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Psychologists' and Psychiatrists' Views on Criminal Behavior, Fetal Alcohol Spectrum Disorder, and Federally Sentenced Indigenous Women in the Prairie Region and British Columbia

Rina Asghar
Walden University

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College of Psychology and Community Services

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Rina Asghar

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Review Committee

Dr. Jerrod Brown, Committee Chairperson, Psychology Faculty

Dr. Eric Hickey, Committee Member, Psychology Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2026

Abstract

Psychologists' and Psychiatrists' Views on Criminal Behavior, Fetal Alcohol Spectrum Disorder, and Federally Sentenced Indigenous Women in the Prairie Region and British Columbia

by

Rina Asghar

MA, University of Keele, 1999

BA, Punjab University, 1987

Dissertation Submitted in Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy
Forensic Psychology

Walden University

May 2026

Abstract

The overrepresentation of federally sentenced Indigenous women in Canada reflects longstanding structural and systemic injustices within the criminal justice system. Constituting approximately 5% of the female population, Indigenous female offenders are disproportionately represented, especially in maximum security facilities and structured intervention units. This qualitative study examined psychologists' and psychiatrists' perspectives on the potential role of fetal alcohol spectrum disorder (FASD) related neurocognitive impairments in increasing justice system involvement among Indigenous women in Western Canada. Guided by the multidimensional Indigenous developmental framework, which integrates historical trauma theory and attachment theory, nine psychologists and one psychiatrist were interviewed in semi-structured interviews. The data were analyzed using thematic analysis, yielding seven interconnected themes. The findings indicated that FASD does not result in criminality but increases the risk of criminalization due to the disruption of executive functioning, memory, and suggestibility, especially in punitive justice contexts. Cumulative trauma and the absence of culturally responsive services add to these risks. Recommendations include introducing FASD screening at an early age and basing justice responses on neurodevelopmentally sensitive, culturally grounded approaches that focus on accommodation, prevention, and reintegration. These findings support positive social change by informing policies and practices that shift justice responses from surveillance and punishment toward dignity, healing, and sustained community reintegration for Indigenous women.

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Dedication

This research is dedicated to the memory of the Missing and Murdered Indigenous Women and Girls (MMIWG) of Canada, and to all those whose voices have been silenced by systems of inequity. May this work contribute, in some small way, to justice, healing, and change.

Acknowledgments

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Chapter 1: Introduction to the Study

David Côté (2023) described the overincarceration of Indigenous peoples as one of Canada's longest-standing and pressing human rights issues. Historically, Indigenous women have faced significant and persistent inequities within the Canadian Criminal Justice System (CJS), reflecting a broader crisis of overrepresentation and systemic injustice (Dickson & Stewart, 2021; Office of the Correctional Investigator [OCI], 2023; Statistics Canada, 2023a). While they represent only 5% of the female population in Canada (Statistics Canada, 2023a), Indigenous women account for a disproportionate 46% of the federal prison population (OCI, 2024). More than half of this overrepresentation is concentrated in the Prairie region, including Alberta (Gutierrez & Chadwick, 2020; OCI, 2023; Statistics Canada, 2023b; Wanamaker & Chadwick, 2023). The statistics underscore the systemic injustice faced by Indigenous women in the criminal justice system, which demands urgent attention and reform.

Among federally sentenced Indigenous women (FSIW), 75% are classified as maximum-security inmates (OCI, 2024), and 96% have experienced placement in Structured Intervention Units (SIU) or segregation (Motiuk & Keown, 2022a; OCI, 2023; Senate of Canada, 2024; Sprott & Doob, 2021). Furthermore, 78.6% of FSIW report experiencing intimate partner violence (IPV; Motiuk & Keown, 2022b). The Truth and Reconciliation Commission of Canada (TRC) has highlighted the overrepresentation of Indigenous peoples in the criminal justice system, which is rooted in systemic inequities, socio-economic disadvantages, and intergenerational trauma from colonial policies like residential schools (TRC, 2015a, 2015b). In response, the Canadian government allocated

\$2.1 million in 2024 to support initiatives to address this ongoing crisis (Department of Justice Canada [JUS], 2024). These efforts are a step toward addressing the deep-rooted injustices faced by Indigenous peoples within the criminal justice system.

An important but often overlooked factor in this crisis is the prevalence of fetal alcohol spectrum disorder (FASD) among Indigenous inmates (McLachlan et al., 2019; Mela et al., 2020). FASD results from prenatal alcohol exposure (PAE), which disrupts brain development and impacts cognition and behavior (Mela, 2023). These impairments can lead to difficulties with impulse control, memory, and decision-making, thereby increasing individuals' vulnerability to criminalization (Mattson et al., 2019; Mela et al., 2024; Reid et al., 2023). As such, FASD presents significant barriers to reintegration for those affected. Understanding the cognitive deficits of FASD is crucial in addressing the overincarceration and recidivism rates among Indigenous women.

Despite growing awareness of FASD's cognitive and behavioral effects, its role in criminalization, sentencing, and recidivism remains unaddressed in policy and practice. (TRC, 2015a). However, systemic barriers, such as colonial legacies, historical trauma, and inadequate legal accommodations, continue to perpetuate cycles of incarceration. The Indigenous Justice Strategy (IJS), introduced in March 2025, represents a shift toward Indigenous-led, culturally appropriate justice alternatives (JUS, 2025). While the IJS supports prevention, diversion, and rehabilitative approaches, significant implementation gaps persist, underscoring the need for further reform and trauma-informed justice practices.

This study examined the impact of FASD-related deficits on criminal behavior

among FSIW, particularly their role in high incarceration and recidivism rates, through a psychological lens. It also highlighted the victim–offender continuum, a crucial yet often overlooked aspect of this issue. While FSIW were not directly involved in this study, the research incorporated perspectives from psychologists and psychiatrists specializing in FASD to bridge gaps in existing literature. In addition to psychologists and psychiatrists, Brown et al. (2024) identified a range of professionals who may interact with offenders living with FASD, including attorneys, judges, correctional personnel, social workers, and mitigation specialists. By exploring the relationship between FASD, Indigenous women, and the justice system, this study sought to enhance the understanding of this complex issue. The goal was to provide insight to inform policies and practices to reduce incarceration and support reintegration.

Indigenous women embody both resilience and vulnerability, a paradox shaped by historical trauma, systemic inequities, and cycles of victimization and incarceration (Gilbert et al., 2023a; Grekul, 2020; Ogden & Tutty, 2024). The added presence of FASD, institutional barriers, and trauma creates both a crisis and an opportunity for transformative change (Spillane et al., 2023; Toombs et al., 2023). Addressing systemic injustices requires dismantling harmful stereotypes, including the misconception that FASD is disproportionately prevalent in Indigenous communities. This misconception perpetuates stigma and exacerbates disparities, contributing to the ongoing marginalization of Indigenous peoples (Milward, 2014a, 2014b; Tait et al., 2017; Wolfson et al., 2019). The TRC’s Call to Action 34 calls for addressing trauma, substance use, and systemic inequities affecting Indigenous populations (Stewart &

Glowatski, 2018; TRC, 2015a).

