

Drug Addiction, Conduct Disorder, and Psychopathy in Inmates

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Abstract

The study investigated substance addiction, conduct disorder, and psychopathy in 200 male inmates from the District Jail, Lahore. One hundred male addicts and 100 non-addicts were recruited purposively, who ranged in age from 20 to 65 ($M_{\text{addicts}} = 34.85$, $SD = 11.97$, $M_{\text{non-addicts}} = 37.05$, $SD = 8.79$) years. Semi-structured interviews were carried out by one of the authors to assess psychopathy (Psychopathy Checklist-Revised, PCL-R) and conduct disorder (Conduct Disorder Checklist, CDC). A 2(Addiction) X 2(Conduct Disorder) between-subject design was used with psychopathy as the dependent variable. A 2(Addiction) X 2(Conduct Disorder) between-subject ANOVA revealed a significant main effect of addiction group; incarcerated addicts were significantly more psychopathic than non-addicts. The study did not reveal any main effect of conduct disorder or the interaction. These results are discussed in the light of helping jail administrators and scholars who can design instruments and enforce effective interventions for mentally ill inmates.

Keywords: substance addiction, addicts, non-addicts, conduct disorder, psychopathy, jail inmates

Drug addiction or substance use disorder is defined as a pattern of substance use leading to clinically significant impairment or distress (DSM-5-TR, 2022). This includes impaired control, using more of the substance than intended, unsuccessfully trying to cut down or stop, experiencing intense cravings, and spending excessive time obtaining, using, or recovering from the substance; social impairment, neglecting responsibilities at work, school, or home due to substance use, continuing use despite relationship problems, and giving up important social or recreational activities; risky use i.e., using substances in dangerous situations, such as while driving, and continuing to use despite physical or psychological problems caused or worsened by the substance; and pharmacological dependence, which includes developing tolerance or needing more of the substance to achieve the same effect, and experiencing withdrawal symptoms when not using (DSM-5-TR, 2022).

The following prevalence information about drug use is summarized from *Drug use in Pakistan* (UNODC, 2013). Cannabis, locally known as *charas* or *bhang*, is the most illicit drug in use. The annual prevalence of cannabis use in Pakistan was estimated at 3.6% of the population aged 15-64 years, translating to approximately 4 million users. Psychotropic substances include sedatives, tranquilizers (Benzodiazepines and barbiturates), stimulants, and hallucinogens. The UNODC (2013) report estimated the annual prevalence of tranquilizer use was at 1.4% (1.5 million users), with high misuse of prescription drugs, like tramadol, morphine, and codeine-based cough syrups (Adil et al. 2024).

Methamphetamine or *Ice* is an emerging and rapidly increasing concern, especially among school and college-going youth. Some speculate that its usage may eventually surpass heroin in some cities. Heroin's estimated user count is between 800,000 to 1 million users, with about 860,000 regular users. In a previous report (UNODC & ANF, 2006), 77% (628,000) of opiate users also used heroin. Alcohol consumption in Pakistan, while technically illegal for Muslim citizens, still exists. Accurate statistics are scarce and often speculative due to their illegal status and the associated social stigma.

Misuse of drugs and crimes are extensively investigated and documented, and a variety of theories that explain their association. One group of theories proposes a causal relationship between drugs and crimes; the *enslavement theory* proposes that chronic drug users cannot support their drug use by legal means, such as earning money, which is why they commit crimes to support their drug habit (Goldstein, 1985; Goldstein et al., 1992). In a meta-analysis, Bennett et al. (2008) reviewed 30 studies and found crimes were three to four times greater for drug users than non-drug users; the likelihood of crime was highest among crack users and lowest among recreational drug users; and this relationship held across a range of crime types, including robbery, burglary, prostitution, and shoplifting. However, this analysis merely points out a correlation between drugs and crime, not a cause-and-effect relationship. The second group of theories suggests an indirect relationship between drugs and crime (Bennett et al., 2008). For example, *common cause theories* explain that drugs and criminal behaviors are not cause-and-effect based. Instead, they see the behavior as an explanation of other common factors linked with drug and crime. For example, psychological factors (impulsivity, poor self-control, etc.) or other situational factors explain criminality (Gottfredson, et al., 1990). Many studies suggest a correlation between crime and drug use, i.e., criminals use drugs and drug users commit crimes. Report compiled by UNODC & ANF (2006) indicates

that 45 percent of inmates in Pakistan used drugs, 26 percent sold drugs, and 18 percent were intoxicated at the time of arrest. This data suggests an inherent relation between criminal behavior and drugs.

