroin, Methamphetamine	14 years
18	32	Indian	Single	Upper secondary education	Transportation worker	Cannabis	14 years
19	42	Indian	Married	Primary education	Lorry driver	Methamphetamine	24 years
20	59	Malay	Divorced	Primary education	Factory worker	Heroin, Cannabis, Methamphetamine	29 years
21	45	Kadazandusun	Single	Upper secondary education	Logistics worker	Heroin, Cannabis, Methamphetamine	23 years
22	31	Indian	Single	Upper secondary education	Field officer	Cannabis	8 years
23	48	Malay	Single	Primary education	Snack vendor	Heroin, Cannabis, Methamphetamine, Ecstasy pills	30 years
24	49	Indian	Single	No formal education	Truck assistant	Heroin, Cannabis	28 years
25	51	Indian	Divorced	Primary education	Plumber	Cannabis	34 years
26	51	Chinese	Single	Primary education	Construction contractor	Heroin, Cannabis, Methamphetamine	31 years

27	45	Malay	Married	Primary education	Mechanic	Methamphetamine	24 years
----	----	-------	---------	----------------------	----------	-----------------	----------

Procedure

Prior to data collection, the study was approved by the Research Ethics Committee of Universiti Kebangsaan Malaysia (Reference: JEP-2024-617). All methods were performed in accordance with the relevant ethical guidelines and regulations for research involving human participants. Informed consent was obtained from all participants prior to participation. Permission to conduct the study within prison facilities was subsequently requested from and granted by the Malaysian Prison Department (Approval Reference: PRIDE.BDK.600-2/28/1JLD.3(8)). Following approval, the prison department identified appropriate prison settings for data collection (prison names are withheld for security reasons), and a liaison officer was appointed to facilitate the researchers' visits. The liaison officer assisted in identifying eligible participants based on the study inclusion criteria and coordinated the scheduling of interviews. Participation was entirely voluntary, and eligible individuals were invited to participate without any obligation or institutional consequence for refusal.

Semi-structured interviews were conducted within prison settings to provide a better understanding of participants' lived experiences with drug use and imprisonment. The interviews were conducted by the first, second, and third authors, and each interview lasted approximately one hour. Audio recordings were prohibited due to institutional regulations. The absence of audio recording may have limited verbatim transcription fidelity; however, this was mitigated through immediate post-interview reconstruction of responses, participant confirmation of recorded quotes, and the use of detailed field notes to preserve contextual meaning.

After every interview, the researchers spent around 30 minutes writing field notes and reflective narratives to ensure the depth and accuracy of the session. These insights were added to the overall depth of the qualitative data by capturing subjective perceptions and contextual observations. Verbal quotes were written throughout the interviews and then spoken to the participants for confirmation and to ensure accuracy. All interviews were conducted in Malay and subsequently translated into English for analysis. The research team cross-checked translations independently to ensure semantic accuracy.

The interview questions, which were open-ended, served as a flexible guide to facilitate participants' narrative accounts of their experiences. This structure encouraged retrospective reflection, allowing participants to draw on earlier drug-use experiences to explain their current circumstances. Example questions included: Can you describe how your drug use started?, How do you make sense of your drug use?, What were you thinking at the time of the offence?, and How do you make sense of your drug use now?

Data Analysis

The study employed interpretative phenomenological analysis (IPA) to analyze participants' lived experiences, specifically how they perceived drug use and imprisonment (Smith et al., 2009). The

double-hermeneutic method of IPA, in which the researcher attempts to comprehend how participants make sense of their own experiences, was ideal for this study's focus on meaning-making within the prison (Pietkiewicz & Smith, 2014).

Two researchers (KS and MRK) independently analyzed the data, looking over field notes, interview notes, and verbatim responses from each participant. Both researchers read and reread each transcript in accordance with IPA guidelines to understand the participants' lived experiences (Smith et al., 2009). Descriptive, linguistic, and conceptual comments were gathered, and initial codes were developed to capture the key aspects of participants' narratives.

IPA's idiographic commitment was upheld by examining each case's detailed experience before continuing to the next (Smith et al., 2009). The researchers then looked for trends in convergence and divergence by comparing and refining themes across cases. Finally, they convened to obtain a consensus on data interpretations, which strengthened the credibility and coherence of the analysis.

The final collection of themes and sub-themes was developed inductively, incorporating recurring patterns of meaning from the participants' narratives. These themes demonstrated the ways in which participants interpreted their experiences. Each theme was supported by illustrative excerpts from participant narratives and triangulated with field notes to ensure contextual accuracy.

Although IPA is typically conducted with smaller samples, the present study employed a larger sample to capture variation in cognitive patterns across a heterogeneous incarcerated population. Idiographic analysis was maintained by analyzing each case individually in full prior to any cross-case comparison. The development of themes occurred only after within-case coding had been completed, ensuring that convergence was grounded in detailed case-level interpretation. Though IPA informed the analytic process, the study did not seek a purely descriptive phenomenological account. Rather, participants' meaning-making was interpreted through a cognitive-affective lens. Accordingly, IPA was used as an interpretative framework for understanding participants' lived experience.

Validity and Reliability

This study adhered to Yardley's (2017) four principles for qualitative rigor: sensitivity to context, commitment and rigor, coherence and transparency, and impact and importance. Data were deliberately analyzed using IPA, with two researchers independently coding and discussing the results regularly to ensure consistency and reliability. Owing to restricted access to participants following data collection, a thick description was used to enhance credibility (Geertz, 1973). Contextual depth was gained by closely observing the behavior of participants during interviews and utilizing personal data received from prison authorities, which aided interpretation within social and institutional contexts.

Results

Three themes emerged from the data analysis, with varying numbers of sub-themes. The themes and sub-themes are shown in Table 2 and discussed in more detail below. The analysis represents an interpretative account of participants' meaning-making derived from their narratives. Cognitive terminology is used as an analytic lens informed by the wider forensic and cognitive literature and does not constitute clinical assessment or imply objective identification of distortion. Themes are presented in order of relative prevalence across the dataset.

Table 2 List of Themes and Sub-themes

Themes	Sub-themes
Cognitive rationalizations	a. Perceived inevitability of use in contexts of high drug availability b. Moral minimization of narcotics offences c. Perceived enhancement of functioning through drug use d. Hedonistic thinking e. Groupthink
Cognitive rigidity	a. Difficulty moving on from old beliefs i. Downplaying adverse consequences ii. Drugs as an easier alternative b. Crime as perceived necessity for sustaining addiction c. Criminal identity as a permanent status
Fatalistic thinking	a. Belief that recovery is impossible b. Lack of future goals c. Inevitability thinking d. Crime as fate or destiny e. Focus on bad luck f. Negative expectations of treatment and withdrawal

Theme 1: Cognitive Rationalizations

A prevalent theme that emerged was the existence of cognitive processes used to rationalize or downplay drug use and associated actions. These patterns mirrored individual beliefs, group influences, and the perceived advantages of drug use. The participants explained how such thinking influenced their behaviors and attitudes towards illicit substances and criminality. These cognitive inclinations took several forms, as seen by the sub-themes that followed.

Sub-theme 1.1: Perceived inevitability of use in contexts of high drug availability

Participants frequently cited easy access to drugs outside of prison settings as a trend that greatly affected their tendency to slip back into drug use. Several participants stated that their continued exposure to drug suppliers in their communities resulted in a mental loop that fuelled their usage. This availability was described as persistent and ingrained in social networks and neighborhoods, rendering deterrence nearly futile. Despite the motivation or comprehension of the repercussions,

the presence of drug-related stimuli and the absence of supportive surroundings sometimes negated their attempts to refrain from consuming drugs and drug-related activities. P17 disclosed that even though he felt unpleasant about doing drugs and acknowledged the time he spent behind bars, the outside world kept pulling him back into the cycle:

I regret taking drugs because staying in prison is a waste of time... but once I get out, I go looking for it because I know it is out there. (P17)

P20 expressed concern about the absence of supply side intervention and emphasized the importance of unregulated drug access in his neighborhood.