This chapter introduces the study, exploring the relationship between FASD-related neurocognitive deficits, the risk of criminal behavior, and the disproportionate incarceration and reincarceration of FSIW. It begins by providing background on the overrepresentation of FSIW in maximum-security institutions and their exposure to systemic barriers, trauma, and legal vulnerabilities. The chapter then examines the prevalence of FASD among FSIW, focusing on its cognitive and behavioral impacts that contribute to criminal justice involvement. Additionally, it outlines the theoretical and conceptual frameworks that inform the study, offering a foundation for understanding the complex intersection of FASD, trauma, and the criminal justice system. This chapter also outlines the study's nature, purpose, and guiding research question; defines key terms; and outlines its scope, assumptions, and limitations. It concludes by discussing the study's significance, emphasizing its potential to inform understanding of the systemic inequities faced by Indigenous women and to guide future interventions and policy reform.

Background to the Study

The overincarceration of Indigenous peoples in Canada is not a recent phenomenon; it has been described as one of the longest-standing, most pressing human rights issues (Côté, 2023). Systemic neglect and abuse of FSIW at the Kingston Penitentiary for Women (P4W) from 1934 to 2000 was the first formally documented carceral case (Guenther, 2024). Despite numerous investigations highlighting its failures, the prison remained open until a public outcry over the abusive treatment of female

inmates, broadcast nationally, forced its closure (Guenther, 2024). Subsequent inquiries revealed that the Kingston Penitentiary for Women (P4W) and other facilities failed to address FSIW unique needs, prompting the creation of healing lodges to provide culturally sensitive rehabilitative programming (McGuire & Murdoch, 2022; Schienbein, 1992). However, these alternatives remain limited in scope, leaving systemic gaps that continue to contribute to the disproportionate incarceration of Indigenous women.

The overrepresentation of Indigenous women in Canada's criminal justice system is indicated by constituting 46% of the federal prison population despite only being 5% of the female population (OCI, 2024). Although the percentage of FSIW decreased to 46% in 2024, they now represent 75% of the female population in maximum-security facilities, up from 70% in 2023 (OCI, 2024). Furthermore, FSIW account for 96% of those held in structured intervention units (SIUs) or segregation (Motiuk & Keown, 2022a; OCI, 2023; Senate of Canada, 2024; Sprott & Doob, 2021). These women not only face disproportionate criminalization but also experience high levels of victimization, with 78.6% reporting IPV, further compounded by intersecting systemic factors (Motiuk & Keown, 2022b). The dual criminalization of Indigenous women as both victims and offenders, influenced by substance abuse, criminal histories, and biases within the justice system, perpetuates cycles of incarceration and victimization (McGuire & Murdoch, 2022; Miller, 2017; National Inquiry into Missing and Murdered Indigenous Women and Girls [MMIWG], 2019a; TRC, 2015a, 2015b).

FASD, a neurodevelopmental condition resulting from PAE, emerges as a critical yet underexamined factor that may be contributing to the overincarceration crisis

(Mullally et al., 2023; Reese et al., 2022). However, misconceptions persist, including the false assumption that FASD directly causes criminal behavior or is disproportionately prevalent among Indigenous communities, claims that risk perpetuating harmful stereotypes (Milward, 2014a, 2014b; Tait et al., 2017; Wolfson et al., 2019). Instead, intersecting socioeconomic and historical factors, such as poverty and the lasting effects of colonialism, help explain the disproportionate rates of FASD among Indigenous populations (Palines et al., 2020). Canadian legal frameworks and correctional practices often fail to address the unique needs of individuals with FASD, relying on risk assessment tools and sentencing practices that disregard neurocognitive and cultural factors (McConnell, 2020; Mullally et al., 2023; Reese et al., 2022). This knowledge gap perpetuates cycles of victimization, criminalization, overincarceration, and inadequate reintegration support for Indigenous women with FASD (Flannigan et al., 2018b; Samaroden, 2018).

Although correctional reports seldom address FASD explicitly, researchers emphasize its role in amplifying risk factors, such as suggestibility and difficulties navigating complex systems, which can increase interactions with the justice system (Brown et al., 2022a; Brown et al., 2022b; Flannigan et al., 2018b; Samaroden, 2018). FASD is characterized by cognitive, behavioral, and emotional impairments, including challenges with impulse control, memory, and decision-making (Flannigan et al., 2023; Hemingway et al., 2019; Hemingway, 2024). These neurodevelopmental impairments contribute to a heightened vulnerability to criminalization, particularly within justice systems that do not accommodate such conditions (Flannigan et al., 2019; Flannigan et

al., 2022b; Flannigan et al., 2023; Mattson et al., 2019). For Indigenous women, these systemic gaps may exacerbate their risk of criminalization.

In 2015, the TRC issued two Calls to Action related to FASD, urging all levels of government and Canadians to address the intersection of FASD and the criminal justice system (TRC, 2015a). Call to Action 33 advocates for culturally appropriate FASD prevention programs, while Call to Action 34 calls for justice system reforms to better support individuals affected by FASD (TRC, 2015a; Stewart & Glowatski, 2018). Despite these calls, the prevalence of FASD among Indigenous offenders remains a critical yet underexplored factor in their overincarceration (McGuire & Murdoch, 2022; Walsh et al., 2023). This neglect continues to perpetuate cycles of criminalization, incarceration, and recidivism, reinforcing systemic inequities, colonial legacies, and intergenerational trauma (McLachlan et al., 2019; Mela et al., 2020; Tetrault, 2023).

In response to these persistent issues, the IJS, introduced in March 2025, represents a significant shift in Canada's approach to Indigenous justice, aligning with TRC Calls to Action 33 and 34 (JUS, 2025). The IJS emphasizes Indigenous-led, culturally appropriate alternatives to incarceration, recognizes FASD as a public health issue, and advocates for prevention strategies that address historical trauma, colonialism, and systemic inequities (JUS, 2025; TRC, 2015a). Additionally, the IJS supports FASD-informed justice practices, including screening, diversion programs, and rehabilitative alternatives to incarceration for individuals with neurodevelopmental conditions (JUS, 2025). However, gaps remain in the implementation of these reforms, underscoring the need for continued policy development and culturally appropriate legal frameworks to

address the overincarceration of Indigenous women with FASD.