If crime is not causally related to drugs, what is it? Research suggests that mental illnesses like psychopathy and conduct disorder may be a few reasons for crime. For example, Gonçalves (1999) reported that psychopaths committed more crimes than non-psychopaths with crimes that were against people (murder, sexual crimes, etc.) and property (theft and robbery, etc.); however, crimes against society (drug trafficking) were committed by non-psychopaths. Since psychopaths are likely to use drugs more than non-psychopaths (Alterman et al., 1993; Hart & Hare, 1989), drug use may be masked by psychopathy. Indeed, psychopaths are more commonly found to abuse alcohol and drugs. In a study of 360 male inmates, psychopaths more than non-psychopaths abused alcohol and other drugs and expressed *general social deviance* on the Psychopathy Checklist Revised (PCL-R) but not its interpersonal and affective facets, suggesting a complex relationship between drug use, psychopathy, and crime (Smith & Newman, 2002). Similarly, Hare et al. (2000) reported a greater number (82%) of psychopaths repeated crimes than non-psychopaths (40%); and those who scored high on interpersonal and affective facets (Factor 1) repeated more (86%) crimes than those who scored low (59%) on this factor. Harpur et al. (1989) suggest that interpersonal and affective facets are related to narcissism, a component of psychopathy, and general social deviance to antisocial personality, alcohol, and drug use disorder.

Fishbein and Reuland (2002) reported that psychopaths are multi-drug (alcohol, marijuana, and cocaine) users and score high on hostility (Factor 2) of PCL-R and violent crimes. In a literature review, Ellis (2002) found psychopathy (and its eight facets) and criminality were related; and so were psychopathy and recidivism; psychopaths relapsed more than non-psychopaths (Laurell & Daderman, 2005). Other factors, like the onset age (before 18 years) of drug use, can be a stronger factor for violent crimes than psychopathy. When substance abuse at a young age, criminality, and psychopathy are analyzed for aggression (Life History of Aggression or LHA scores), recidivism for violent crimes was observed for early users of drugs and the duration of drug abuse, but not for the number of repeated violent crimes (Gustavson et al., 2007). Rasmussen et al. (1999) similarly reported that psychopaths begin their criminal careers earlier (13.8 years) than non-psychopaths (27.9 years). Other studies also report that psychopaths start their criminal careers and commit more crimes (higher conviction rate by 250%) earlier than non-psychopaths (Blackburn & Coid, 1998). And yet other studies report that less intelligent psychopaths are likely to commit more violent crime (90%) than other (58%) criminals (Heilbrun, 2007). Significant correlation was reported between crimes and interpersonal and affective facets (Factor 1) and the hostility facet (Factor 2) of PCL-R, where both factors were highly related to criminal versatility. However, psychopaths committed fewer murders/attempted murders, or sexual crimes than non-psychopaths. Psychopaths were high on violent crimes, committed more theft, more drug-related crimes, and traffic-related crimes. Psychopathy does not have a specific diagnosis in DSM-5 but is a validated construct highly associated with personality disorders such as antisocial

personality (Rasmussen et al., 1999). In a small sample of prisoners, these authors reported, 16 met the criteria of Cluster A personality disorder, 28 met the criteria of Cluster B personality disorder, 27 were antisocial, and 16 had borderline personality disorder.

There is an established link between conduct disorder and drug use in later stages of life. Such investigations were carried out in a longitudinal study to reveal a link between early conduct disorder and intentional disorder on later adulthood drug use and dependence (Fergusson et al., 2007). Results indicated that the magnitude of conduct-related problems was strongly associated with the frequency of use for several illicit drugs except alcohol. If the conduct-related problems had a lower magnitude before 18 years of age, cannabis use was low (39.4%); however, if the level of conduct-related problems was severe, cannabis use increased to 57.1 percent. A similar pattern was observed for other illicit drugs; low levels of conduct-related problems during teens (< 18 years) led to lower drug use (4%) than if the problems were severe (21.4%). With low conduct-related problems, drug abuse or dependence before 18 years was negligible, but at or after 25 years, drug dependence rose to 2.1% for various illicit drugs, which doubled for severe conduct-related problems (Fergusson et al., 2007).