Why do you not catch the dealers out there? If they're out selling, there will always be buyers. It's like that in my place. We know exactly where to get it, no matter where they are at. They don't even need to try hard. (P20)

Another participant indicated that access to drugs was enabled through his network of acquaintances, eliminating any constraints on his finances.

Money is not a problem...my friends are dealers. I just have to ask. It's always there, even when I have got no money. Sometimes, they even offered it to me, without me having to ask. (P21)

P23 emphasized the psychological impact of returning to a setting saturated with drug-related cues.

Out there, my brain just tells me to look for it. In prison, it's clean, but once I step out, that is the first thing I think of. I know where to get it, who to call, and which places to go to. It has already been automated in my brain. (P23)

Participants characterized this constant and familiar exposure as a major impediment to their efforts to stay clean, citing environmental availability as a deeply rooted feature in their relapse patterns.

Sub-theme 1.2: Moral minimization of narcotic offences

Participants frequently exhibited a persistent cognitive pattern of minimizing the significance of drug-related offences. This minimizing nature enabled participants to rationalize their acts while also mitigating feelings of guilt or moral conflict. Many participants stated that they thought their crimes were non-violent, did not involve victims, or were harmless compared to other crimes. By cognitively detaching themselves from the harm caused by drug crimes, they viewed their actions as personal and insignificant, reducing their internal resistance to engaging in or continuing drug-related offences. P7 emphasized that he did not meddle in the affairs of others and saw his acts as isolated and harmless.

Drug-related crimes were the only cohort. This crime does not involve any other people. It is not like I am disturbing anyone. Whatever I am doing does not concern other people, and no one's lives are at stake. (P7)

Similar views were expressed by P16, who acknowledged that, although engaging in drug use was unlawful in reality, it did not equate to the barbarism of other crimes:

This offence is wrong, but it's not as brutal as murder. If you look at the law, yes, it's wrong to use drugs, but it's not that serious compared to other crimes. I'm not killing anyone. I didn't go to that extent. I'm just minding my business. (P16)

P11 highlighted that his offence was non-intrusive and that the punishment was out of scale because he was not harming or taking advantage of others.

It's not like we're burdening anyone. I'm not using anyone's money. I'm not disturbing anyone. It's only serious if it involves section 302 [murder]. I don't think it's fair to imprison us and give us long sentences for only drug-related crimes. (P11)

P24 minimized the significance of drug usage by framing it as a personal decision rather than a criminal act, and contrasted it with more overtly hostile offences:

Drug crime is not that serious because there's no blood involved. Violent crimes are more serious. For me, using drugs is an individual's choice and we don't bother the people out there. (P24)

P18 exhibited a skewed cost-benefit analysis, as he justified his involvement in drug trafficking by highlighting financial gain and drawing parallels to more serious crimes:

I became greedy for money after seeing so much of it. It makes me want to sell more and more and make more money. I think drug-related crimes are not as serious compared to other crimes. Being in here, I've seen people who've done so many different crimes that are far more severe, like murder, owning a firearm...their punishment is heavier, unlike mine. (P18)

P22 recognized that all crimes include danger, but nonetheless ranked his activities lower on the moral scale, justifying them with beliefs about the innocuous nature of cannabis:

All crime is dangerous. But other crimes start with using drugs. But still, I feel like my offence is not that heavy, like killing someone. The *ganja* I sell, it's not like it can kill people. This actually makes people healthier. It's just plants, if you think about it. (P22)

This inclination to minimize enabled individuals to retain a more positive self-image and lessen cognitive dissonance, decreasing the psychological obstacles to committing drug-related crimes.

Sub-theme 1.3: Perceived enhancement of functioning through drug use

Another significant cognitive process is the instrumental notion that drug use improves both psychological and physical performance. Several participants reported that drugs increased their energy, concentration, or ability to handle daily obstacles, especially those pertaining to survival

or employment. This belief system appeared to justify continued use by assigning functional value to drug intake, presenting it not only as a productivity tool, but also as a coping mechanism.

One participant noted how drug usage made labor-intensive jobs more bearable, giving him a sense of vigor and strength.

When I smoke drugs, I feel more energized to work. I work at a hotel and sometimes it involves heavy work, but even so, it won't seem too heavy when I take drugs. It becomes easier. I feel more pumped to do work. I don't feel lazy. If there's work to rubber tap in the village, it's very easy for me to do after I smoke, it's like I don't even remember the world anymore. I feel more brave. But when the effect runs out, I feel down. That's why I can't stop taking it. (P3)

Another explanation for the change in his perceived skills was, attributed to the drug's influence on his increased vitality and boundless endurance.

I feel odd...different from normal. I feel more energized. I can do anything with no limits. It's like if I've taken it, I can do anything. When I stop, no work gets done. It's almost like, without drugs, I can't function. (P12)

Participant 10 claimed that the drugs improved his cognitive capacity and allowed him to make bold judgments.

I know it's wrong, but only if I take drugs can I solve any problem better. It makes me think better and more efficiently. When I take drugs, this world seems small, and I can conquer it. That is why I think it makes me braver to commit more crimes to get money, so I can keep buying drugs. If I don't take drugs, there's no way I'd be that brave. That's why I like to take it. It's really not that big of a deal. (P10)

Others have considered drug usage as an acceptable way to become more productive or driven. One participant disclosed the following:

I think taking drugs is not wrong because it makes you more diligent to want to do work. It's not wrong at all. What drives me to keep doing so is the confidence it gives me. It makes me braver over time and want to steal. If I don't use drugs, it's hard to get through my day-to-day tasks. I've tried many things, like energy drinks, but nothing works like drugs. (P13)

Health and wellness narratives also arose, notably regarding how some substances, such as cannabis, were believed to be natural and beneficial. Participant 25 was convinced of their physical advantages.

The drugs I take are very light. I have never touched heroin or methamphetamine. I feel my body is really healthy. I went for a medical checkup and everything was clear. I tried cannabis because my friend said it's healthy, and yes, I feel healthy. So I'm very stern

about not trying other drugs because they're all chemical. Only cannabis is made of plants. It has so many benefits and Malaysia should legalize it. It gives me confidence and improves my sleep. (P25)

Confidence and linguistic ability have also been reported as consequences of drug usage, corroborating the view that drugs increase personal effectiveness.

Taking drugs is not wrong because it makes me better at talking confidently and it makes me brave, makes me diligent and energetic to do work. I don't understand why people would want to frame drugs as something that's not allowed or bad until we have to be imprisoned. If anything, I feel more healthy. (P23)

Sub-theme 1.4: Hedonistic thinking

This sub-theme depicts hedonistic thinking, in which the pursuit of pleasure, enjoyment, or emotional relief becomes the primary motivator for drug use. In addition to providing a means of escape from the emotional void or neglect in the family, drugs also satisfy the desire for recognition in social contexts where drug use is tolerated or even glamorized. Those who experienced the "high" frequently said that no other life event could be compared to the joy and happiness it brought.

According to Participant 5, he first became interested in drugs after witnessing others having an exceptionally good time while under influence, when he had been battling with a sense of despair and emotional flatness:

I saw my friends enjoying themselves while taking drugs, so I too wanted to feel that. My life was gloomy. Nothing made me happy. So, I saw my friends and they were having so much fun, and I didn't want to be left out of that joy. (P5)

Likewise, another participant highlighted that his initial experience with drugs was driven by curiosity and desire not to be missing out:

Nobody forced me to take drugs. I wanted to try it because I observed others. The way they were having fun caught my attention. I didn't want to be left out of the fun. So as time went by, I tended to always look for drugs just to feel the high. The joy it brings has no words to describe. Only drugs can make me that happy. That's why I like taking it. (P12)

Some have attributed their hedonistic motives to deeper emotional wounds. According to Participant 13, he used drugs as a coping mechanism for feelings of loneliness and envy brought on by familial favoritism.