This study examined psychologists' and psychiatrists' perspectives on the relationship between FASD-related deficits and the risk of criminal behavior. It explored strategies to promote equity, healing, and justice for FSIW with FASD. Theoretically, the study drew on historical trauma theory (HTT) and attachment theory (AT) to contextualize the challenges faced by FSIW. HTT highlights the lasting impacts of colonial policies, including systemic racism, the Sixties Scoop, forced sterilization, and the residential school system, which continue to affect Indigenous communities (Avalos, 2021; Brave Heart & DeBruyn, 1998; Brave Heart, 2003; Stote, 2012, 2015; Zephier Olson & Dombrowski, 2020). AT complements HTT by explaining how early relational disruptions, often exacerbated by intergenerational trauma, influence emotional regulation, social development, and behavioral patterns (Bowlby, 1969; Mukherjee et al., 2019).

The Multidimensional Indigenous Developmental Framework (MIDF) is a novel conceptual framework that integrates HT and AT. It emphasizes culturally grounded approaches to understanding the intersecting impacts of criminality and FASD alongside historical, intergenerational, and transgenerational trauma and systemic inequities. In this study, these traumas were collectively referred to as multifaceted trauma, which serves two purposes: (a) elucidating the underlying causes of criminal behavior among FSIW who may have FASD and (b) underscoring the importance of culturally sensitive, trauma-informed interventions focused on healing and reintegration. By integrating psychologists' and psychiatrists' views on how FASD-related cognitive deficits influence

criminal risk, the study addressed a critical gap in understanding the pathways to the overincarceration and reincarceration of Indigenous women in the Prairie Region and British Columbia. It also emphasized the importance of exploring the victim-offender continuum, an often overlooked aspect of this issue. The findings are expected to inform systemic reforms and the development of culturally relevant policies and practices in alignment with the TRC's Calls to Action (TRC, 2015a). These efforts are essential for breaking cycles of marginalization, reducing incarceration, and creating meaningful opportunities for Indigenous women with FASD.

Problem Statement

The overrepresentation of FSIW in Canada is alarmingly disproportionate. Although Indigenous women represent only 5% of the female population, they account for 46% of the federal prison population, 75% of maximum-security placements, and 96% of SIU stays (Motiuk & Keown, 2022a; OCI, 2023; PSC, 2022c, 2023b; Senate of Canada, 2024; Sprott & Doob, 2021). While structural and systemic issues have been studied, FASD is a potentially significant but underresearched variable in this difference. Research highlights a high prevalence of FASD among Indigenous inmates (Flannigan et al., 2018b; McLachlan et al., 2019), yet there are few empirical studies investigating its role in the incarceration and recidivism of Indigenous women. This study addressed that gap by examining the perspectives of psychologists and psychiatrists working with FSIW in the Prairie Region and British Columbia to better understand how FASD-related vulnerabilities intersect with justice system involvement.

Systemic inequalities, apart from public safety concerns, drive the frequent

placement of FSIW in maximum-security facilities, particularly in the Prairie region, which includes Alberta, Saskatchewan, and Manitoba (Gutierrez & Chadwick, 2020; OCI, 2023). In addition, 78.6% of FSIW report intimate partner violence (IPV), which indicates their intersectional risk (Motiuk & Keown, 2022b). The interaction between alcohol and drug use, criminal history, and countercharges in IPV cases also places Indigenous women on the justice trajectory (McGuire & Murdoch, 2022; Miller, 2017; MMIWG, 2019a; Murphy, 2014; Sheehy et al., 2012). High recidivism rates among FSIW emphasize the failure of current policies, which perpetuate cycles of victimization, imprisonment, and social isolation (McGuire & Murdoch, 2022; Vecchio, 2018).

FASD-related neurocognitive deficits, such as memory and executive functioning impairments, complicate legal interactions and increase vulnerability to criminalization (Flannigan et al., 2018b, 2018c, 2018d; McLachlan et al., 2019). This study did not seek to establish a causal link between FASD and criminality, as doing so risks reinforcing harmful stereotypes and deficit-based assumptions about Indigenous peoples (Flannigan et al., 2018b). Although FASD does not directly cause criminal behavior, it heightens risk factors for justice system involvement, including suggestibility and difficulty navigating legal processes (Brown et al., 2022a, 2022b; Samaroden, 2018). These vulnerabilities are compounded by socioeconomic disadvantage and intergenerational trauma, further isolating Indigenous women (Boyer & Kampouris, 2014; Samaroden, 2018; Totten & The Native Women's Association of Canada, 2010). Complex systemic and sociohistorical factors shape the relationship between FASD and criminal behavior (Mukherjee et al., 2023). The lack of comprehensive diagnostic frameworks and

culturally sensitive interventions contributes to underdiagnosis and high reoffending rates (Flannigan et al., 2018b, 2018c).

To date, no known studies have specifically explored psychologists' and psychiatrists' perspectives on the role of FASD-related deficits in contributing to the overincarceration and reincarceration of Indigenous women in Western Canada. Prior research has examined the intersection of FASD and justice system involvement broadly (Brown et al., 2022a; Flannigan et al., 2018b; Mukherjee et al., 2023). However, there remains a critical gap regarding practitioner insights on how FASD-related vulnerabilities may impact justice outcomes for this population. This study addressed that gap by centering the views, experiences, and expertise of psychologists and psychiatrists specializing in FASD and FSIW in the Prairie Region and British Columbia (Western Canada).

Purpose of the Study

The purpose of this study was to examine psychologists' and psychiatrists' perspectives on how FASD-related neurocognitive deficits contribute to the risk of criminal behavior among FSIW. It explored how these deficits lead to overincarceration and reincarceration within this marginalized group. A key focus was the victimization–offending continuum, which highlights how systemic victimization and broader structural and social dynamics intersect with FASD-related cognitive deficits to perpetuate cycles of criminalization. This study sought to promote a culturally responsive understanding of how FASD-related deficits link with criminalization cycles by incorporating views from expert psychologists and psychiatrists.

Research Question

What are psychologists' and psychiatrists' views, perspectives, and opinions on the role that FASD-related cognitive deficits may play in the risk for criminal behavior resulting in the overincarceration and reincarceration of FSIW in Western Canada (the Prairie Region and British Columbia)?

Theoretical Foundation

The legacy of historical trauma continues to shape the lived experiences of Indigenous peoples, particularly concerning systemic inequities, justice involvement, and intergenerational well-being. HTT provides a framework for understanding how cumulative trauma, rooted in colonization, residential schools, and forced assimilation, has led to enduring psychological, social, and behavioral consequences (Brave Heart & DeBruyn, 1998). Based initially on Rakoff et al.'s work with Holocaust survivors (Sigal & Rakoff, 1971; Sigal et al., 1973), HTT has been validated through research linking historical trauma to adverse mental health outcomes such as depression, substance misuse, and emotional distress (Brave Heart et al., 2011; Wilk et al., 2017). AT complements HTT by addressing how early relational disruptions, often exacerbated by intergenerational trauma, influence emotional regulation, social development, and behavioral patterns (Bowlby, 1969; Mukherjee et al., 2019). Together, these theories, which will be detailed in Chapter 2, provide an integrated framework for examining how systemic and developmental factors contribute to the overincarceration of FSIW. This study integrated HTT and AT within the MIDF to explore the intersection of trauma, attachment, FASD-related deficits, and criminal behavior among FSIW in Western

Canada (the Prairie Region and British Columbia).

