

# Prevalence of Anti-Social Behavior Among Women with Substance Use Disorder in Pakistan

**SADDIQUA, A.<sup>1</sup>, ZUNNURAIN, M. Z.<sup>2</sup>**

**1** | Charles University, First Faculty of Medicine, Department of Addictology, Prague, Czech Republic

**2** | Supreme Training and Consultancy, Taiping, Malaysia

**Citation** | Saddiqua, A., & Zunnurain, M. Z. (2024). Prevalence of anti-social behavior among women with substance use disorder in Pakistan. *Adiktologie*, 24(2), 81–87. <https://doi.org/10.35198/01-2024-002-0004>

**INTRODUCTION:** Pakistan is ominously impacted by the menace of substance abuse. Women, who represent 42% of the total population, are primarily affected by the use of illicit substances with co-occurring behavioral disorders. Despite extensive efforts, prevalence estimates reported here are likely to underestimate substance use among women. A high level of dependency was observed among the cases who were reported; however, the unreported cases in the general population are beyond the count. This study focuses on an approximation about the prevalence of anti-social behavior among women in Pakistan with substance use disorder.

**METHODS:** A uniform survey, Subtypes of Anti-Social Behavior (STAB), was used for data collection. Data was collected from five women treatment and rehabilitation centers by using a convenient sampling approach. The sample size comprised of 100 women, with 20 women from each center, aged between 25 to 45. Descriptive statistics for quantitative analysis were used. **RESULTS:** The results were compiled on the bases of three major questions including frequent behavior on physical, social aggression and rule

breaking, followed by sub questions. The responses indicated that among the sample of one hundred, 28.9% women reported to frequently express the physical aggression, 28.2% demonstrated social aggression and 30.5% stated to break the rules under the influence of multiple illicit substances.

**CONCLUSIONS:** The study's findings indicate the prevalence of antisocial behaviour among women who use substances. This study designates that scaling up the psychoeducation and recovery management programs for women may help to understand their issues and minimise antisocial behaviour and substance use.

**Keywords** | Pakistan – Substance Use – Women with Substance Use – Psychoactive Substance – Anti-Social Behavior – Women Treatment – Comorbidity – Aggression

**Submitted** | 7 March 2024

**Accepted** | 12 September 2024

**Grant affiliation** | This study was supported by the Specific University Research No. 260632, and the institutional support programme Cooperatio (research area HEAS).

**Corresponding author** | Aisha Saddiqua, Charles University, First Faculty of Medicine, Department of Addictology, Apolinářská 4, 128 00 Prague 2, Czech Republic.

[siddiqua229@gmail.com](mailto:siddiqua229@gmail.com)

## 1 INTRODUCTION

People who exhibit antisocial behavior may be habitual criminals, engage in actions that could lead to criminal arrest and prosecution, or manipulate and harm others in ways that are widely considered unethical, immoral, irresponsible, or in violation of social norms and expectations (Zaman et al., 2015). Antisocial behavior refers to an individual who habitually and pervasively disregard or violate the rights and considerations of others without remorse (APA, 2022). Antisocial Personality Disorder (ASPD) is a severe personality disorder with robust associations with crime and violence, but its precise aetiology is unknown (Filov, 2019). Drawing on the near-population of federal correctional clients in the Midwestern United States, the current study examined antecedent background factors spanning adverse childhood experiences and childhood psychopathology. Greater adverse childhood experiences were associated with ASPD diagnosis, with physical abuse showing associations with ASPD symptoms and sexual abuse with a lifetime diagnosis for ASPD. Conduct disorder was strongly linked to ASPD. Given the role of environmental factors in the development of ASPD, greater criminological attention should be devoted to understanding how assorted forms of abuse and neglect coupled with childhood psychopathology contribute to ASPD, especially given its linkages to severe criminal offences (Werner et al., 2015).