Past studies (Alterman et al., 1993; Gonçalves, 1999; Hart & Hare, 1989) have reported associations among psychopathy, drug abuse, and crime; and that psychopaths, more than non-psychopaths, were involved with drug abuse and crimes. Similarly, recidivism was found in 82 percent of psychopaths (interpersonal and affective facets) with repeated crimes than in non-psychopaths (40%). Large numbers of drug addicts commit crimes to support their addiction. The criminal profile of drug addicts indicated that more than 38% of drug users were arrested at least once in their lifetime on drug-related charges. National Drug Assessment study (UNODC & ANF, 2006) suggested that, on average, first-time arrests were made for drug users who started using drugs seven years ago or three years ago if the drug was heroin. It further indicated that, on average, drug users had arrested about four times for drug-related crimes and incarcerated for more than 2 years. More than 50% of drug users were arrested for criminal offences such as theft and petty crimes (UNODC & ANF, 2006).

Objectives and Hypotheses

The study compares the psychopathic personality and its four facets (Interpersonal, Affective, Lifestyle, and Antisocial) in addict and non-addict inmates. We wanted to know if psychopathy (and the four facets) was greater in addict inmates than in those who were non-addicts. We also wanted to investigate whether psychopathy was greater in inmates with conduct disorders than in normal inmates. And finally, addicts with conduct disorder would express greater psychopathy than non-addicts; however, addicts who were normal would express similar psychopathy to non-addicts. To carry out these objectives we formulated three hypotheses that predicted: a main effect of addiction i.e., addicts would express greater psychopathy than non-addicts; a main effect of conduct disorder i.e., inmates with conduct disorder would express greater psychopathy than normals, and a significant interaction i.e., addicts with conduct disorder would express greater psychopathy than non-addicts, but normal inmates would not differ on their psychopathy measures.

Methodology

Sample

A purposive sample of 100 addicts (Addiction Barrack) and 100 non-addicts (other barracks) incarcerated male inmates ($N = 200$) was drawn from the District Jail, Lahore. The age range for jail inmates was from 20 to 65 years, with a

mean yearly age of addicts ($M = 34.85$, $SD = 11.97$) that was not significantly ($p > .05$) different from non-addicts ($M = 37.05$, $SD = 8.79$). We included incarcerated addicts in the study based on DSM-5-TR criteria, and if they were between 20 and 65 years; non-addict inmates were also between 20 to 65 years, see Table 1 below for details.

Table 1
Characteristics of Addict ($n = 100$), Non-Addict ($n = 100$) Inmates

Variable	N (%)		χ^2	V/d
	Addict	Non-Addict		
Family system				
Joint	61(61.00)	68(68.00)	.38	-
Nuclear	1(1.00)	9(9.00)	6.40**	.80
Independent	38(38.00)	23(23.00)	3.68	-
Education				
Not Schooled	44(44.00)	29(29.00)	3.08	-
Middle or High School	51(51.00)	53(53.00)	1.77	-
College	5(5.00)	9(9.00)	??	-
University	-	9(9.00)	-	-
SES				
Lower (< 10K PKR)	80(80.00)	30(30.00)	22.72*	.45
Middle (11 - 25K PKR)	20(20.00)	54(54.00)	15.62*	.45
Upper (> 26K PKR)	-	16(16.00)	-	-
Family size				
Small (2 - 4)	17(17.00)	30(30.00)	3.59	-
Medium (5 - 7)	42(42.00)	34(34.00)	.27	-
Large (7+)	41(41.00)	36(36.00)	1.03	-
Marital status				
Married	34(34.00)	62(62.00)	8.16**	.29
Unmarried	65(65.00)	38(38.00)	7.07**	.26
Divorced	1(1.00)	-	-	-
Age, M (SD)¹	34.85(11.97)	37.05(8.79)	-1.48*	.20 ²

Note. SES = Socioeconomic Status, M = Mean, SD = Standard Deviation, χ^2 = Chi Square, V = Cramer's V. Chi-square analysis was used on all demographic variables except age.