HTT and AT

HTT provides a lens to examine the cumulative, multifaceted impacts of colonization in Canada, including the 1876 Indian Act, Residential Schools, and the Sixties Scoop, which have disrupted Indigenous families and cultural continuity (Matheson et al., 2022; TRC, 2015a, 2015b). Sigal and Rakoff (1971) initially rooted HTT in observations of trauma transmission among Holocaust survivors. Brave Heart (2003) later expanded the framework to highlight unresolved grief in Native American communities, linking historical trauma to issues such as alcohol abuse, violence, and suicide. When applied to Indigenous populations, HTT can explain how systemic oppression and multifaceted trauma contribute to social vulnerabilities, including the overrepresentation of Indigenous women in correctional systems (Boska et al., 2015; Choate & Tortorelli, 2022). This framework underscores how historical loss, normalized substance misuse, and trauma exacerbate the impact of FASD-related deficits on criminal behavior risks (Brave Heart, 2003; Gone et al., 2019).

AT, conceptualized by Bowlby (1969), highlights how early bonds between caregivers and infants influence social and emotional development. PAE disrupts secure attachment formation due to neurocognitive impairments, perpetuating multifaceted cycles of attachment difficulties and maladaptive coping mechanisms such as substance use (Mukherjee et al., 2019; Pei & Burke, 2018). Insecure attachment, compounded by multifaceted trauma and adverse childhood experiences (ACEs), increases the likelihood of criminal behavior, particularly among individuals with FASD (Cook et al., 2023;

Greenspan & Woods, 2018; Tan et al., 2022). HTT and AT offer critical insights into the developmental and historical mechanisms underpinning criminal offending among FSIW. These frameworks provide a comprehensive lens to understand the complex interplay among multifaceted trauma, PAE, attachment disruptions, and FASD-related impairments, helping illuminate pathways to criminal behavior and overincarceration (Flykt et al., 2021; Mukherjee et al., 2023; Sessa et al., 2022).

MIDF

The MIDF integrates HTT and AT, offering a holistic framework for understanding the interplay of multifaceted trauma, neurodevelopmental impairments, systemic inequities, and the overincarceration of FSIW. It emphasizes the role of cultural identity, neurodevelopmental impacts of PAE, and trauma (Choate et al., 2020) while criticizing systemic inequities. This framework, outlined in Chapter 2, advocates for culturally grounded interventions to address these issues and reduce overincarceration. Tait's (2003) seminal work underscores a critical link between the enduring legacy of residential schools and increasing FASD prevalence among Indigenous communities. The latter's heightened susceptibility to FASD warrants an examination of the interplay of FASD, criminal justice involvement, and the disproportionate incarceration rates observed among FSIW. A comprehensive understanding of these phenomena requires an in-depth examination that contextualizes them within the historical framework of systemic oppression and the continuing repercussions of colonialism.

By incorporating HTT and AT into the MIDF, a conceptual framework, this study adopted a holistic approach to examining the variables that influence criminal conduct

among Indigenous women with FASD. The primary objective of this research was to gain insights into the intersection of FASD, FSIW, and criminal behavior through interviews with psychologists and psychiatrists specializing in this field. The MIDF guided the investigation into psychologists' and psychiatrists' perspectives on the role of FASD in criminal behavior, to inform culturally sensitive policies and practices that promote healing and change within the criminal justice system. Through this exploration, the study sought to contribute to the development of targeted interventions and support services tailored to the specific needs of this marginalized population, reducing overincarceration and improving reintegration outcomes.

Nature of the Study

This study addressed a critical gap in the literature by examining how FASD-related deficits contribute to the criminalization of FSIW in Western Canada. It explored how FASD-related risk factors shape cycles of imprisonment, reintegration, and reincarceration, with a particular focus on the often-overlooked victim–offender continuum. Using a qualitative approach, this research captured the perspectives of psychologists and psychiatrists specializing in FASD who work with FSIW, uncovering how FASD-related cognitive deficits may contribute to criminal behavior and overincarceration. While recidivism was not the primary focus, its relationship with FASD could provide valuable insights into the high rates of reincarceration among this population.

A qualitative research design enables a comprehensive analysis of this complex issue, allowing in-depth exploration of participants' experiences and perspectives

(Busetto et al., 2020). Grounded in HTT and AT within the MIDF framework, this study employed semi-structured interviews with psychologists and psychiatrists who work with FSIW and those affected by FASD. Participants were recruited using expert sampling, a purposive approach that selects individuals with specialized knowledge relevant to the research question (Elfil & Negida, 2017; Palinkas et al., 2015). Collaboration with the Northwest Central Alberta FASD Network (NWC FASD Network) helped identify suitable participants. Given the focused nature of this study, 10 in-depth interviews were conducted to achieve thematic saturation, in line with qualitative research standards for small, homogeneous samples (Elfil & Negida, 2017; Palinkas et al., 2015).

Data were analyzed using Taguette (Rampin et al., 2021) with reflexive thematic analysis (RTA) and the constant comparative analysis method (CCA). RTA prioritizes researcher reflexivity and the organic emergence of themes (Braun & Clarke, 2019, 2021), while CCA enhances analytical rigor through continuous comparison, refining categories, and capturing the depth of participants' experiences (Fram, 2013). Although initially associated with grounded theory, CCA is adaptable across qualitative methodologies, including thematic analysis, ensuring an iterative and dynamic approach to theme development. This study integrated a living codebook to enhance transparency, depth, and rigor (Reyes et al., 2024) to systematically track, refine, and document coding decisions, ensuring consistency and reliability in a solo research setting. This structured yet flexible framework strengthens methodological integrity, fostering a nuanced interpretation of the intersection between FASD and criminalization among FSIW.

Kerimofski et al. (2025) successfully conducted a similar qualitative study

in Australia using a comparable methodology. The participants, including 10 psychologists with lived experience of FASD, were interviewed to gain insight into FASD assessment, training needs, and opinions on universal screening for PAE. Thematic analysis using NVivo revealed five major themes: stigma and stereotypes, support for universal screening, diagnostic problems, a lack of post-diagnostic support, and enhanced FASD-specific training. The findings emphasized the importance of including FASD education in psychology programs to improve diagnosis and treatment. One notable limitation was the psychologists' and psychiatrists' higher baseline FASD knowledge, which may not represent the entire profession, as identified in a previous study by Kerimofski et al. in 2024.