Antisocial behaviour is either overt, involving aggressive actions against siblings, peers, parents, teachers, or other adults, such as verbal abuse, bullying, and hitting; or covert, involving aggressive actions against property, such as theft, vandalism, and fire-setting. Covert antisocial behaviours in early childhood may include noncompliance, sneaking, lying, or secretly destroying another's property, drug and alcohol abuse, and high-risk activities involving oneself and others (Jonson-Reid et al., 2010). Substance use disorders (SUDs) are the most highly comorbid conditions with ASPD and psychopathy. Those with ASPD are much more likely to use substances and to be diagnosed with SUDs, and conversely, those with SUD are more likely to be diagnosed with ASPD. The DSM-5 indicates that antisocial personality disorder is comorbid with substance use disorder and other personality disorders. Antisocial behaviours exist along a severity continuum and include repeated violations of social rules, defiance of authority and of the rights of others, deceitfulness, theft, and reckless disregard for oneself and others. Substance abuse is defined as a pattern of compulsive substance use marked by recurrent significant social, occupational, legal, or interpersonal adverse consequences, such as repeated absences from work or school, arrests, and marital difficulties (APA, 2013). The engagement of substance user women in antisocial behaviour represents a psychological issue of great concern given the scorching impression that women's antisociality can have an impact on individuals, families, and communities. Despite its importance and relevance for psychological science, this topic has received limited attention to date, and no systematic review of risk factors exists (Bourassa et al., 2020). Women face unique issues when it comes to substance use. These differences are influenced by sex (differences based on biology) and gender differences based on culturally defined roles. Research has found many differences in how women and men use substances and react

to substances. For example, if the women use psychoactive substances in smaller amounts, even less than men, they may experience the strong effects as compared to men. A study on the identification and association of factors responsible for substance use disorder among cases reporting to psychiatric outpatients indicates that the physically or sexually abused, although less reported but statistically significant as evidenced, being a victim of physical or sexual assault increases the risk of an adolescent getting involved with substance use from two to four times. Peer pressure and friends using substances were highly significant, but other factors were also significant. The influence of peers on adolescent substance use often exists in the form of deviant peer relationships, wherein an adolescent is associated with a group of people who use substances, or in the form of perceived popularity. Many previous studies have shown that deviant peer relationships are associated with adolescent substance use (Jat et al., 2018).

A similar study was conducted in the USA about the increased use of marijuana among women from 1999 to 2014. A study validates that the increased use of marijuana developed a co-morbidity of aggressive and anti-social behaviour among women (Tang et al., 2013). Drug problems are awfully increasing in Pakistan, which is affecting both genders. In Pakistan, women with substance use, "unlike male substance users who congregate and use drugs with other drug users, drug use is a discreet, hidden, and more of an individual activity for female substance users" (UNODC, 2013). A study by UNODC Pakistan, which was conducted in 2010, highlights that the women experience noticeably higher levels of stigma and psychological problems that eventually lead them towards comorbidity, including antisocial behavior. In addition to drug use, there are the warning signs for a rapid expansion of psychosis and mental illness (UNODC, 2010). The results of another study about women's substance use are distinguishing the high prevalence of mental and personality disorders among people (including women and children) who use drugs. Because the majority of women drug users are not aware of their status, they are also not taking precautions to prevent and using non-prescribed drugs. Lack of awareness and knowledge about substance use and the effects of psychoactive substances among the general population may cause the emergence of behaviour problems and grow the opportunities for behaviour issues, including anti-social behaviour among individuals. In Pakistan, women are at risk with anti-social behaviour and drug use. The major drugs of abuse are heroin and marijuana, but designer drugs are shown to be on the increase. Major causes and factors of drug use that were indicated among men and women are antisocial personality disorders. Moreover, non-prescribed use of sleeping pills and other psychoactive drugs is causing behaviour and other issues among women. One of the major issues is lack of awareness about the problem and access to quality treatment (Zaman et al., 2015).

The primary objective of this research was to evaluate the extent of antisocial behaviour demonstrated by women suffering from substance abuse disorders and to determine the existence and prevalence of this kind of behaviour among women in Pakistan who use multiple substances. Furthermore, the results of the 2013 survey report on women's substance use in Pakistan by the UNODC Pakistan office served as the foundation for an

investigation into the possible link between women's anti-social behaviour and substance use. Another goal of the present study was to provide insight on the anti-social behaviour of substance-using women in the country, which can not only worsen the socioeconomic condition but also have a significant impact on future generations. The study also highlights the challenges of substance abuse and behaviour that must be addressed through appropriate strategies (UNODC, 2013).