¹A t-test was used on age to calculate significant differences between addicts and non-addicts.

²The effect size for age was measured by Cohen's d.

* $p < .01$, ** $p < .001$

Instruments

Psychopathy Checklist-Revised (PCL-R).

This checklist is administered in a specific and structured way to ensure the most accurate assessment of psychopathic traits, which is not completed by the respondent as a self-report. The trained administrator (AA) gathered relevant information about each participant, which included reviewing various records and documents (criminal records, employment history, mental health evaluations, etc.) related to their life history. The author then carried out a *semi-structured interview* in Urdu with each participant, typically lasting 90 to 120 minutes. This interview was designed to explore different aspects of the individual's life and covered nine areas called sections. Demographic information (age, marital status, socioeconomic status, number of siblings, etc.) was collected in Section 1. Criminal history (previous and current crimes, previous and current incarceration) in Section 2. Information about drug addiction (drug of choice, dose of drug, type of current drug, variety of drugs, drug use method, treatment, etc.) is in Section 3. Childhood history

(school, play, friends, verbal and/or physical abuse) in Section 4. Personal and marital (wife, children, sexual orientation, etc.) in Section 5. Social relationships (parents, siblings, and friends, etc.) are discussed in Section 6. Hobbies and interests (spare time used, movies, books, etc.) in Section 7. Religion (religious education and religious practices) in Section 8. In the final Section 9, information about psychopathic behaviors was collected.

The interview was conversational to ensure the information needed to score the PCL-R items was attained. Rapport was established first to allow the participant to elaborate on their experiences and responses comfortably. All information was carefully reviewed and aligned with previously gathered records and collateral information (details gathered from other sources about the individual). This is done to corroborate or clarify information obtained during the interview, as individuals with psychopathic tendencies may provide unreliable accounts.

Based on the information collected from the interviews, and the author used items on the PCL-R and rated each item on a 3-point scale (0-2), where (0) signified the item does not apply at all; (1) that there was a partial match, mixed information, or insufficient information to fully score the item; and (2) the item definitely applied. The individual item scores are summed to produce a composite score ranging from 0 to 40. Higher scores indicate a higher degree of psychopathic traits. While a score of 30 or above is typically considered the threshold for psychopathy in North America, Statistics Solutions highlights that in Europe, a score of 25 is often used (Hare & Neumann, 2006). We used this composite score as a threshold for psychopathy.

The PCL-R is widely accepted with two factors and four facets. Factor 1 is called *Interpersonal/Affective* with *Interpersonal* facet (Facet 1: items 1, 2, 4, and 5), characterized by traits such as glibness and superficial charm, a grandiose sense of self-worth, pathological lying, and conning/manipulativeness. The *Affective* facet (Facet 2: items 6, 7, 8, and 16) is characterized by a lack of remorse or guilt, shallow affect, callousness/lack of empathy, and a failure to accept responsibility for one's actions. Factor 2 is dubbed as *Social Deviance/Lifestyle* with *Antisocial* facet (Facet 4: items 10, 11, 12, 18, 19, and 20) characterized by poor behavioral controls, early behavior problems, juvenile delinquency, revocation of conditional release, and criminal versatility; and *Lifestyle* facet (Facet 3: items 3, 9, 13, 14, and 15) characterized by a need for stimulation/proneness to boredom, parasitic lifestyle, lack of realistic long-term goals, impulsivity, and irresponsibility (Zagon, & Jackson, 1994). Items 11 (promiscuous sexual behavior) and 17 (Many short-term marital relationships) were not used in the analysis, though some studies have subsumed these items as the third factor in PCL-R (Skeem et al., 2003). Data from five prisons revealed intra-class correlation coefficients that were between .78 to .94 for a single rating and from .87 to .97 for an average of two ratings. Internal consistencies (Cronbach alphas) ranged from .87 to .97, and the generalizability coefficients were between .85 and .90. The generalizability coefficient for test-retest reliability was strong ($r = .89$, Hare et al., 1990).