Definitions

Fetal alcohol spectrum disorder (FASD): FASD is a complex, lifelong condition stemming from maternal alcohol exposure, encompassing a spectrum of physical, cognitive, and behavioral impairments (Banerji & Shah, 2017; McLachlan et al., 2020a; Mela, 2023). Its development is influenced by biological, genetic, environmental, and social factors, leading to health disparities, social injustices, and multifaceted effects (DeAngelis, 2019, 2023; Flannigan et al., 2022a; McQuire et al., 2020; McQuire et al., 2024). The Diagnostic and Statistical Manual of Mental Disorders (DSM-5) delineates various FASD conditions, including Fetal Alcohol Syndrome (FAS), Partial FAS (pFAS), Alcohol-Related Neurodevelopmental Disorder (ARND), and Alcohol-Related Birth Defects (ARBD) (American Psychiatric Association [APA], 2013).

Gladue: The *Gladue* principle plays a critical role in various stages of the

criminal justice process, advocating for culturally appropriate sentences and alternatives to incarceration (Dickson & Stewart, 2021; Ewing & Kerr, 2023; Marchetti et al., 2023; McConnell, 2020; Mullally et al., 2023). Personalized pre-sentencing reports, or *Gladue* reports, provide detailed information on mitigating factors for judges to consider, encouraging individualized assessments and promoting alternatives to imprisonment (Dickson & Stewart, 2021; Edwards, 2017; Murti, 2023).

Indigenous Peoples: In Canada, Indigenous peoples (or Aboriginal peoples) are a collective term that refers to First Nations (both Status and non-Status), Métis, and Inuit peoples, the original inhabitants (Parrott, 2023).

Intimate partner violence (IPV): IPV specifically refers to harm experienced by an individual within an intimate relationship due to the actions of their partner. It does not encompass the broader impact on other family members affected by the situation. Other terms like family violence, partner violence, or domestic abuse are used interchangeably. However, they may not fully capture the situation's complexity, as they may exclude non-partner individuals affected by the abuse (Aranda-Hughes et al., 2025; Hoffart & Jones, 2018).

Recidivism or repeat offending: Recidivism, also known as repeat offending, is defined as any recurrence of a criminal offense under the Federal Framework to Reduce Recidivism (Public Safety Canada [PSC], 2022e).

Truth and Reconciliation Call For Action 33: “We call upon the federal, provincial, and territorial governments to recognize as a high priority the need to address and prevent FASD, and to develop, in collaboration with Aboriginal people, FASD

preventive programs that can be delivered in a culturally appropriate manner” (TRC, 2015a, p. 4).

Truth and Reconciliation Call For Action 34: “We call upon the governments of Canada, the provinces, and territories to undertake reforms to the criminal justice system to better address the needs of offenders with FASD, including:

- i. Providing increased community resources and powers for courts to ensure that FASD is properly diagnosed, and that appropriate community supports are in place for those with FASD.
- ii. Enacting statutory exemptions from mandatory minimum sentences of imprisonment for offenders affected by FASD.
- iii. Providing community, correctional, and parole resources to maximize the ability of people with FASD to live in the community.
- iv. Adopting appropriate evaluation mechanisms to measure the effectiveness of such programs and ensure community safety” (TRC, 2015a, p. 4).

Assumptions

Before beginning my study, I carefully considered the assumptions underlying my research question. First, I assumed that a connection exists between FASD-related deficits and criminal behavior among Indigenous women in the Prairie Region and British Columbia. Additionally, I hypothesized that cognitive-related deficits of FASD could increase the likelihood of engaging in criminal activity. I also assumed that psychologists’ and psychiatrists’ perspectives on FASD and its relationship to criminal behavior will be crucial in shaping strategies to reduce the overincarceration of FSIW.

These assumptions are particularly relevant given the limited research on repeated criminal involvement and reincarceration patterns among Indigenous women in the Prairie Region and British Columbia.

With their specialized expertise, psychologists and psychiatrists can provide critical insights into how FASD may influence criminal behavior while also addressing broader systemic factors, such as complex trauma, attachment issues, and social disparities, that contribute to the overrepresentation of Indigenous women in the criminal justice system. A fundamental assumption guiding my research was the importance of cultural sensitivity. I assumed that psychologists and psychiatrists working with Indigenous populations recognized the value of cultural competence, which significantly impacts the effectiveness of interventions. I anticipated their insights would inform targeted interventions and support measures tailored to Indigenous women affected by FASD, fostering optimism about the potential for meaningful social change resulting from this study's findings.

Scope and Delimitations

This study did not involve direct interviews with FSIW due to ethical, institutional, and cultural sensitivities. The Correctional Service of Canada has established stringent guidelines to protect the safety and privacy of inmates, making it difficult to obtain permission (Government of Canada [GC], 2017). Reports indicate that FSIW often experience trauma, raising concerns about the potential for re-traumatization (GC, 2017). Additionally, collaboration with FSIW must adhere to the principles of Indigenous sovereignty (GC, Inter-Agency Advisory Group on Research Ethics, 2022).

Walden University's policies discourage doctoral students from conducting research involving vulnerable populations (Walden University, Office of Research and Doctoral Services, n.d.).

To address these constraints, this study focused exclusively on the perspectives of psychologists and psychiatrists who interact with FSIW and have specific experience with FASD. Their insights provided a deeper understanding of how deficits related to FASD influence criminal behavior and the systemic challenges FSIW face. The study ensured an ethical and feasible research approach by narrowing the sample to psychologists and psychiatrists with expertise in these areas. Additionally, this focus allowed for the exploration of culturally appropriate strategies for intervention and support. This study sought to enhance knowledge that informs policies and practices to reduce the overincarceration of FSIW.

Limitations

Qualitative research inherently presents limitations, including challenges in generalizability and potential researcher bias (Jerolmack, 2023). Unlike quantitative studies, qualitative research does not rely on predetermined sample sizes or statistical calculations (Hennink & Kaiser, 2022). Instead, the sample size is determined by saturation, where no new themes or significant variations emerge (Malterud et al., 2016). This study included 10 participants, a sample size aligned with its objectives and methodology (Jerolmack, 2023). Research suggests that even small samples, such as six participants, can achieve saturation, while larger samples may yield diminishing returns (Guest et al., 2006).

Participants were recruited through expert sampling, a subtype of purposive sampling that selects individuals with specialized knowledge relevant to the research question (Elfil & Negida, 2017; Palinkas et al., 2015). The purpose of this study was to examine psychologists' and psychiatrists' perspectives on how FASD-related neurocognitive deficits may contribute to the risk of criminal behavior among FSIW. This approach was therefore warranted given the study's focus on psychologists and psychiatrists with expertise in FASD and FSIW. In addition, literature supports the notion that small, homogeneous samples frequently reach saturation, reinforcing the adequacy of this sample size (Elfil & Negida, 2017; Palinkas et al., 2015).

Methodological Limitations

While this study employed RTA and the CCA to enhance analytical depth and rigor, several methodological limitations must be acknowledged. RTA requires active researcher involvement in shaping interpretations, which introduces potential bias (Braun & Clarke, 2019, 2021). Although reflexivity helps mitigate this risk, personal perspectives could still influence theme development. Researcher subjectivity may shape the identification and refinement of themes, impacting the study's findings. To address this, I maintained a reflexive journal to document analytic decisions and enhance transparency.