## 2 METHODS

### 2.1 Setting

This study was conducted in three provinces as well as the federal capital of Pakistan, including Islamabad (federal capital), Karachi (Sindh Province), Gujranwala and Lahore (Punjab Province), and Peshawar (Khyber Pakhtun Khwa Province). The treatment facilities were approached for data collection, who are offering the treatment for women with substance use along with psychological disorders.

### 2.2 Sample

Population of this study were women with anti-social behaviour using substances. The sample size of this study is 100 and 20 women between the ages of 25 and 45 who were in rehabilitation or in early recovery, selected from each facility by using convenient sampling. An informed consent was taken from all the clients before administration of the questionnaire. The senior supervisor and clinical psychologist of each treatment facility have administered the questionnaire.

### 2.3 Measures and statistical analysis

Data was collected by using the Anti-Social Behaviour Questionnaire, which was developed by S. Alexandra Burt and M. Brent Donnellan in 2009, for measuring the anti-social behavior. This questionnaire measures the anti-social behaviour and its subtypes, including social and physical aggression and rule-breaking. Research pertaining to the STAB verifies the reliability of the internal consistency of the STAB scales. STAB is a promising self-report measure of antisocial behaviours such as physical aggression, rule-breaking, and social aggression. Along with dependable scales and convergent validity with other longer self-report measures of antisocial behaviour, it seems to have a stable factor structure. Additionally, it seems appropriate for use with adjudicated, community, and college populations. STAB is a brief and useful measure that can be used to differentiate and assess physically aggressive, rule-breaking, and socially aggressive forms of antisocial behaviour (Burt & Donnellan, 2009). This self-reporting tool is comprised of 32 questions; each subtype is followed by eleven sub questions, which took 20–25 minutes in administration. It contained rating responses ranging from 1 to 5, including (1 = Never indicated the behaviour never happens, 2 = Hardly Ever means hardly done behavior, 3 = Sometimes indicated behaviour happens sometimes, 4 = Frequently refers to frequently

of behaviour, and 5 = All the Time indicated excessive repetition of behaviour). The range of response is between 0 and 160, where the minimum score is zero ("0") and the maximum 160. For data analysis, descriptive statistics were used. The results were compiled by using SPSS 26, 2018 version (Statistical Package for the Social Sciences) for quantitative analysis. The below-mentioned factors define the frequency and percentage of the response in each category.

### 2.4 Ethics

The research ethical committee of the department of Allied Health Sciences, University of Cyberjaya, Malaysia, granted the approval for the said project, and before data collection, an informed consent was signed by 100 participants of the study and conceded permission for the data to be made publicly available. The data was obtained with complete confidentiality and integrity. Data forms were only accessible to designated experts from each facility. The names and addresses of all participants were kept confidential.

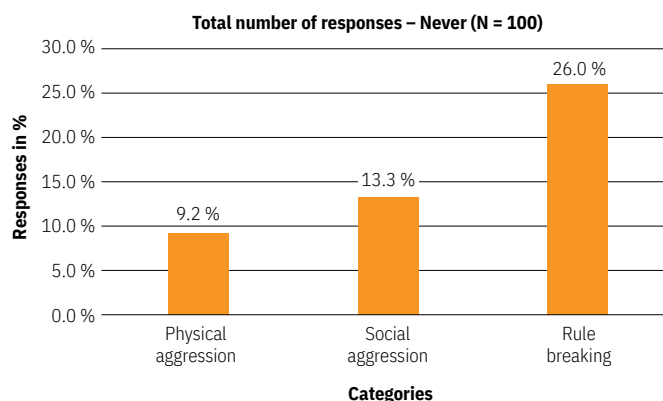
## 3 RESULTS

The focus of the current study sought to ascertain how common antisocial behaviour is among the substance users' women. Generalisations and conclusions were drawn on the basis of the characteristics and attitude of the respondents. Three main categories were formed from the responses of the subject population (Figures 1–5), which consisted of women between the ages of 25 and 45 who used drugs and exhibited antisocial behaviour.