Conduct Disorder Checklist (CDC)

To assess conduct disorder during childhood in inmates, a symptom checklist was established, which consisted of 15 items based on DSM-5-TR (2022). After the semi-structured interviews, the extracted themes were compared to this checklist for face validity, and we found many themes aligned with the prepared checklist. Symptoms ranged from mild conduct problems such as lying about small things, truancy, staying out at night without permission, etc., to moderate conduct problems, such as stealing without confronting a victim, vandalism, etc., to severe conduct problems, such as forced sex, physical cruelty, and use of weapon in fight, stealing while confronting a victim, breaking etc. This checklist was divided into four broad categories: *aggressive behavior* against living things, such

as humans and animals, with 5 items related to intimidating, fighting, use of weapons, hurting people, and animals, respectively. The second category was *aggressive behavior* expressed towards property or vandalism and consisted of one item, which was arson. The third category was labeled as *deception/stealing* with four items that measured deceiving others, break-ins, and theft, etc. The fourth category was *breaking laws and regulations*, which consisted of 5 items that measured running away from home, spending nights outside home at a young age (before 13 years), a history of missing or running away from school at a young age (before 13 years), defying elders and engaging in sexual behaviors, etc. The magnitude of conduct disorder was based on adding checklist items; the higher the composite score, the more severe the conduct disorder. A mild level of conduct disorder was identified with a minimum of three items classified as mild, if the individual met at least 4-5 symptoms considered moderate and 6 or more considered severe. score. The checklist was completed by one of the investigators (AA) using semi-structured interviews.

Procedure

The study was approved by the Institutional Research and Ethics Committee, followed by permission from the District Jail Lahore to carry out the study. All participants were approached individually in their barracks and were requested to participate in the study while being given detailed information about the study. And after getting their voluntary consent, they were told about the semi-structured interview that would lead to completing the PCL-R and conduct disorder by AA. All data were analyzed using SPSS (16 version).

Results

Internal consistency of PCL-R was high ($\alpha = .95$), and facets too had adequate to high internal consistency, Interpersonal ($\alpha = .65$), Affective ($\alpha = .84$), Lifestyle ($\alpha = .89$), and Antisocial ($\alpha = .89$), see Table 2. Table 2 also shows that psychopathy (total score of PCL-R) was significantly, $t(198) = 15.54$, $p < .0001$, $d = 2.34$, higher in addicts ($M = 32.02$, $SD = 4.36$) than non-addicts ($M = 16.69$, $SD = 8.84$). In the same fashion, the interpersonal facet of psychopathy was significantly, $t(198) = 11.03$, $p < .0001$, $d = 1.56$, higher in addicts ($M = 7.22$, $SD = .92$) than in non-addicts ($M = 5.26$, $SD = 1.51$). The affective facet of psychopathy was significantly, $t(198) = 11.85$, $p < .0001$, $d = 1.68$ higher in addicts ($M = 6.25$, $SD = 1.38$) than non-addicts ($M = 3.02$, $SD = 2.34$). The lifestyle facet of psychopathy was significantly, $t(198) = 13.76$, $p < .0001$, $d = 1.95$ higher in addicts ($M = 9.01$, $SD = 1.22$) than non-addicts ($M = 4.93$, $SD = 2.69$). The antisocial facet of psychopathy was significantly, $t(198) = 16.10$, $p < .0001$, $d = 2.40$ higher in addicts ($M = 9.84$, $SD = 2.06$) than non-addicts ($M = 3.47$, $SD = 3.13$).