Similarly, while CCA strengthens analytical rigor through continuous comparison and category refinement (Fram, 2013), applying it outside a grounded theory framework may lead to over-categorization or thematic fragmentation. These risks can complicate rather than clarify findings, making it essential to ensure coherence in theme

development. To mitigate this, themes were reviewed iteratively, allowing for necessary refinements while maintaining conceptual clarity. I prioritized depth over excessive thematic breadth to prevent fragmentation. This approach ensured that the analysis remains comprehensive yet focused.

Additionally, as a solo researcher, maintaining inter-rater reliability is more challenging than in team-based studies, where multiple coders enhance consistency. Data interpretation relies on a single perspective without multiple coders, which can introduce unintended biases. To improve reliability, a living codebook (Reyes et al., 2024) was used to systematically document coding decisions. Expert feedback and peer review were external validation measures to strengthen analytic rigor. These steps enhanced the study's credibility despite the limitations of solo research.

Trustworthiness

Lincoln and Guba (1985) introduced trustworthiness as a qualitative counterpart to validity and reliability in quantitative research, emphasizing credibility, transferability, dependability, and confirmability. These elements ensure rigor and transparency, allowing readers to assess the quality of the findings. The study, therefore, used member checks, triangulation by comparing data across sources, and reflexivity to enhance credibility. Transferability was supported through thick descriptions and contextual details to help others determine applicability. Dependability was addressed by maintaining an audit trail and engaging in peer debriefing, ensuring methodological consistency. Lastly, confirmability was achieved by documenting researcher bias, triangulating data, and maintaining an audit trail to ensure findings were grounded in

participant data rather than personal assumptions.

Generalizability and Ethical Considerations

Finally, the generalizability of the findings is inherently limited by the qualitative design, as the study focuses specifically on FSIW in Western Canada. Qualitative research does not seek to produce broadly generalizable results but prioritizes rich, contextualized insights. While the findings may not apply to all populations, they will provide an in-depth understanding of the lived experiences of FSIW with FASD. The insights gained can inform policy, practice, and future research on the intersection of FASD and criminalization. Acknowledging these limitations ensures transparency while reinforcing the study's contribution to the field.

As a non-Indigenous researcher, I remained vigilant about potential biases that could influence this study. Although participants were psychologists and psychiatrists who work with FSIW, their diverse backgrounds could have introduced cultural differences and nuances that shaped their perspectives. Additionally, my preconceived notions regarding the roles and experiences of FSIW with FASD could lead to confirmation bias. This could affect the questions posed and the interpretation of responses, inadvertently shaping the research process. I engaged in ongoing reflexivity to mitigate these risks, critically examining my assumptions throughout the research.

Ethical Approaches to Mitigating Risks

Stigma and negative stereotypes, both within and outside the criminal justice system, can reinforce misconceptions about Indigenous communities and alcohol use (Aspler et al., 2021; McLachlan et al., 2020b; Milward, 2014a). A common

misconception is that FASD is disproportionately prevalent among Indigenous populations (Chu et al., 2024; Flannigan et al., 2021a, 2021b; Stewart & Glowatski, 2018; Wolfson et al., 2019). Consequently, there is a risk of perpetuating stereotypes or reinforcing stigmatizing attitudes toward FSIW. This could also create power imbalances in researcher-participant relationships, affecting the depth and authenticity of the data. Addressing these concerns requires a commitment to ethical research practices and to prioritizing respect, cultural sensitivity, and awareness.

To counter these risks, I used precise, non-stigmatizing language (FASD United, 2024) and critically examined my assumptions to mitigate potential harm. I also ensured responsible scholarship guides the research process, reflecting a commitment to ethical conduct. It is essential to avoid oversimplified causal narratives regarding overrepresentation in the criminal justice system (Flannigan et al., 2018b). By carefully considering these aspects, I intended to avoid reinforcing harmful stereotypes and ensure the research does not contribute to bias. These steps helped safeguard the study's integrity and promote more accurate and respectful representations of the findings.

This study upheld transparency and rigor by acknowledging methodological and ethical limitations, thereby ensuring that findings were interpreted appropriately. Ethical research practices and reflexivity guided the research process, ensuring that cultural sensitivity and respect are at the forefront. The study sought to provide valuable insights into FSIW experiences with FASD, while recognizing and addressing potential risks. These efforts supported responsible scholarship and meaningful engagement with the issues. These considerations strengthened the credibility of the study and its findings.

Significance of the Study

This study explored the role of cognitive deficits related to FASD in pathways to criminal behavior that might contribute to the overincarceration of FSIW, addressing critical gaps in research and representation. Indigenous women with FASD face unique neurocognitive vulnerabilities compounded by disrupted attachment, trauma, and systemic injustices. These intersecting factors perpetuate cycles of incarceration and underscore the urgent need for targeted interventions. Additionally, this study examined how neurocognitive problems associated with FASD, particularly when combined with depression, suicidality, and unresolved trauma, may shape trajectories of criminal behavior. Understanding these complexities is essential to developing responsive, culturally informed solutions.

This research highlighted the linked vulnerabilities that contribute to FSIW overincarceration and reincarceration by thoroughly examining the continuum from victimization to offending. Addressing gaps in existing research underscores the critical need for timely screening, precise identification, and implementation of culturally appropriate interventions. The study sought to inform policies and correctional practices that mitigate systemic barriers, such as stigma and limited clinical understanding. Equitable justice outcomes remain a pressing concern for FSIW with FASD, requiring greater awareness and specialized responses. This research, therefore, advocates evidence-based reforms that promote justice and rehabilitation.

As a non-Indigenous researcher, I approached this work with humility, transparency, and respect, recognizing the privilege and responsibility of addressing

issues impacting Indigenous communities. Rather than involving FSIW directly, this study engaged psychologists and psychiatrists with expertise in FASD and FSIW to provide insights into the systemic, psychological, and cultural factors driving overincarceration. This approach ensured an ethical and respectful exploration of these complex issues. By centering expert perspectives, this study was designed to generate meaningful knowledge that can guide policy and practice. It strives to contribute to a more just and culturally responsive criminal justice system.

Summary

This chapter addressed the ongoing overrepresentation of FSIW within the Canadian criminal justice system. While awareness of FASD's potential role as a risk factor in this overrepresentation is increasing, empirical evidence on its prevalence and effects remains limited. This research gap underscores the urgency of investigating how FASD-related deficits can contribute to criminal behavior among FSIW in Western Canada and their impact on incarceration and reincarceration rates. The problem statement and research question have been presented alongside the study's purpose and significance, emphasizing its potential for social change. Additionally, this chapter highlights the theoretical and conceptual frameworks, definitions, assumptions, scope, delimitations, and limitations.