Drugs are so much fun and enjoyable. I used to feel depressed because my family always favoured my other siblings...maybe because they were more obedient and went to school, unlike me. Whatever they asked, they'd get. Not going to lie, I was jealous. But I kept it to myself. I don't like talking about my family, so I turned to drugs to make me happy. I

genuinely don't think anything else could bring me happiness the way drugs do...not even intimate relationships. (P13)

Others characterized drug use as a way to seek out interesting experiences and fill emotional voids in otherwise boring lives. A participant reflected:

I like the feeling of being high and being in the club because my life feels empty. I seek such entertainment, and only drugs can bridge that gap. In my 46 years of life, nothing compares to the joy that drugs bring. Only drugs. (P18)

The sense of euphoria, which is frequently regarded as incomparable, increases psychological attachment to drug-induced experiences and contributes to continued use despite recognized risks.

Sub-theme 1.5: Groupthink

This sub-theme addresses how peer group dynamics and social conformity have a significant impact on drug-use habits. Participants reported circumstances in which substance use was normalized and generally accepted, making abstinence seem like a social outlier. While overt peer pressure is not always evident, the implied need to fit in and not feel excluded is a constant driving force. For many, doing drugs became more about fitting in with the group's conventions than fulfilling particular desires.

One participant described how odd it was to not participate because drug usage was exceptionally prevalent in his circle:

Almost everyone in my group takes drugs. If I don't, it makes me feel odd just sitting there, like I'm out of place. I'm just afraid that won't be accepted into the group. (P4)

Another participant stated that drug use frequently occurred in groups and that being a part of that communal experience was both enjoyable and difficult to resist.

I just followed along. Everyone takes it together. I know it's wrong, but it felt wrong to speak up, so I just went with the flow. (P5)

Some people developed internalized pressure to fit in, even in situations where their friends did not explicitly urge their engagement. One participant recalled,

At first, I saw everyone using it except me. No one pressured me, but I felt like I had to try it. I didn't want to be the only one left out. It would make me feel like I don't fit in the group. (P9)

Others felt excluded if they chose to opt out, as one explained:

If I have 10 friends, all 10 take drugs. I didn't want to be the odd one out. it didn't feel right. If I don't take it, it feels like a challenge...that only they get to enjoy it. (P23)

Taken together, these narratives suggest that participants did not simply describe drug use as a problematic behaviour, but frequently constructed it as understandable, beneficial, or socially acceptable within the contexts of their lived experiences. Drug use was variously framed as a source of pleasure, emotional relief, social belonging, enhanced functioning, or an understandable response to environments where drugs were perceived as readily available. Across narratives, these rationalizations appeared to reduce psychological resistance to continued drug use and, in some cases, associated criminal behavior.

Theme 2: Cognitive Rigidity

Cognitive rigidity was the second most prominent theme that surfaced, referring to the enduring cognitive processes that influenced participants' perspectives on drug use and criminal behavior. Many found it difficult to break free from their previous coping strategies and belief systems, even after serving time in prison. Drug-related behavior was seen as inevitable, and these patterns supported criminal self-identity.

Sub-theme 2.1: Difficulty moving on from old beliefs

The participants' rigid thinking frequently revealed resistance to letting go of their long-held beliefs about drug use. This was particularly notable in two ways: by minimizing the negative consequences and downplaying its damaging effects, and by seeing drugs as a simpler or faster approach to solve issues. Their continued use is supported by these ideas.

Sub-theme 2.1.1: Downplaying adverse consequences

Participants in this sub-theme tended to minimize or disregard the negative consequences of drugs. Even when they were exposed to knowledge about health hazards or experienced severe repercussions in others, they frequently dismissed these impacts as unimportant or overblown, especially if they had not experienced similar effects.

Participant 9 stated that he had never personally encountered any of the severe health issues associated with the drugs, although having heard about them. As a result, he concluded that the warnings were completely false.

People say you can get TB [tuberculosis] or backbone pain, but I've never gotten any of that. They're just wrong. Drugs don't hurt me. At most, they just slow me down a bit. That's all. No big deal. Nothing I can't handle. (P9)

Another participant reported experiencing certain adverse effects; however, he discounted them as unimportant in light of the alleged advantages of ongoing use:

Yeah, I get angry easily and my body's not as strong anymore since I started taking drugs, but that's not a big issue. I've been using it for years and nothing bad enough has happened to make me want to stop. (P11)

Some justified drug use by emphasizing that personal experiences contradicted public health narratives. Despite being aware of individuals who had become very ill or even lost their lives because of overdosing, one participant was unconcerned because he had not experienced the same outcome:

I have friends who got really sick...some even died from OD [overdose], but look at me, even my teeth are still strong. Nothing's happened to me, so I don't see it as wrong. I take it for fun. If someone wants to buy, I sell. No one's being forced. (P24)

Others used their views on the “natural” basis of some substances, such as cannabis, for justification. They utilized a similar logic to distinguish “good” drugs from hazardous ones, drawing comparisons with harmless substances:

Cannabis is like herbs...just like vegetarians' lifestyle. No disease, no illness. My friend uses ice [methamphetamine] that's dangerous, sure, but cannabis is fine. I've been taking it since my school days and never had any problems. (P25)

Sub-theme 2.1.2: Drugs as an easier alternative

For several participants, drugs were appealing not only for their physical effects, but also because they provided a quick way to relieve, revenue, and even emotional validation. Even though they were aware of the possible dangers or ethical ramifications, these groups of participants perceived drug use and drug trafficking as a more convenient or lucrative alternatives to more traditional career routes such as work or medical care.

Some resorted to drugs as less expensive alternatives to medical attention. One participant openly expressed the physical discomfort that the drugs caused him, but justified his ongoing usage owing to financial restrictions:

Yes, drugs hurt my body, my waist, my joints...but pharmacy medicine is too expensive. Sometimes they don't even give it to you unless you see the doctor first, and that just means more money. I can't afford that. But with drugs, I get fast relief. It's cheaper and life feels better. (P1)

Others described being drawn into the drug trade as a quick way to get money, particularly when compared to the long hours and poor pay for standard occupations. One participant remembered how his friend persuaded him with a simple pitch.

“Why work so hard? Just follow me, I'll give you a job.” And just like that I was convinced because I needed the money, and I was compelled. (P3)

Financial desperation drove him to take risks despite his knowledge of them, reasoning that a regular job would never permit him to make so much so quickly.

Another participant, who had previously been employed as a truck attendant, emphasized the financial benefit of earning money from drugs:

In the drug world, you get fast money. I don't have to work long hours to make hundreds. It pays more than my old job. My friends warned me about the risks, but I was stubborn. I'd already seen how much I could earn. (P24)

In addition to medical alleviation and financial survival, some participants resorted to drugs for emotional reasons, particularly to receive attention or affection. One participant, who had been neglected by his parents in favor of his more submissive siblings, acknowledged that doing drugs attracted unanticipated attention from his family:

It crossed my mind that maybe if I took drugs, my parents would finally notice me. And they did. I don't feel bad about it. I just wanted attention, and this was the easier way. I know once I start, I can't stop, but I don't care. I'm tired of feeling invisible. This is just an easy option. (P13)

Rigid thinking drove participants to justify hazardous decisions that appeared to provide instant comfort or benefits. Drugs are viewed as both a coping strategy and the easiest way to go forward, regardless of the reason, which encourages prolonged use despite recognized negative effects.

Sub-theme 2.2: Crime as perceived necessity for sustaining addiction

Several participants demonstrated a profound relationship between drug addiction and criminal behavior, which they justified as unavoidable or essential. They frequently believed that there were no other options, and that crime was the only practical way to support their addiction. This perceived lack of options is a manifestation of cognitive inflexibility, which is the inability to envision or follow legal avenues because of pressing issues such as poverty or withdrawal.