Table 2*Mean Differences between Addict (n = 100) and Non-Addict (n = 100) Inmates on PCL-R and Facets*

Scale/Facet	α^1	Inmate M(SD)		<i>t</i>	<i>d</i>
		Addict	Non-Addict		
PCL-R	.95	32.02(4.36)	16.69(8.84)	15.54 ^c	2.34
Interpersonal	.65	7.22(.92)	5.26(1.51)	11.03 ^c	1.56
Affective	.84	6.25(1.38)	3.02(2.34)	11.85 ^c	1.68
Lifestyle	.89	9.01(1.22)	4.93(2.69)	13.76 ^c	1.95
Antisocial	.89	9.84(2.06)	3.47(3.13)	16.01 ^c	2.40

Note. PCL-R = Psychopathy Checklist-Revised, M = Mean, SD = Standard Deviation, *t* = independent *t*-test, *d* = Cohen's *d*

¹Cronbach's alpha for internal consistency is based on the total sample (*N* = 200)

^c*p* < .001

Table 3 shows five analyses of psychopathy and its facets across addiction and conduct disorder in inmates. A significant main effect $F(1, 196) = 185.09$, $p < .0001$, $\eta^2 = .48$ of addiction was revealed for overall psychopathy (PCL-R); addict inmates ($M = 32.02$, $SD = 4.36$) had a higher overall psychopathy than non-addict ($M = 16.69$, $SD = 8.84$). A significant main effect $F(1, 196) = 83.85$, $p < .0001$, $\eta^2 = .30$ for addiction was revealed for Interpersonal psychopathy; addict inmates ($M = 7.22$, $SD = .92$) had a higher Interpersonal psychopathy than non-addict ($M = 5.26$, $SD = 1.51$). A significant main effect $F(1, 196) = 102.21$, $p < .0001$, $\eta^2 = .34$ for addiction was revealed for Affective psychopathy; addict inmates ($M = 6.25$, $SD = 1.38$) had a

higher Affective psychopathy than non-addict ($M = 3.02$, $SD = 2.34$). A significant main effect $F(1, 196) = 144.11$, $p < .0001$, $\eta^2 = .42$ for addiction was revealed for Lifestyle psychopathy; addict inmates ($M = 9.01$, $SD = 1.22$) had a higher Lifestyle psychopathy than non-addict ($M = 4.93$, $SD = 2.69$). A significant main effect $F(1, 196) = 212.14$, $p < .0001$, $\eta^2 = .52$ for addiction was revealed for Antisocial psychopathy; addict inmates ($M = 9.84$, $SD = 2.06$) had a higher Antisocial psychopathy than non-addict ($M = 3.47$, $SD = 3.13$). No main effects for conduct disorder or interaction between conduct disorder and addiction were found for psychopathy and its facets (means and standard deviation not shown).

Table 3*Comparison of Psychopathy and its Facets between Addicts, Non-Addicts, Conduct Disorder, and Normal Inmates (N = 200)*

Condition	Scale/Facet	Inmate M(SD)		<i>F</i>	η^2
		Addict	Non-Addict		
Conduct Disorder	PCL-R	32.45(3.83)	17.18(8.74)	55.21 ^c	.49
	Interpersonal	7.00(1.12)	5.33(1.61)	17.06 ^c	.23
	Affective	6.15(1.30)	3.20(2.35)	26.90 ^c	.32
	Lifestyle	9.10(1.16)	5.10(2.65)	41.04 ^c	.41
	Antisocial	10.15(1.53)	3.51(2.93)	89.16 ^c	.61
Normal	PCL-R	31.91(4.50)	16.38(8.97)	180.55 ^c	.56
	Interpersonal	7.27(.87)	5.21(1.46)	108.68 ^c	.43
	Affective	6.27(1.41)	2.90(2.35)	111.87 ^c	.44
	Lifestyle	8.98(1.24)	4.81(2.74)	145.58 ^c	.51
	Antisocial	9.31(2.15)	3.44(3.27)	164.07 ^c	.54

Note. PCL-R = Psychopathy Checklist-Revised, M = Mean, SD = Standard Deviation

^c*p* < .001

Discussion

The present study was carried out to investigate psychopathy and its facets across addiction and conduct disorder in an incarcerated sample. The findings suggest that addicts and non-addicts differed significantly on psychopathy and its facets. Drug addicts had higher scores on total PCL-R and its facets compared to non-drug addicts. The largest effect sizes were revealed for PCL-R and its antisocial facet in inmates who had conduct disorder or were normals. This finding supports our first hypothesis and is partially supported by previous studies, e.g., Smith and Newman (2002) found that those who abused alcohol and other drugs had significantly more psychopathy than those