This qualitative study examined psychologists' and psychiatrists' perspectives on the potential role of FASD-related neurocognitive impairments in increasing justice system involvement among Indigenous female offenders in Western Canada, guided by the MIDF, which integrates HTT and AT. Chapter 2 presents a literature review that

further explores the nexus between PAE, FASD-related neurocognitive deficits, criminal behavior, and examines their connection to the criminal justice system and the overincarceration of FSIW. This chapter also elaborates on the theoretical and conceptual framework of this study.

Chapter 2: Literature Review

The overincarceration of FSIW remains a long-standing human rights concern rooted in systemic inequities and colonial legacies (Côté, 2023). Historically, Indigenous women experienced disproportionate incarceration, neglect, and abuse in facilities such as the Kingston Penitentiary for Women (P4W), where inhumane conditions persisted until the institution's closure in 2000 (Guenther, 2024). Public outcry following the deaths and mistreatment of Indigenous women at Kingston Penitentiary for Women (P4W) between 1988 and 1991 led to its closure and the establishment of culturally responsive alternatives, including healing lodges (Correctional Service Canada [CSC], 1990; Guenther, 2024; McGuire & Murdoch, 2022; Vecchio, 2018). Today, although Indigenous women comprise only 5% of the Canadian adult female population, they are overrepresented in the federal correctional system (Statistics Canada, 2023b). According to the OCI (2024), FSIW now account for nearly half of all federally incarcerated women, with 75% classified as maximum-security inmates and 96% experiencing SIU placements (OCI, 2024; Wanamaker & Chadwick, 2023).

The TRC identified FASD as a critical issue linked to intergenerational trauma and alcohol use among Indigenous populations, patterns intrinsically tied to colonial disruption (Bombay et al., 2014; Tait, 2003; TRC, 2015a). TRC Calls to Action 33 and 34 advocate for culturally appropriate FASD prevention strategies, accurate diagnoses, and restorative justice initiatives to reduce Indigenous overincarceration (Stewart & Glowatski, 2018; TRC, 2015a, 2015b). Similarly, the Calls for Justice (CFJ) from the National Inquiry into Missing and Murdered Indigenous Women and Girls (MMIWG)

emphasize the enduring impacts of colonial violence, systemic discrimination, and intergenerational trauma that heighten Indigenous women's vulnerability to criminalization (MMIWG, 2019a, 2019b). The Assembly of First Nations (AFN) and the 2025 IJS echo these priorities, calling for trauma-informed, culturally grounded, and community-led justice responses (AFN, 2024; JUS, 2025). Collectively, these frameworks highlight the urgent need for systemic reforms that acknowledge the complex realities of Indigenous women affected by FASD and related vulnerabilities.

Despite sustained advocacy and research indicating a high prevalence of FASD among Indigenous inmates (Flannigan et al., 2018b; McLachlan et al., 2019), empirical studies specifically examining the role of FASD vulnerabilities in the overincarceration and reincarceration of Indigenous women remain scarce. FASD-related neurocognitive deficits, including impairments in executive functioning, memory, and adaptive behavior, have been shown to complicate individuals' interactions with the criminal justice system (Mela, 2023; Mela et al., 2024; Reid et al., 2023). Although FASD is a potentially critical factor contributing to the disproportionate criminalization of Indigenous women, it remains under-addressed within correctional policies and practices. As a result, individuals living with FASD often encounter cycles of criminalization, systemic marginalization, and barriers to meaningful reintegration (Flannigan et al., 2018b; Samaroden, 2018). The purpose of this study was to address this gap by exploring psychologists' and psychiatrists' perspectives on how FASD-related vulnerabilities intersect with criminal justice involvement among FSIW in Western Canada.

This chapter establishes the theoretical and contextual framework for the study.

It begins by establishing two major theories: HTT, AT, and the MIDF, a conceptual framework, which together provide a lens for understanding the developmental and systemic elements that influence the experiences of FSIW. The chapter then examines the impacts of PAE, including neurological, behavioral, and social consequences, as well as implications for justice system involvement, associated stigmas, and opportunities for systemic change. Finally, it discusses the overincarceration of FSIW, exploring contributing factors, barriers to culturally responsive support, and gaps within existing legal frameworks. It also highlights key tools and recommendations for addressing systemic inequities.

Literature Search Strategy

The literature review in this chapter draws on HTT and AT to illustrate the significance of these frameworks for understanding the relationships among PAE, FASD, and criminal behavior. By integrating these theories into a MIDF, this study provided a comprehensive perspective on FASD research that considers trauma's cultural and psychological dimensions. The literature review thoroughly examines three key areas: (a) the effects of PAE and its associated comorbid risk factors; (b) the symptoms and impairments resulting from PAE; (c) and the current approaches of the Canadian CJS to address FASD among FSIW.

I focused on literature from various fields, including social work, human services, sociology, criminology, and psychology. Although I set a limit to include only pieces published in the previous 5 years, some cited articles were published earlier. Upon discovering that they were well-recognized and contributed to my field of study, I

decided to include these earlier publications in my review. Journals, books, public health organizations, Government of Canada publications, and TRC reports were consulted throughout this investigation. I used EBSCOhost, MEDLINE, ProQuest, PsycINFO, SAGE Journals, and the Thoreau Multi-Database Search for my search. I also scanned doctoral dissertations and Indigenous websites that provided details on FASD and incarcerated FSIW in Canada and around the world. The following terms, among others, comprised the keywords I used for the literature search: *Indigenous offenders, Alberta FASD, alcohol consumption, attachment theory, British Columbia FASD, Canada, correctional, criminal behavior, criminal justice, criminality, culpability, Canadian criminal justice, diminished responsibility, discrimination in the Canadian justice system, epigenetics, ethnocultural offenders, federal corrections, federal prisons, Federally Sentenced Indigenous Women, Fetal Alcohol Spectrum Disorder, FASD, First Nations offenders, Gladue, historical trauma, Indigenous offenders, intergenerational impact, intergenerational trauma, Prenatal Alcohol Exposure (PAE), neurodevelopmental challenges, Post-Traumatic Stress Disorder (PTSD), recidivism, residential schools, residential school survivor, and suggestibility.*

Theoretical Foundation

The two interconnected theories that ground this research are HTT and AT. HTT theorizes that intergenerational impacts of colonization, such as cultural displacement and systemic institutional discrimination, still impact the well-being and affective outcomes of Indigenous people (McQuaid et al., 2022; Reid et al., 2023). AT proposes that early attachment disruption, which is typical for individuals who have experienced trauma or

instability, will impair emotional regulation, and heighten potential contact with the justice system (Gone & Kirmayer, 2020; Narayan et al., 2021). MIDF, a novel model, extends these theories by highlighting Indigenous worldviews and by acknowledging development as an integrated, interrelated process across spiritual, emotional, mental, and physical realms. Cumulatively, these frameworks presume that the overincarceration of FSIW with FASD is inexplicable beyond colonial histories, disrupted caregiving, and culturally misaligned systems. As a non-Indigenous researcher, this study also presumed that culturally respectful, reflexive, and attentive methods are necessary for conducting ethical research and developing relevant, inclusive knowledge (Ghanbari, 2023).