A participant explained how the need to satisfy desires takes precedence over waiting for a steady paycheck:

I sometimes suddenly feel like using it, so I'll go find money straight away. Waiting for a salary takes too long. It's better I look for things to sell...doesn't matter if it's scrap metal, stolen cables, or just anything I can find. I need to get fast money for drugs. (P5)

Participant 8 echoed this pattern, characterizing robbery as practically usual in drug-use circles:

Usually, people who take drugs, rob. It's just what we do. Even I do it. It's not that I don't know it's wrong, but I feel forced to do it for money. I used to be a good person, but once I got into drugs, I started robbing just to keep going. (P8)

This internal conflict of recognizing what is good and wrong while behaving against it highlights addiction-compulsive drawings and declining moral flexibility. Participant 13 described how the crime rose from desperation and became habitual:

First, I'd ask my family for money. If they say no, my mind goes straight to stealing. I've taken all kinds of things, you name it—boat engines, cars, bikes...I've got it all. The boat engine gave me the most money. I used it to buy drugs and even to gamble. After that, it became a cycle. Once I steal and get away with it, I want to do it again. (P13)

Considered across different parts of his account, Participant 13's narrative reflects a progression from perceived familial neglect and social comparison to the use of drugs as a means of emotional relief, and later to engagement in criminal behavior as a way of sustaining drug use and obtaining resources. These experiences are portrayed to be interconnected responses to longstanding feelings of exclusion and unmet emotional needs.

Others underlined that guilt or fear was an insufficient deterrent. The physiological and psychological effects of withdrawal compelled impulsive behavior. One participant mentioned,

I've stolen wires and cables. I do feel scared, but that's the only way I can think of to get money. When the cravings hit, I can't wait long. I have to act fast. (P14)

Participant 19 added to the sense of inevitability by expressing a well-established pattern of theft and a lack of repercussions that encouraged the behavior:

If I don't have money, I steal...simple. I've never been caught, so I just keep doing it. I've taken things like palm oil, copper, wire. When I think about it, this is the one and only way for me to get money. (P19)

Sub-theme 2.3: Criminal identity as a permanent status

Several participants believed that their identity as "criminals" was set in stone and could not be changed because of their repeated experiences in prison. They began to see change as unrealistic and even unworthy as a result of this internalized label, which set off a vicious cycle. A profound sense of resignation was evident in their rigid mindset—once a criminal, always a criminal.

Participant 3 demonstrated this by explaining how recurrent imprisonment made criminal behaviour more commonplace:

I've gone in and out of prison 42 times. It's like once I did it, I want to keep doing it. I've already 'washed my hands,' meaning I've crossed that line, like breaking a seal. Once you've done it, it becomes easier to keep doing it. I'm like a pro now when it comes to drug stuff. It's like it calls out to me. Now that I've already got the criminal label, might as well continue the legacy. (P3)

His metaphor depicts a personal turning point, as if his participation in the criminal world irreversibly altered his identity. A similar sense of emotional numbness was reported by participant 15.

I've been to prison 14 times. I know I'll get sentenced every time I'm caught, but I'm used to it...I'm immune to it now. In prison, everything's provided—food, water, a place to sleep, religious classes. Even if I change, I don't know if I won't be caught again. I already have the criminal status...they'll always keep an eye on me. This is the only lifestyle I know. (P15)

Participant 27 described his experience as surviving danger and being lured back into it:

You can just pay bail or get a short sentence. You get used to it. It's like when you've entered a lion's den and come out of it, you feel like doing it again. And if people have already stamped you with the criminal label, might as well enjoy it and use drugs instead of being caught for nothing. (P27)

For others, the passage of time entrenches this identity. Participant 23 described how drug use and imprisonment became his way of life.

I've been using it for more than 20 years. I'm used to it now. As soon as I step out of prison, my mind goes back to drugs. Once you've been to prison, that criminal identity sticks with you. There's no point in changing, especially when people outside keep looking down on you. There's no second chance for people like me. I'm already used to it, so I just continue. (P23)

Across participants' narratives, these rigid patterns of thinking appeared to constrain the range of alternatives they perceived as available to them. Long-standing beliefs about the benefits of drugs, the necessity of crime, and the permanence of a criminal identity often persisted despite repeated imprisonment and adverse consequences. Many participants portrayed their current lifestyles as entrenched and difficult to challenge, reinforcing continued engagement in drug use and offending behavior. Participants describing cognitive rigidity often portrayed themselves as trapped within familiar ways of thinking about drugs, crime, and identity. Their previous experiences appeared to narrow perceived alternatives, resulting in recurring reliance on established beliefs even when those beliefs contributed to continued offending and relapse.

Theme 3: Fatalistic Thinking

The third theme that emerged was fatalistic thinking. Participants commonly expressed pessimism about the prospect of change or rehabilitation, believing that their situation was immutable or predetermined. Narratives of despair, certainty of recurrence, and skepticism regarding the effectiveness of rehabilitation initiatives are examples of this. Such ways of thinking encourage drug-related behaviors and reduce the drive for self-improvement.

Sub-theme 3.1: Belief that recovery is impossible

Many participants revealed a strong feeling of pessimism about their capability to overcome their addiction, which stemmed from personal experiences of failure and suffering throughout recovery attempts. For these patients, relapse was inevitable, and the change seemed unattainable.

Participant 5 expressed a complete lack of confidence in rehabilitation as a feasible and sustainable option.

If I'm released, I just know I'll start using it again. There's no such thing as change once you've used drugs. Trust me, there's no going back. (P5)

For him, his first drug experience was a watershed moment, which made reform impossible.

Participant 6 expressed a similar resignation, relating his experience with medical intervention. His remark reveals not only physical resistance to therapy, but also a psychological rejection of the notion that recovery is even possible.

I tried taking methadone to stop, but it made me feel worse. That made me feel like...why even try to change? If recovery makes me feel awful like that, I don't want it. I really believe I can't be cured. It doesn't exist. (P6)

Similarly, Participant 8 revealed his recurring cycles of imprisonment and perpetual relapse:

I've gone in and out of prison 20 times. The thought of living a normal life has crossed my mind, but I'm not strong enough. Recovery here doesn't help, so I feel like it's really not possible. Out there, if there's no drug supply, I'll take methadone, but the craving for methadone is worse than drugs. So, I'd rather take drugs. It's easier that way. I only take methadone when there are no drugs. And I'm good like this. There's no need for recovery. (P8)

Sub-theme 3.2: Lack of future goals

A common thread among participants was a lack of purpose, direction, or accountability, which was commonly caused by broken relationships and family estrangement. This lack of long-term goals fuelled ongoing drug use because there appeared to be virtually no incentive to pursue reform or recovery.

Participant 8 explained how his sense of identity and optimism were destroyed by his divorce.

When my wife found out about my drug habits, she left just like that. I can't blame her. It's my fault. But since then, I feel like I have no purpose, no direction. There's no one I need to care for anymore...no responsibilities. So, I just continued using. I don't have a reason to change...unless someone supported me and brought me to the right path, maybe then there's a chance. Otherwise, I see myself continue using. (P8)

Viewed across his wider narrative, Participant 8 linked the breakdown of important personal relationships with a diminishing sense of purpose, ongoing drug use, and pessimism regarding recovery. His narrative suggests that experiences of loss and perceived lack of social support were closely intertwined with beliefs that continued drug use and relapse were difficult to avoid.

Similarly, Participant 20 described how he felt emotionally disoriented after his wife abruptly decided to leave after learning about his addiction. The absence of emotional support and attempts at reconciliation reinforced his perception that rehabilitation is futile.

She didn't even try to help. We're divorced now, and I feel down all the time. What's the point of changing after this? There's no use. (P20)

For others, losing family was an existential and emotional loss. Participant 10 said the following:

I don't have any family responsibilities anymore...no wife, no kids. What's the need to recover? For whom should I do it for? (P10)

Participant 11, who had previously maintained sobriety during his engagement, relapsed after the breakup.

From 2019 to 2024, I refrained from using. But when we broke up, I started again. Because I feel like there's no hope in life. I give up. (P11)

Participant 24 described a similar experience of being gradually abandoned by his family:

I used to be close to my family. But after I got caught, they all started disappearing one by one. I understand why and it's not their fault. But without anyone around to nitpick or give advice, life feels empty. So, I used drugs and sold them just to feel a little happy. Now that I'm in here again, I don't think they care anymore. But it's okay. It's not like I have a wife, kids, or my own family to care for. So, it's like...whatever. (P24)

Sub-theme 3.3: Inevitability thinking

A number of participants believed that drug use was an inevitable aspect of life, rather than merely a habit. They were unmotivated to pursue recovery, because they believed that relapse or ongoing use was inevitable. They strongly believed that change was not only improbable, but also pointless because of their immediate environment, age, and social context.