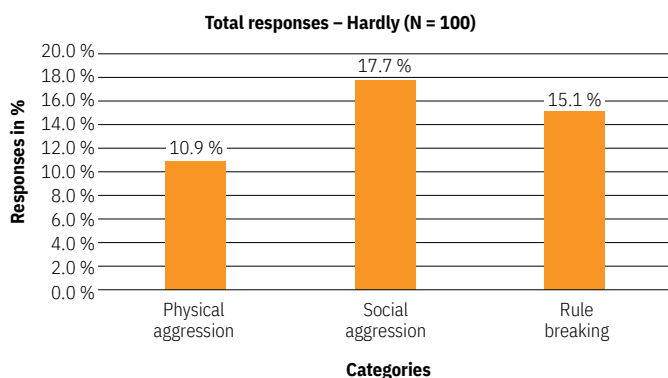
### 3.1 Responses in categories

As per category 1, responses were collected regarding the demonstration of physical aggression by women. This question is divided into ten subsections that enquire about multiple facets of women's behaviour, including hitting people, getting angry quickly, hitting back when hit by others, threatening others,

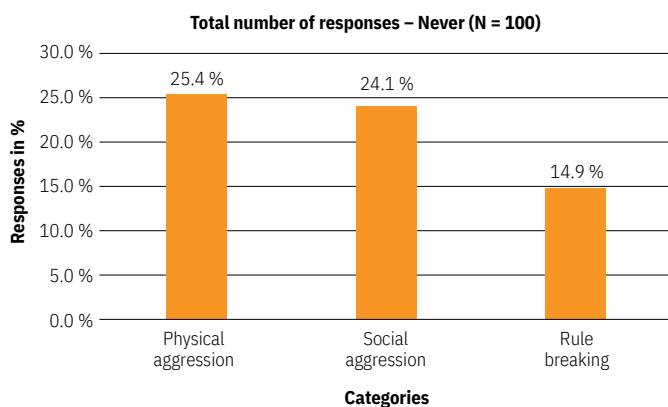
**Figure 1|** This graphic presentation indicates the total number of responses to the questions. Among the sample of 100, 9.2% reported never showing physical aggression, 13.3% denied the demonstration of social aggression, and 26% responded that they were never involved in rule-breaking.



**Figure 2** | This graph displays the 10.9% of respondents who said they hardly ever showed physical aggression. Of the 100 participants in the sample, 17.7% corroborated social aggression, while 15.1% accepted breaching the rules.



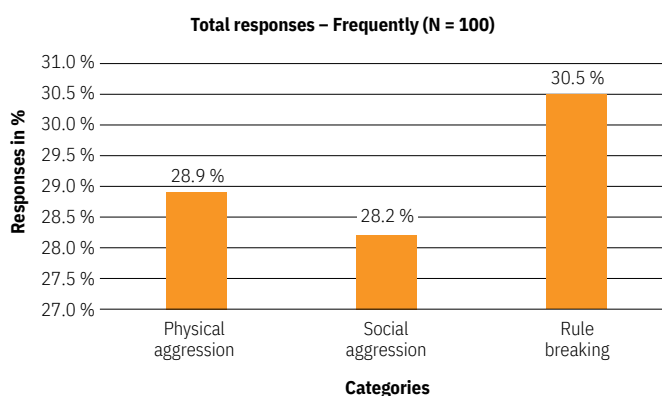
**Figure 3** | The sample's replies are displayed in Figure 3. Of the total of 100, 25.4% of the women said they occasionally displayed physical aggression. 14.9% of respondents reported breaching the law, and 24.1% said they sporadically displayed social aggression.



difficulty controlling temper, physical fights, and feeling better after a fight after the use of substance. A total of 28.9 women responded that they were frequently involved in expressing physical aggression; 15.1% reported that they hardly expressed physical aggression, while 14.9% of women reported it sometimes after the use of substances. Only 9.2% of women reported that they never expressed physical aggression under the use of substances.