who did not abuse chemical substances. These researchers added that general social deviance (Factor 2) of PCL-R was strongly associated with substance abuse, but not Factor 1, which represented core personality features of psychopathy. This was also revealed in our study: drug addicts responded with higher scores (large effect sizes) on all the facets of PCL-R. This aspect was aligned with similar findings obtained by Fishbein and Reuland (2002), who suggested that psychopathy was highly related to alcohol, marijuana, and cocaine. The study did not find any influence of conduct disorder on psychopathy and its facets, and it did not find any interaction of addiction and conduct disorder on

psychopathy. Many studies report that early conduct disorder is a risk factor for psychopathy. Pisano et al. (2017) point out that callous-unemotional traits in childhood and adolescence are prepotent risk factors in conduct disorder that lead to antisocial and aggressive behaviors (affective dimension) in adult psychopathology. Not finding any relation between conduct disorder and psychopathy, we think it was primarily based on a lack of a standard assessment of conduct disorder; and though our instrument was aligned with symptoms of conduct disorder, the assessment was not clinically made, and there were no reliability and validity associated with our conduct disorder checklist. Conduct disorder even in the clinic is difficult to diagnose because it overlaps with other disorders like oppositional defiant disorder, ADHD, and mood disorders (Barry et al., 2013). It is quite possible that our instrument was unable to pick up clear symptoms of conduct disorder amidst other symptoms that may have been present in inmates. In addition, literature suggests a dimensional approach (measuring the degree of CU traits) often yields stronger predictive results than using the simple categorical "present/absent" checklist, much like the way our instrument was designed. Finally, the sample of the study was small ($N = 200$), and if the global prevalence (Ayano et al., 2024) of conduct disorder is considered (3%), this would give 6 or fewer inmates with true conduct disorder, a number not large enough to detect a statistically significant effect within this specific subgroup. In summary, the most likely reason for a non-finding is that the study failed to isolate the specific "emotions associated with psychopathy" within a broader, heterogeneous category of conduct disorder. Other data on inmates is available on request from the authors at (Email: abid_abidi@hotmail.com)

Limitations and Suggestions

The sample of the present study was drawn only from one prison (District Jail, Lahore), which is not representative of the Province of the Punjab or the country. Better, more representative samples would be needed to replicate these findings and generalize them to jail inmates in Pakistan. A greater limitation in the study was its small sample size, which reduced our ability to clearly detect or assess conduct disorder in inmates. Since semi-structured interviews were used to complete the PCL-R form and CDC, personal biases in completing the instruments are expected. There is no way to assess administrator biases; however, any such biases are likely to reduce the efficacy and sensitivity of the measures and render our analysis with greater noise. We think that, for comparison in future studies, female inmates should also be tested for the aforementioned variable to psychopathy; gender studies should follow cross-cultural studies to better understand addiction, conduct behavior, and psychopathy in other cultures and societies.

Implications

This study is among a handful of studies done in Pakistan and perhaps other countries, largely due to difficulties with security, administrative permission from jail authorities, and institutional approvals. This study has helpful and practical implications for professionals who

serve prisons as counselors, psychologists, and other rehabilitation officers. Knowledge about substance use, conduct disorder, and psychopathy should be important for these professionals, to literature from home and abroad, and work plans that could help delinquents reframe their law-abiding behaviors.

Conclusion

The study concluded that jail addicts and non-addicts significantly differed on psychopathy and its facets. Drug addicts scored significantly high on selfish, callous, and remorseless use of others, which is associated with the affective/psychopathic dimension of psychopathy, and on social deviant behavior associated with the antisocial dimension of psychopathy, compared to non-addicts. However, the study could not detect clear differences in psychopathy in inmates with conduct disorder or any combined effect of addiction and conduct behavior, the reasons for which are presented above in the discussion.

Disclosure of funding

This study was not funded by any government or private agency.

Acknowledgement: We want to thank the prison administration for giving us the opportunity to collect the data from the District Jail, Lahore. We would also like to thank the support staff at the jail assisting us in daily matters, and all inmates/participants who consented and took part in this study. Finally, we would like to thank Farwa Chaudhary for her valuable suggestions.

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Received: January 4, 2024

Revision Received: December 22, 2025