Participant 3 disclosed that he had never tried to abstain because he thought relapse was bound to occur after being released.

I know what's waiting for me outside. I've got a job at a budget hotel where a dealer stays. He's the one who first gave me supplies. Drugs are always available there. The thought of changing never really comes because I need to survive, and that means being in that environment again. This is how it is, there really is no way around it. (P3)

Participant 9 reported a similar sense of invincibility, stating that even if he attempted to avoid drugs, others around him made it difficult.

Even if I don't go looking for it, others come looking for me. So, it's like I'm being pulled back in. I cannot run away from it. It is what it is. (P9)

For Participant 11, drug usage was acknowledged as detrimental, but as he grew older, quitting seemed increasingly unattainable. For him, long-term usage is viewed as permanent, especially since attempts to quit become more difficult over time:

Drugs slow down your brain and make you sick. I know that very well. But the older I get, the harder it feels to let go. It's like its already part of me. (P11)

Participant 12 expressed past regrets and reflections before concluding with a sense of hopelessness regarding change.

I used to have fun without drugs. Life was better before. Even though I now realize it was a mistake, it feels like there's no way out. I feel left behind. I'm already old, and I don't think changing will bring me any real benefit. So, I might as well continue. (P12)

Sub-theme 3.4: Crime as fate or destiny

Some individuals believed that drug use and recurrent imprisonment were fated rather than deliberate. This belief in destiny reduces the perceived need or ability to change, fostering a sense of acceptance of their circumstances.

Participant 5 regarded his repeated interactions with the justice system as unavoidable and beyond his control.

I've been caught so many times that it doesn't feel like a choice anymore. It feels like destiny. Almost like a cycle I can't break. We can't run from what's written. God doesn't give us more than we can bear. (P5)

Similarly, Participant 10 accepted that the drugs were harmful, but was convinced that his repeated incarcerations were fated and predetermined:

Drugs destroy lives, I know that. But I also know that once I get out, I'll face a lot of pressure, and that's why I always end up back inside. It feels like it's meant to be. It's all been written. Maybe there's some hidden reason behind it. When things happen without me asking for them, I believe that's just God's way. We don't always get to choose. (P10)

Participant 25 echoed this, dismissing the necessity for drug policy or intervention entirely:

In Malaysia, banning drugs won't do anything. So many people already know how to make it. It's like everything is already arranged by God. Me and everyone else in here were meant to be here. There's nothing we can do. Why change something that's been fated? (P25)

Sub-theme 3.5: Focus on bad luck

Participants developed a strong sense of learned helplessness because they continuously connected their life events with misfortune or "bad luck." Their loss of drive for change and resignation was influenced by their belief that bad things would always happen, regardless of how hard they tried.

Participant 2 expressed a profound sense of hopelessness and futility:

Whatever I try in life never turns out the way I hope for it to be. There never really is a happy ending for me. So many things have happened and it's really stressful. I am tired and just give up because I know I'll end up in prison again anyway. (P2)

Participant 7 shared how a personal loss exacerbated his feelings of hopelessness:

When I got out of prison the first time, I got engaged. But during a family event, my fiancée heard rumours that I had a criminal record. She broke off the engagement after that. Since then, it feels like everything is falling apart. Even when I try to change for the better, it's like the world is against me and I am tired of trying. Nothing goes my way. (P7)

Participant 26 reported a life filled with continual scrutiny and mistrust, regardless of his actions.

The police always keep an eye on people like me. Sometimes, even if I didn't do anything, I still get caught. That's been my kind of luck since I was a kid. So, I've stopped trying. What's the point of changing? It doesn't matter. Nothing will change. Bad things keep happening to me and will continue to happen anyway. (P26)

Sub-theme 3.6: Negative expectations of treatment and withdrawal

Some participants expressed feeling severe physical and psychological distress during recovery, which was compounded by negative expectations and a lack of trust in therapy, indicating a nocebo effect. Their resistance to recovery was strengthened by these negative beliefs, which led them to believe that the therapy was detrimental.

Participant 1 noted how his time in rehabilitation strengthened his apprehension about starting over:

I tried traditional medicine, and it didn't work. Then someone pushed me into rehab, so I went just for the sake of it, but it made me feel ten times worse. I had headaches...I constantly threw up and felt like my head was going to explode. If that's what recovery looks like, I'd rather die from an overdose. (P1)

Participant 15, who unwillingly entered rehabilitation, also spoke about how his expectations influenced his reaction:

I had no confidence in rehab at all. I knew recovery would be painful, but I didn't expect this level of pain. The withdrawal symptoms made my whole body ache like I was dying. After that, I felt like there was no point in getting cured...like why do I have to go through all this pain? I'd rather die this way. (P15)

Participant 27 revealed that negative expectations clouded his judgment of the process. Despite the potential for improvement, fear of failure led to early dropout.

When I entered rehab, people told me it would be tough at first but the symptoms would slowly go away. But I wasn't hopeful. When the pain hit, especially the nerve pain, I thought the treatment was causing more harm than good. Maybe if I'd been stronger, I could have pushed through, but at that time I just gave up and turned back to drugs. (P27)

Participant 21 described how disengagement resulted from both the internal and external forces. There was a significant reluctance to any further attempts at recovery because of the psychological anticipation of failure and severe withdrawal symptoms.

My girlfriend made me go to rehab. I didn't go because I wanted to. I wasn't confident it would help at all. When the symptoms started...stomach aches, heart palpitations, and so on, I couldn't take it. I still don't know if it was the symptoms or my mindset, but I just wanted to leave. I wasn't convinced that changing would help me. (P21)

Collectively, these narratives reflect a pervasive sense of pessimism regarding the possibility of change. Fatalistic thinking was characterised by a diminished sense of personal agency and a belief that future outcomes were largely predetermined. Whether expressed through hopelessness about recovery, perceptions of destiny, or expectations of recurring failure, participants frequently described change as unlikely or beyond their control. Across narratives, such fatalistic beliefs appeared to weaken motivation for change and reinforce expectations of continued drug use and reoffending.

Discussion

This study investigated the potential role of cognitive processes in drug-related offences committed by incarcerated men in Malaysia. Although the present study focuses on cognitive mechanisms underlying persistent drug offending, these cognitive processes do not operate independently of broader structural and psychosocial conditions. A substantial body of research has demonstrated that psychosocial and environmental determinants, such as social disadvantage, stigma, peer networks, and structural constraints, play a central role in shaping drug-related behavior and recidivism (Syasyila et al., 2025). Therefore, the results of this study do not imply a unidirectional pathway in which cognition alone determines behavior, but rather to illuminate the specific thought patterns that participants themselves identified as influential in their ongoing involvement in drug activities.

The results identified three interrelated cognitive orientations that seemed to underpin and perpetuate involvement in drug-related crimes: cognitive rationalizations, cognitive rigidity, and fatalistic thinking that were embedded within participants' narrative of persistent drug involvement. Although these themes were analytically independent, they were rarely observed separately. Instead, they appeared to function as mutually reinforcing interpretive patterns shaping how participants understood drug use, criminal behavior, and possibilities for change. When these data are synthesized, numerous critical insights from past research and theoretical models have emerged.

One of the most striking results was the prominence of cognitive rationalizations that framed drug use as functional, necessary, or relatively harmless. Participants frequently emphasized the instrumental benefits of drug use, including coping, productivity, or social belonging, while minimizing or redefining its consequences. Within a cognitive-interpretive framework, such accounts reflect meaning-making processes consistent with neutralization strategies identified in prior research on offending populations (Tatch, 2021; Walters, 2023) as well as cognitive justifications findings that people who use drugs frequently use skewed cost-benefit analysis to justify taking risks (Rossmo & Summers, 2022). These are subjective reconstructions that reduce internal conflict and support continued behavior.