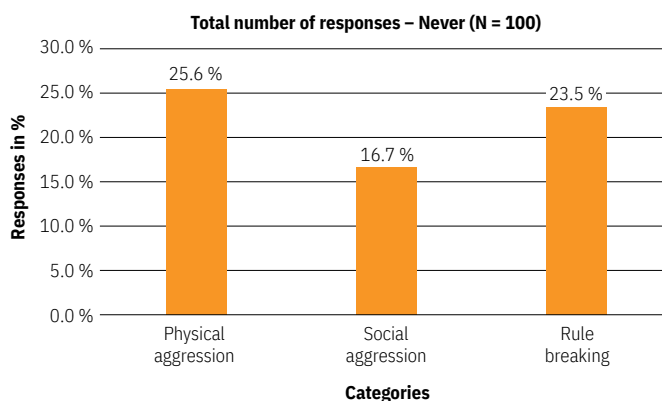
A total of 11 follow-up questions about the subjects' behaviour were posed under the heading of "social aggression" by counting the following: making fun of others, trying to hurt someone, intentionally damaging someone's reputation, calling someone's names, trying to turn others against someone, giving someone the silent treatment when angry with him/her, being rude towards others, revealing someone's secrets when angry, and making negative comments about others' 28.2% of substance-abusing women reported expressing social aggressiveness regularly, 24.1% occasionally, 17.7% seldom, and 13.3% never. Similarly, 16.7% of women reported that when using substances, they almost always exhibit social hostility.

**Figure 4** | The sample's replies are shown in Figure 4. Of the 100 respondents, 28.9% of the women said they often used physical aggression. 30.5% reported frequently disobeying the rules, while 28.2% said they frequently displayed social hostility.



Participants provided evidence on rule-breaking behaviour. In this regard, women who used drugs were asked eleven follow-up questions that fell under the category of violating the regulations. The replies were gathered for the following sub-questions: broke into a business, mall, or warehouse; shattered windows in an empty building; shoplifted items; trashed public places by breaking bottles and toppling trash cans, among other things. Stole a bicycle, stole items from school or work, left home for an extended amount of time without informing family/friends, sold drugs, including marijuana, was suspended, expelled, or dismissed from school or work, had difficulty keeping a job, or failed to pay debts. A total of 100 replies were obtained to the questions, with 30.5% of women reporting that they frequently breach the regulations, 14.9% reporting that they do it occasionally, 15.1% seldom do it while using the substance, and 26% reporting that they never break the restrictions. However, 23.5% of women who use substances indicated that they almost always broke the rules when using them. The following table defines the frequency and percentage of responses in each category.

**Figure 5** | This graphic presentation displays the table 5 responses from the 100 sample members about physical aggression, social aggression, and rule-breaking. Among the population of 100, a total 25.60% reported physical aggression, 16.70% validated social aggression, and 23.50% revealed rule-breaking, nearly all the time, under the influence of substance use.



The Anti-Social Behaviour Questionnaire, which was used to collect responses from the study's sample group, reveals that women with substance use disorders frequently exhibit anti-social behaviour. This behaviour takes the shape of physical hostility, social aggression, and rule-breaking while under the influence of substances. The findings are shown in the tables above, suggest that the women displayed antisocial behaviour "nearly all of the time," with substance use coming in second in terms of replies. However, when compared to regular and almost always use, the response "hardly and never" indicated antisocial behaviour connected to substance use. The remaining population stated that when under the influence of drugs, they occasionally engaged in antisocial behaviour.

## 4 DISCUSSION

The incidence of anti-social behaviour was hypothesised among women who were exposed to illicit substances. The results of the investigation verify the expression of physical violence, social aggression, and rule-breaking behaviour among substance-using women. Amongst the 100 participants, a large proportion of women reported breaking the rules and demonstrating social as well as physical aggressiveness. The purpose of this study was to determine the prevalence of antisocial behaviour among Pakistani women aged 25 to 45 who are using substances. The findings revealed that women who use substances are more likely to exhibit physical aggressiveness and break rules. A total of 28.9% of the 100 women in the sample reported frequently engaging in physical aggressiveness when using drugs. However, 15.1% asserted that they rarely expressed physical aggression. Nevertheless, 14.9% reported occasional physical aggressiveness after substance use, whereas 9.2% reported never having done so. The study also found that 28.2% of women who used substances reported expressing social hostility regularly, 24.1% occasionally, 17.7% barely, 13.3% never, and 16.7% almost always. While questioned about rule-breaking, 30.5% of women said they did it frequently, which was the highest response among all other responses; 14.9% said they did it occasionally; 15.1% said they rarely did it; 26% said they never did it; and 23.5% said they broke the rules nearly all the time while using substances. In a comparable vein, replies to sub-questions on physical fights, hostility, and revenge were reported to be high.