A notable tension in participants' accounts reflects how they conceptualized the idea of "harm." Many emphasized that using drugs "didn't harm anyone," which appears to stem from interpreting harm primarily in terms of physical or direct self-injury. However, these narratives coexisted with accounts of relational breakdown, emotional distress among family members, and loss of social support. This suggests that participants may differentiate between immediate physical harm and the more diffuse, relational harms that their substance use generated. Previous studies have demonstrated that substance use frequently affects not only the user but also those in their immediate vicinity, raising the possibility of emotional distress in family members and even inciting aggressive conduct that could lead to other criminal activities (Alhammad et al., 2022; Curtis et al., 2021). This discrepancy implies that participants can undervalue the wider societal repercussions of their behavior, which is a cognitive blind spot reflected in research on drug-related criminal activity (Jakupi, 2024; Ouellet & Dubois, 2022).

A further key finding was the frequent linkage between perceived drug availability and perceived inevitability of relapses. In this context, regular exposure to drugs normalizes their use, corresponds to previous research on environmental conditioning in high-drug regions (Wickremasinghe & Kaluthanthri, 2021). Participants often described environments in which drugs were highly accessible and socially embedded. However, some narratives extended beyond environmental description to infer diminished personal agency, such that abstinence was perceived as highly unlikely or practically impossible. This shift from environmental observation to inevitability inference is interpreted as a maladaptive appraisal of control. In this sense, the cognitive process lies not in the perception of availability itself, but in the inferred inability to resist within such contexts.

This pattern aligns with CAP theory (Coghlan et al., 1973; Gold & Coghlan, 1976), which conceptualizes behavior as emerging from interacting cognitive, affective, and pharmacogenic components. Repeated drug exposure may reinforce immediate affective relief, while cognitive rationalizations support continued engagement by reducing dissonance. Over time, these processes may become increasingly automatic, shaping stable interpretive frameworks that constrain perceived behavioral alternatives.

Cognitive rigidity and fatalistic thinking further reflected this entrenchment. Participants frequently described fixed identities as drug users or criminals, alongside beliefs that change was unlikely or impossible. These narratives are consistent with schema-level processes described in

cognitive theory, whereby repeated experiences consolidate enduring beliefs about the self and future possibilities (Young et al., 2003). Within CAP theory, such rigidity reflects the stabilization of cognitive-affective units under repeated reinforcement, particularly in contexts of chronic stress and limited perceived control (Shavidze et al., 2024).

Fatalistic thinking also appeared to serve as an adaptive psychological function. Attributing drug use and offending to fate, destiny, or external forces reduced perceived personal responsibility and emotional burden associated with repeated failure or relapse. This is consistent with research showing that a decreased desire for change is associated with external, stable, and uncontrollable attributions (Constantinos & George, 2023). Interestingly, these views were frequently maintained in social settings where negative expectations were reinforced by one another, and groupthink predominated. This emphasizes how fatalistic narratives deprive people of motivation and a sense of agency, while biased thinking may normalize behaviors. These findings are consistent with earlier research on the social contagion of hopelessness in correctional settings, where negative outlooks on the future, such as the likelihood of relapse or the ineffectiveness of rehabilitation, are not only internalized by individuals, but also reinforced by peers and shared narratives, ultimately influencing the emotional and cognitive climate of the prison environment (Maier & Ricciardelli, 2021).

This cognitive landscape is especially significant because these themes support one another. Rationalizations encouraged sustained drug use, reinforcing cognitive rigidity through repeated behavioral enactment, whereas rigidity led to fatalistic ideas about the permanence of addiction and offending. Fatalism, in turn, diminished perceived agency and increased dependence on rationalizations as psychological coping mechanisms. This cyclical relationship (see Figure 1) aligns with CAP theory's emphasis on feedback loops connecting cognition, emotion, and behavior (Gold & Coghlan, 1976). Based on the CAP theory, Feingold and Tzur Bitan (2022) suggested that drug addiction is a gradual cognitive deterioration stemming from unresolved psychological conflict. When life events drastically deviate from an individual's expectations, this conflict frequently commences, resulting in ongoing tension, emotional turmoil, and a sense of helplessness. Repeated failures can lead to errors in thinking, which are false beliefs leading to despair, poor self-esteem, and eventually, drug abuse as a psychological escape. Drug use may initially have a self-soothing effect, offering momentary comfort and a sense of control. However, the neurochemical effects of drugs gradually rewire the brain, affecting executive function and judgment, and feeding a vicious cycle of obsessive usage regardless of the repercussions (Duessio, 2021).

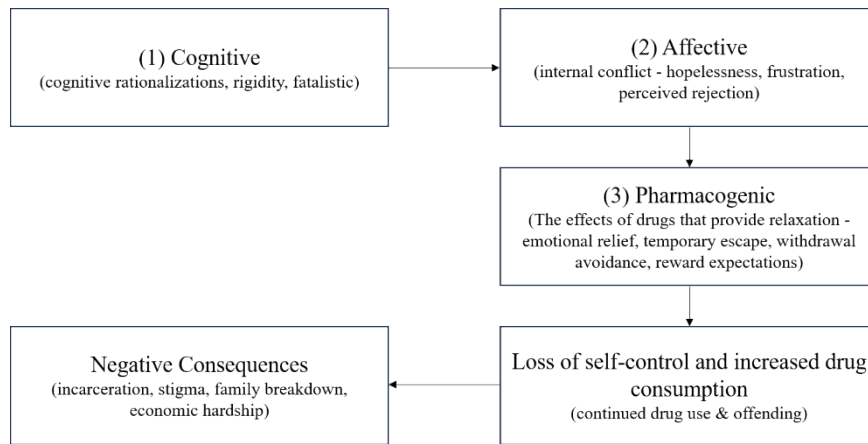


Figure 1. CAP-informed Cognitive Maintenance Model of Persistent Drug Offending

Hence, the results suggest that cognitive rationalizations first serve to lessen guilt and justify ongoing drug use. These explanations seem to solidify with frequent reinforcement, leading to inflexible views about identity, addiction, and criminality. Participants characterize change as improbable or impossible when perceived behavioral options become more limited, which leads to fatalistic thinking. A self-reinforcing cognitive loop may result from these fatalistic ideas, which may then lessen motivation for recovery and increase dependence on prior justifications, as evident by their longevity of addiction. This route provides one explanation for how the discovered motifs seemed to coexist and reinforce one another inside participant narratives.

This research deviates from recent data that predominantly attribute drug-related offences to executive dysfunction, impulsivity, or self-regulation deficiencies (Reddy, 2025); yet it broadens our present knowledge by emphasizing how reflective, narrative-based cognitive processes may also sustain behavior over time. Participants' accounts suggest that drug-related offending is not solely impulsive but is also maintained through coherent belief systems that justify, normalize, and stabilize continued use. These processes may function as post hoc meaning-making structures that preserve self-consistency and reduce moral dissonance (Herman & Pogarsky, 2024; Tsang, 2002).

This trend is consistent with the dual-process theory of cognition, notably the connection between impulsive (System 1) and reflective (System 2) processes (Kahneman & Frederick, 2002). While System 1 may initiate impulsive drug-seeking in response to stress or desire, System 2 seems to be involved in creating narratives that support behavior that is justified over the long term, constructing post hoc rationalizations such as perceiving drug use as harmless or justified behavior. Over time, these narratives may consolidate into schema-like structures that guide interpretation and constrain perceived alternatives (Young et al., 2003). This interaction of immediate impulses with long-term belief systems exemplifies how drug offending is sustained by a cognitively coherent but maladaptive worldview. Accordingly, combating drug criminality requires more than simply addressing flawed reasoning; it also entails questioning the identity-level beliefs and emotional commitments that underlie such arguments.