These responses are reflecting the findings of the drug survey of Pakistan (2013), conducted by UNODC, that the women experience markedly greater levels of stigma and psychological problems that ultimately lead them towards comorbidity, including antisocial behavior. In addition to substance use, there are warning signs for a quick development of psychosis and mental illness. Study results revealed a very high prevalence of mental and personality disorders among women who use multiple substances. Because the majority of women substance users are not aware of the harmful use of illicit substances and their adverse effects on the brain and body, they do not take any precautionary measures or remedies to prevent themselves from the use of non-prescribed drugs. In Pakistan, most women use non-prescribed drugs, including sleeping pills, cough syrups, painkiller tablets, and injections, that eventually cause

dependence along with co-morbidity, i.e., psychological and behavioural disorders. In general, Pakistani women know very little about antisocial behaviour and other mental health challenges. Despite national efforts, the prevalence remains high, with insufficient access to mental health care and specialist treatment facilities for women with substance use disorders. Another difficulty is the enormous social stigma that women who use illicit substances face in society. As a result, there is an increased chance of developing comorbidities, including anti-social behavior (UNODC, 2013).

The fact that the aforementioned data was obtained from the particular women's treatment facilities through convenient sampling is one of the study's limitations. This approach was limited up to the involvement of those women who were either undergoing residential treatment or in the initial phases of recovery. The women who are recovered and already reintegrated in the community and those who do not have access to treatment are not included. It was also challenging, to approach the population in treatment facilities due to social stigma issues. Data was collected through trained psychologists and supervisors of each facility. A large number of women were reluctant to divulge details about their substance abuse and instances of antisocial behavior. They nevertheless provide consent to take part with the condition to share the responses with their psychologist and supervisors only and later on agree to use data for publication. In this regard, data was collected through trained psychologists and supervisors of each facility.

The Punjab Mental Health Act 2014, which addressed women's access to mental health care and drug misuse treatment, was implemented by the Punjab Provincial government in Pakistan. On the provincial level, nevertheless, its implementation is still ongoing. If it is put into practice in its entirety, it can help the women in the province overcome discrimination and social stigma by making it simple for them to seek access to drug therapy (Tareen & Tareen, 2016). Furthermore, this can be used as a model in other provinces to determine whether women need evidence-based care for co-occurring diseases and antisocial behaviour. The study given here supports the significance of separate, specialized treatment modalities for women, as well as the government's responsibility to provide evidence-based mental health services on a provincial and national scale. Increasing professional competence in women's treatment facilities is important for managing behavioural issues. In order to ensure superior service, treatment facilities that treat female clients for substance abuse, antisocial behaviour, or any other mental health condition have a duty to gather and standardize their data under the national health regulatory bodies. At the same time, it's essential to implement a robust monitoring system that will ensure women's access and the delivery of high-quality services while considering their unique biological demands and requirements (TIP 51 Substance Abuse Treatment Addressing the Specific Needs of Women, n.d.). The rise of the issue can be regulated, and Pakistani women might get support in addressing their substance abuse and antisocial behaviour with the government and concerned stakeholders by implementing appropriate policy measures on treatment and prevention for the treatment of psychological disorders and substance dependency.

## 5 CONCLUSIONS

This study sought to investigate the prevalence of antisocial behaviour among Pakistani women who use multiple illicit substances. In this experimental study, women who use substances were asked a standardised question to determine the existence and prevalence of antisocial behaviour. The women's replies were divided into three categories: social aggression, physical aggression, and rule-breaking behaviour. This investigation thus supports the prevalence of anti-social behaviour among Pakistani women who use multiple substances, which includes physical aggression, social aggression, and rule-breaking in everyday interactions. Pakistani women in particular require healthcare and evidence-based integrated treatment programs. With an outlook on the interaction and association between antisocial behaviour and substance use, these outcomes will be beneficial to psychologists and addiction specialists in Pakistan who are dealing with the clients struggling with co-occurring mental and substance use disorders. The present predicament can be mitigated or lessened through strengthening psychoeducation, implementing family therapy preventative programs for women, and reducing social stigma. By including children in successful intervention efforts, this may help them understand their issues and, in turn, lessen antisocial behaviour (WHO & UNODC, 2020).