These cognitive processes are also deeply embedded within participants' social and structural environments. Instead, they appear to emerge through participants' lived environments, such as

drug-using peer groups, unstable employment, limited family support, and chronic economic strain, which shape how individuals interpret and justify their drug use (Syasyila et al., 2025). From a social learning theory perspective, participants' cognitions appeared to develop through repeated reinforcement within drug-using networks, where drug taking was viewed as socially rewarding, offering acceptance, shared identity, or financial gain through distribution (Bandura, 1969). Social control theory also helps explain how weakened social bonds, such as fractured family relationships, inconsistent employment, and limited community attachment, reduced external constraints against drug use, thereby increasing reliance on internalized cognitive justifications (Hirschi, 2015). Additionally, aspects of participants' narratives, such as using drugs to cope with economic hardship, interpersonal conflict, or emotional distress, align with general strain theory, wherein adverse life conditions create pressures that increase vulnerability to substance use (Agnew & Brezina, 2019). Taken together, these theoretical perspectives illustrate that participants' cognitions are not merely internal justifications but are deeply intertwined with their structural and relational circumstances. These perspectives collectively suggest that participants' cognitive processes both reflect and are shaped by lived social conditions.

The findings of this study underline the need for treatments that target not only behavior but also the interpretive frameworks that sustain it. To this end, cognitive behavioral therapy (CBT) alone may be insufficient if these beliefs are schema-based. Schema therapy can address entrenched core beliefs; motivational interviewing can enhance change readiness; and metacognitive therapy can help restructure rigid meta-beliefs about thinking, control, and hopelessness. These approaches target the interplay among cognition, emotion, and identity, which is essential for relapse prevention (Moghaddam et al., 2025). These therapies have the potential to map the cognitive profiles of this population and design tailored interventions for breaking the maladaptive affective-cognitive cycles. Furthermore, addressing a pessimistic outlook directly through goal setting, future visualization, or identity reconstruction may assist the incarcerated population in regaining agency and decrease the appeal of deterministic narratives (McMurran & Ward, 2004).

The identified patterns may also have implications for clinical and forensic assessment. During interviews, expressions of minimization, deterministic beliefs about relapses, or rigid offender identities should not necessarily be interpreted as factual accounts of risk or motivation in isolation. Instead, these narratives may function as cognitive-affective strategies that shape self-presentation and meaning-making. Assessors may therefore benefit from triangulating such accounts against behavioral history, collateral information, and contextual factors to distinguish objective barriers from cognitively mediated perceptions of helplessness or inevitability. The recurring nature of these cognitive themes also suggests potential value in structured cognitive screening upon prison intake. Instruments assessing cognitive distortions, criminal thinking, attributional style, or maladaptive schemas may help identify individuals whose offending is primarily characterized by rationalization processes versus those exhibiting more entrenched cognitive-affective patterns. Such profiling could assist in matching individuals to interventions of differing intensity and focus.

Limitations

This study has several limitations. The inability to audio-record interviews within the correctional institution is one of the limitations of this study, which could have limited the accuracy and depth of the data collection. Furthermore, given the sensitive and stigmatized nature of the subject matter, participants may have used selective disclosure, impacting the depth of their responses. This study is also limited by its focus on men, and therefore the findings are not generalizable to women. Prior research suggests that gendered social roles, trauma histories, and pathways into drug use may differ substantially for women, which could shape distinct cognitive patterns (Minero et al., 2022). Future studies should therefore examine whether similar or divergent cognitive mechanisms operate among women involved in drug offending. Comparative research across different cultural and legal settings would help clarify which cognitive tendencies are context-specific and which may be more universal among individuals with persistent drug involvement. Nonetheless, despite these limitations, this study provides a comprehensive understanding of the cognitive processes that underlie drug-related crimes.

Conclusion

This study illustrates how ingrained distortions, such as biased, rigid, and fatalistic thinking, may entrench individuals in a cycle of offending. Such skewed thinking may not only precede but also actively support criminal behavior, promoting a worldview in which reform is impossible and offending becomes normalized. These findings shed light on these cognitive vulnerabilities and emphasize the importance of targeted cognitive-based interventions in correctional settings. Carceral rehabilitation treatments that include cognitive restructuring may disrupt these deeply rooted thought patterns and encourage more adaptable coping and decision-making strategies. Effective intervention necessitates deeper cognitive restructuring that challenges faulty ideas and enables ongoing destruction. Therefore, cognitive restructuring among incarcerated individuals must move beyond simple thought corrections and focus on reorganizing schema-level beliefs, metacognitive awareness, and narrative identity. Recidivism is likely to persist in this absence.

Competing Interests

The authors declare no conflict of interest.

Fundings

The authors received no specific funding for this work.

References

- Agnew, R., Brezina, T. (2019). General strain theory. In M. Krohn, N. Hendrix, G. Penly Hall, A. Lizotte (Eds.), *Handbook on crime and deviance* (pp. 145–160). Springer. https://doi.org/10.1007/978-3-030-20779-3_8
- Alhammad, M., Aljedani, R., Alsaleh, M., Atyia, N., Alsmakh, M., Alfaraj, A., Alkhunaizi, A., Alwabari, J., & Alzaidi, M. (2022). Family, individual, and other risk factors contributing

- to risk of substance abuse in young adults: A narrative review. *Cureus*, 14(12), Article e32316. <https://doi.org/10.7759/cureus.32316>
- Anderson, A. C., & Verdejo-Garcia, A. (2023). Cognitive remediation for impulsivity in addictive disorders: Review of current evidence and future directions. *Current Addiction Reports*, 10(3), 472–484. <https://doi.org/10.1007/s40429-023-00504-4>
- Bandura, A. (1969). Social-learning theory of identificatory processes. *Handbook Of Socialization Theory and Research*, 213–262.
- Chan, W.-C. (2025). Death penalty for drug offenders in Southeast Asia: Weakening of resistance to change? *International Journal for Crime, Justice and Social Democracy*. 1–12. <https://doi.org/10.5204/ijcjsd.3681>
- Cheah, P. K., Unnithan, N. P., & Raran, A. M. S. (2019). Rehabilitation programs for incarcerated drug offenders in Malaysia: Experience-based perspectives on reintegration and recidivism. *The Prison Journal*, 100(2), 201–223. <https://doi.org/10.1177/0032885519894656>
- Coghlan, A. J., Dohrenwend, E. F., Gold, S. R., & Zimmerman, R. S. (1973). A psychobehavioral residential drug abuse program: A new adventure in adolescent psychiatry. *International Journal of the Addictions*, 8(5), 767–777. <https://doi.org/10.3109/10826087309071067>
- Constantinos, T. & George, A. (2023). Causal attributions for offending and victim-related perceptions of imprisoned child sex offenders. A qualitative study in Greece. *Kriminologija & Socijalna Integracija*, 31(2), 108–128. <https://doi.org/10.31299/ksi.31.2.2>
- Curtis, A., Gooden, J. R., Cox, C. A., Harries, T., Peterson, V., Enticott, P. G., Sanfilippo, P. G., Miller, P. G., Lubman, D. I., & Manning, V. (2021). Neurocognitive functioning among people accessing an addiction neuropsychology clinic with and without a history of offending behaviour. *Psychiatry, Psychology and Law*, 28(6), 854–866. <https://doi.org/10.1080/13218719.2021.1873204>
- DOSM. (2024). *Crime Statistics Malaysia 2023*. Retrieved from <https://www.dosm.gov.my/portal-main/release-content/crime-statistics-malaysia-2024>
- Duresso, S. (2021). Psychopharmacological perspectives and diagnosis of substance use disorder. *Addictions - Diagnosis and Treatment*. <https://doi.org/10.5772/intechopen.99531>
- Feingold, D., & Tzur Bitan, D. (2022). Addiction psychotherapy: Going beyond self-medication. *Frontiers in Psychiatry*, 13, Article e820660. <https://doi.org/10.3389/fpsyt.2022.820660>
- Geertz, C. (1973). Religion as a cultural system: The Interpretation of Cultures. NY: Basic Books
- Gold, S. R., & Coghlan, A. J. (1976). Locus of control and self-esteem among adolescent drug abusers: Effects of residential treatment. *Drug Forum*, 5(2), 185–191.

- Hassan, C. A., Billah, M., Arshad, A., & Hussain, F. (2024). Decriminalization of minor drug offenders in Malaysia enhances the rehabilitative aspect of drug addicts, reduces the problem of prison overpopulation and the treatment gap between the arrested and volunteered drug addicts. *International Journal of Academic Research in Business and Social Sciences*, 14(9), 2381–2389. <http://dx.doi.org/10.6007/IJARBSS/v14-i9/22862>
- Herman, S., & Pogarsky, G. (2024). Moral salience, situational moral evaluations, and criminal choice. *Crime & Delinquency*, 71(9), 3157–3191. <https://doi.org/10.1177/00111287241259474>
- Hirschi, T. (2015). Social control theory: A control theory of delinquency. In *Criminology theory* (pp. 289-305). Routledge.
- Ismail, R., Abdul Manaf, M. R., Hassan, M. R., Mohammed Nawawi, A., Ibrahim, N., Lyndon, N., Amit, N., Zakaria, E., Abd Razak, M. A., Zaidy Nor, N. I., Shukor, M. S., & Kamarubahrin, A. F. (2022). Prevalence of drug and substance use among Malaysian youth: A nationwide survey. *International Journal of Environmental Research and Public Health*, 19(8), Article e4684. <https://doi.org/10.3390/ijerph19084684>
- Ismail, R., Nurul Shafini Shafurdin, Md Shafii Shukor, Azmawati Mohammed Nawawi, Manaf, A., Ibrahim, N., Roziah Mohd Rasdi, Novel Anak Lyndon, Amit, N., Siti Aishah Hassan, Hanafi, N., Ibrahim, F., Fathimath Nahla, & Wahab, S. (2024). Predictors of drug and substance abuse among school-going adolescents living in drug hotspot in Malaysia. *PloS One*, 19(6), Article e0305460. <https://doi.org/10.1371/journal.pone.0305460>
- Jakupi, S. (2024). The influence of drug addiction on criminal behavior. *JUSTICIA—International Journal of Legal Sciences*, 12(21-22), 249–260. <https://doi.org/10.62792/ut.jus.v12.i21-22.p2777>
- Kahneman, D. & Frederick, S. (2002). Representativeness revisited: Attribute substitution in intuitive judgment. In T. Gilovich, D. Griffin, & D. Kahneman (Eds.). *Heuristics and biases: The psychology of intuitive judgment*. pp. 49-81. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511808098.004>
- Maier, K., & Ricciardelli, R. (2021). “Prison didn’t change me, I have changed”: Narratives of change, self, and prison time. *Criminology & Criminal Justice*, 22(5), 774–789. <https://doi.org/10.1177/17488958211031336>
- McMurran, M., & Ward, T. (2004). Motivating offenders to change in therapy: An organizing framework. *Legal and Criminological Psychology*, 9(2), 295–311. <https://doi.org/10.1348/1355325041719365>
- Minero, V. A., Best, D., Brown, L., Patton, D., & Vanderplasschen, W. (2022). Differences in addiction and recovery gains according to gender – gender barriers and specific differences in overall strengths growth. *Substance Abuse Treatment, Prevention, and Policy*, 17(1), Article e21. <https://doi.org/10.1186/s13011-022-00444-8>

- Moghaddam, P. A., Atashpour, S. H., & Golparvar, M. (2025). Comparing the effectiveness of combined schema therapy and mindfulness with schema therapy and CBT on psychological flexibility. *Practice in Clinical Psychology*, 13(1), 33–46. <https://doi.org/10.32598/jpcp.13.1.981.1>
- Mohammad Rahim, K., Mahat, N. A., Geshina Ayu, M. S., Azizah, O., Anthony, I. L., Sowmya, K., Suzaily, W., Saravanan, M., Balan, R., Fauziah, I. (2021). The psychology of murder concealment acts. *International Journal of Environmental Research and Public Health*, 18(6), 3113–3160. <https://doi.org/10.3390/ijerph18063113>
- Muhammad Syafiq, M. S., & Lukman Z. M. (2025). Overcrowding in Malaysian prisons: Are private prisons the answer? *International Journal of Research in Social Science and Humanities*, 6(2), 43–49. <https://doi.org/10.47505/IJRSS.2025.2.7>
- Ouellet, F., & Dubois, M.-È. (2022). Got assistance? profit-driven criminal careers and assisted desistance. *Crime & Delinquency*, 70(3), 894–920. <https://doi.org/10.1177/00111287221104733>
- Pietkiewicz, I., & Smith, J. A. (2014). A practical guide to using interpretative phenomenological analysis in qualitative research psychology. *Psychological Journal*, 20(1), 7–14. <https://doi.org/10.14691/CPPJ.20.1.7>
- Reddy, K. J. (2025). Neuropsychological perspectives on recidivism. *Foundations of Criminal Forensic Neuropsychology: Bridging Mind, Law, and Criminal Justice*. 477–522. https://doi.org/10.1007/978-3-031-83771-5_16
- Rossmo, D. K., & Summers, L. (2022). Uncertainty and heuristics in offender decision-making: Deviations from rational choice. *Journal of Criminal Justice*, 81, Article e101923. <https://doi.org/10.1016/j.jcrimjus.2022.101923>
- See Mey, L., Rozainee, K., Tengku Elmi Azlina, T. M., Daniella, M. M., Mohammad Rahim, K. (2020). Survey dataset on the prevalence of childhood maltreatment history among drug addicts in Malaysia. *Data in Brief*, 31, Article e105864. <https://doi.org/10.1016/j.dib.2020.105864>
- Shavidze, S., Natti Ronel, & Gueta, K. (2024). Reframing powerlessness in the addiction recovery process. *Journal of Drug Issues*. 1–22. <https://doi.org/10.1177/00220426241300915>
- Smith, J. A., Flower, P. & Larkin, M. (2009). *Interpretative Phenomenological Analysis: Theory, Method and Research*. London: Sage Publications.
- Syasyila, K., Gin, L. L., Hilwa, A. M. N., & Mohammad Rahim, K. (2024). The role of cognitive distortion in criminal behavior: a systematic literature review. *BMC Psychology*, 12(1), Article e741. <https://doi.org/10.1186/s40359-024-02228-0>
- Syasyila, K., Mohammad Rahim, K., Hilwa, A. M. N. & Paramjit Singh, J. S. (2025). Psychosocial determinants of recidivism risk among incarcerated individuals with a history of substance

- use: A systematic review. *PloS One*, 20(7), Article e0327810. <https://doi.org/10.1186/s40359-024-02228-0>
- Tatch, A. (2021). I did it, but...: Exploring DUI offender deviance rationalization in the digital age. *Deviant Behavior*, 43(10), 1193–1208. <https://doi.org/10.1080/01639625.2021.1968773>
- Tsang, J.-A. (2002). Moral rationalization and the integration of situational factors and psychological processes in immoral behavior. *Review of General Psychology*, 6(1), 25–50. <https://doi.org/10.1037/1089-2680.6.1.25>
- UNODC, (2024). *Drug Statistics and Trends*. Retrieved from https://www.unodc.org/documents/wdr/WDR_2010/2.0_Drug_statistics_and_Trends.pdf
- Walters, G. D. (2023). Does the worst of both worlds effect run through cognition? Testing perceived peer delinquency/drug use and moral neutralization as mediating mechanisms. *Youth Violence and Juvenile Justice*, 22(2), 125–142. <https://doi.org/10.1177/15412040231213570>
- Wickremasinghe, H. T., & Kaluthanthri, P. C. (2021). Spatial distribution of crimes in urban areas: An insight from Sri Lanka. *Malaysian Journal of Society and Space*, 17(4), 207–220. <https://doi.org/10.17576/geo-2021-1704-15>
- Yardley, L. (2017). Demonstrating the validity of qualitative research. *The Journal of Positive Psychology*, 12(3), 295–296. <https://doi.org/10.1080/17439760.2016.1262624>
- Young, J. E., Klosko, J. S., & Weishaar, M. E. (2003). Schema therapy: A practitioner's guide. *American Journal of Psychiatry*, 160(11), 2074–2075. <http://dx.doi.org/10.1176/appi.ajp.160.11.2074-a>