---

**Authors' contributions:** The author SA designed the study, conducted the literature review, collected interview data, conducted initial analysis, and prepared the draft of the article. The author ZMZ edited the full study and contributed to the analysis and revision of the final article. Both authors contributed to article creation and approved the final manuscript.

**Declaration of interest:** For the current study, there are no supporters or conflicts of interest to disclose.

---

## REFERENCES

- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental health disorders* (5th ed.).
- Bourassa, K. J., Caspi, A., Harrington, H., Houts, R., Poulton, R., Ramrakha, S., & Moffitt, T. E. (2020). Intimate partner violence and lower relationship quality are associated with faster biological aging. *Psychology and Aging, 35*(8), 1127–1139. <https://doi.org/10.1037/pag0000581>
- Burt, S. A., & Donnellan, M. B. (2009). Development and validation of the Subtypes of Antisocial Behavior Questionnaire. *Aggressive Behavior, 35*(5), 376–398. <https://doi.org/10.1002/ab.20314>
- Castillo-Carniglia, A., Keyes, K. M., Hasin, D. S., & Cerdá, M. (2019). Psychiatric comorbidities in alcohol use disorder. *The Lancet. Psychiatry, 6*(12), 1068–1080. [https://doi.org/10.1016/S2215-0366\(19\)30222-6](https://doi.org/10.1016/S2215-0366(19)30222-6)
- Dar, F., Khan, A., Siddiqui, I., & Ghani, F. (2010). Pattern of drugs of abuse identified in chemical samples. *Journal of the College of Physicians and Surgeons Pakistan, 20*(9), 608–611.
- DeLisi, M., Drury, A. J., & Elbert, M. J. (2019). The etiology of antisocial personality disorder: The differential roles of adverse childhood experiences and childhood psychopathology. *Comprehensive Psychiatry, 92*, 1–6. <https://doi.org/10.1016/j.comppsy.2019.04.001>
- Emmanuel, F., Akhtar, S., & Rahbar, M. H. (2003). Factors associated with heroin addiction among male adults in Lahore, Pakistan. *Journal of psychoactive drugs, 35*(2), 219–226. <https://doi.org/10.1080/02791072.2003.10400003>
- Filov, I. (2019). Antisocial personality traits as a risk factor of violence between individuals with mental disorders. *Open Access Macedonian Journal of Medical Sciences, 7*, 656–661. <https://doi.org/10.3889/oamjms.2019.146>
- Flynn, P. M., Craddock, S. G., Luckey, J. W., Hubbard, R. L., & Dunteman, G. H. (1996). Comorbidity of antisocial personality and mood disorders among psychoactive substance-dependent treatment clients. *Journal of Personality Disorders, 10*(1), 56–67. <https://doi.org/10.1521/pedi.1996.10.1.56>
- Gelder, M., Mayou, R., & Cowen, P. (2001). Misuse of alcohol and drugs. In P. Harrison, P. Cowen, T. Burns, & M. Fazel (Eds.), *Shorter Oxford textbook of psychiatry* (pp. 533–579). Oxford University Press. <https://doi.org/10.1093/med/9780198747437.001.0001>
- Jat, M. I., Nankani, A. K., & Kumar, A. (2018). Identification and association of factors responsible for substance use disorder among cases reporting to psychiatric out-patient department of a tertiary care public hospital. *ISRA Medical Journal, 10*(5). <https://www.imj.com.pk/wp-content/uploads/2018/11/7.OA-536-01-18-Identification-and-Association-of-Factors-Responsible-for-Substance-use.pdf>
- Jonson-Reid, M., Presnall, N., Drake, B., Fox, L., Bierut, L., Reich, W., Kane, P., Todd, R. D., & Constantino, J. N. (2010). Effects of child maltreatment and inherited liability on antisocial development: An official records study. *Journal of the American Academy of Child & Adolescent Psychiatry, 49*(4), 321–332. <https://doi.org/10.1016/j.jaac.2009.11.015>
- Lewis C. F. (2011). Substance use and violent behavior in women with antisocial personality disorder. *Behavioral Sciences & The Law, 29*(5), 667–676. <https://doi.org/10.1002/bsl.1006>
- Ministry of and Interior and Narcotics Control, Pakistan Bureau of Statistics, & United Nations Office on Drugs and Crime. *The report on drug use in Pakistan 2013*. [www.unodc.org/documents/pakistan/Survey\\_Report\\_Final\\_2013.pdf](http://www.unodc.org/documents/pakistan/Survey_Report_Final_2013.pdf).
- National Institute on Drug Abuse. (2020). *Drug facts: Substance use in women*. <https://www.drugabuse.gov/sites/default/files/drugfacts-substance-women.pdf>
- Neale, J., Tompkins, C. N. E., Marshall, A. D., Treloar, C., & Strang, J. (2018). Do women with complex alcohol and other drug use histories want women-only residential treatment? *Addiction, 113*(6), 989–997. <https://doi.org/10.1111/add.14131>
- Shafiq, M., Shah, Z., Saleem, A., Siddiqi, M. T., Shaikh, K. S., Salahuddin, F. F., Siwani, R., & Naqvi, H. (2006). Perceptions of Pakistani medical students about drugs and alcohol: A questionnaire-based survey. *Substance Abuse Treatment, Prevention, and Policy, 1*, Article 31. <https://doi.org/10.1186/1747-597X-1-31>
- Sher, K. J. (2016). *The Oxford handbook of substance use and substance use disorders: Volume 1*. Oxford University Press.
- Stein, M. D., Conti, M. T., Kenney, S., Anderson, B. J., Flori, J. N., Risi, M. M., & Bailey, G. L. (2017). Adverse childhood experience effects on opioid use initiation, injection drug use, and overdose among persons with opioid use disorder. *Drug and Alcohol Dependence, 179*, 325–329. <https://doi.org/10.1016/j.drugalcdep.2017.07.007>
- Substance Abuse and Mental Health Services Administration. (2009). Substance abuse treatment: Addressing the specific needs of women. A Treatment Improvement Protocol TIP 51. U.S. Department of Health and Human Services. [https://www.ncbi.nlm.nih.gov/books/NBK83252/pdf/Bookshelf\\_NBK83252.pdf](https://www.ncbi.nlm.nih.gov/books/NBK83252/pdf/Bookshelf_NBK83252.pdf)
- Tang, Y., Jiang, W., Liao, J., Wang, W., & Luo, A. (2013). Identifying individuals with antisocial personality disorder using resting-state fMRI. *PLoS one, 8*(4), Article e60652. <https://doi.org/10.1371/journal.pone.0060652>
- Tareen, A., & Tareen, K. I. (2016). Mental health law in Pakistan. *BJPsych International, 13*(3), 67–69. <https://doi.org/10.1192/s2056474000001276>
- United Nations Office on Drugs and Crime. (2010). *New challenges, strategies and program in demand reduction*. [https://www.unodc.org/documents/commissions/CND/CND\\_Sessions/CND\\_53/CRPs/ECN7-2010-CRP3\\_V1051349\\_E.pdf](https://www.unodc.org/documents/commissions/CND/CND_Sessions/CND_53/CRPs/ECN7-2010-CRP3_V1051349_E.pdf)
- Werner, K. B., Few, L. R., & Bucholz, K. K. (2015). Epidemiology, comorbidity, and behavioral genetics of antisocial personality disorder and psychopathy. *Psychiatric Annals, 45*(4), 195–199. <https://doi.org/10.3928/00485713-20150401-08>
- Wirtz, A. L., Poteat, T. C., Malik, M., & Glass, N. (2020). Gender-based violence against transgender people in the United States: A call for research and programming. *Trauma, Violence, & Abuse, 21*(2), 227–241. <https://doi.org/10.1177/1524838018757749>
- World Health Organization & United Nations Office on Drugs and Crime. (2020). *International standards for the treatment of drug use disorders: Revised edition incorporating results of field-testing*. <https://iris.who.int/handle/10665/33163>
- Zaman, M., Razaq, S., Hassan, R., Qureshi, J., Ijaz, H., Hanif, M., & Chughtai, F. R. (2015). Drug abuse among the students. *Pakistan Journal of Pharmaceutical Research, 1*(1). <https://doi.org/10.22200/pjpr.2015141-47>