HTT

Dr. Vivian M. Rakoff and her colleagues, observing trauma transmission among Holocaust survivors' descendants, developed the HTT (Sigal & Rakoff, 1971; Sigal et al., 1973). Brave Heart and DeBruyn (1998) built on this basis by expanding HTT to explain unresolved grief in Native American cultures caused by colonization, forced assimilation, and institutional oppression. This concept connects historical trauma to negative consequences such as substance abuse, aggression, and suicide (Brave Heart, 2003). HTT has since evolved to provide a framework for understanding the multigenerational transmission of trauma, often using terms like intergenerational and transgenerational trauma to describe the various ways trauma is perpetuated (Brave Heart et al., 2011; Evans-Campbell, 2008; Isobel et al., 2021; Matheson et al., 2022). In this study, historical, intergenerational, and transgenerational trauma were collectively referred to as multifaceted trauma to illustrate the collective nature of trauma transmission. This

perspective is essential for understanding the cumulative effects of historical and ongoing harm on Indigenous women's pathways into the justice system.

Application of HTT

Historical trauma in Canada stems from colonial policies such as the Indian Act of 1876 and the Indian Residential School (IRS) system, which disrupted Indigenous governance, family systems, and cultural continuity (Evans-Campbell, 2008; Matheson et al., 2022; Maxwell, 2014; McQuaid et al., 2022). This legacy is significant for Indigenous people with FASD, whose behavioral vulnerabilities may be exacerbated by trauma exposure, increasing the likelihood of criminalization (McQuaid et al., 2022; Reid et al., 2023). Bombay et al. (2014) provide firm empirical grounding for the concept of intergenerational trauma within Indigenous people in Canada, where the effects of trauma are transmitted within families across generations. The trauma associated with the IRS, in particular, continues to affect subsequent generations, contributing to ongoing psychological distress and social challenges in Indigenous families (Bombay et al., 2014). The trauma-related effects frequently manifest as challenges with emotional regulation, attachment, and coping (Isobel et al., 2019; Isobel et al., 2021; Spillane et al., 2023).

In contrast, transgenerational trauma encompasses broader societal transmission, including the collective trauma experienced by entire populations due to historical events like colonization (Matheson et al., 2022). Transgenerational trauma, according to Spillane et al. (2023), refers to the long-term consequences of trauma experienced by entire cultural or ethnic communities throughout numerous generations. O'Neill et al. (2016) examined how the transmission of transgenerational trauma across generations in

Canadian Indigenous communities can occur through biological mechanisms like epigenetics. This paradigm acknowledges how collective traumas like colonization, genocide, and systemic racism become ingrained in cultural memory and institutional structures (Matheson et al., 2022). These legacies form group identity, impact community behavior, and perpetuate cycles of disadvantage (Isobel et al., 2019; Isobel et al., 2021; Matheson et al., 2022). O'Neill et al. highlighted the importance of understanding these complex trauma processes to inform healing and support strategies within Indigenous communities.

The forced sterilization of Indigenous women in Canada is one example of systemic violence, which adds to intergenerational trauma rooted in colonial ideas comparable to those driving the IRS and the Sixties Scoop (Shawana et al., 2021). Indigenous women were disproportionately targeted under Alberta's Sexual Sterilization Act of 1928, with many being labeled as mentally unfit based on biased IQ testing (Stote, 2015). Between 1970 and 1975, Indian hospitals sterilized roughly 1,200 Indigenous women in the name of population control and cost-cutting initiatives (Collier, 2017; Stote, 2012, 2015). Although governmental support for sterilization programs ceased in the 1970s, these practices remained; from 2015 to 2019, over 100 Indigenous women reported being pressured or forced into sterilization (Stote, 2012, 2015). These acts, widely acknowledged as human rights abuses, indicate systematic racism in Canadian healthcare and legal institutions (Organization of American States [OAS], 2019), leading to mistrust of services, community disintegration, and cultural loss (Shawana et al., 2021; Stote, 2015).

ACEs

Indigenous children with PAE encounter compounded adversities, such as cultural disconnection and systemic inequities, intensified by ACEs. Caregivers' ACEs affect attachment dynamics, perpetuating trauma cycles (Narayan et al., 2021). Maternal alcohol abuse often leads to insecure attachment styles linked to maladaptive behaviors and criminal activity (Cook et al., 2021; Greenspan & Woods, 2018). The multifaceted transmission of ACEs, particularly in Indigenous communities affected by PAE, is marked by elevated ACE scores and vulnerabilities, leading to cognitive impairments and emotional distress (Cooke et al., 2018; Flannigan et al., 2018b; Flannigan et al., 2021a; Orton et al., 2023; Price et al., 2017; Zhang et al., 2023). These exacerbate neurodevelopmental deficits in executive functioning and emotional regulation (Khalifa et al., 2021; Mela et al., 2018), contributing to criminal behavior risks. ACEs, trauma, and FASD intersect to exacerbate mental health challenges and impairment affect regulation, increasing the likelihood of criminal behavior (Brown et al., 2022a; Brown et al., 2022b; Flannigan et al., 2022a). Sheahan and Wardrop (2023) also reported that the childhood experience of substance misuse in the household was the most common ACE among Indigenous female offenders.

Systemic inequities obstruct healing, necessitating trauma-sensitive, culturally informed interventions (Temple et al., 2019). These adversities can lead to severe outcomes, including violence, human trafficking, and involvement in the juvenile justice system, predicting future criminality (Bombay et al., 2014; Brockie et al., 2015). Biological impacts of trauma, compounded by PAE, result in neurodevelopmental

vulnerabilities, enhancing ACEs' effects and linking to criminality (Flannigan et al., 2021a; Price et al., 2017).

Broader Impacts of Multifaceted Trauma

While no clear causal relationship has been established between historical trauma, criminal conduct, and the deficits related to FASD, the emotional distress experienced by survivors of historical and intergenerational trauma may lead to alcohol use as a coping mechanism, increasing the risk of Prenatal Alcohol Exposure (PAE) and justice system involvement (Bombay et al., 2014; Brave Heart, 2003; Reid et al., 2023). Indigenous communities continue to experience disrupted cultural practices and socio-economic marginalization, contributing to high rates of mental health issues and incarceration (Bombay et al., 2014; Bombay et al., 2020; Harding et al., 2022; McQuaid et al., 2022). Substance use, often linked to both historical and lived trauma, further exacerbates these outcomes (Spillane et al., 2023; Toombs et al., 2023; Zephier Olson & Dombrowski, 2020). ACEs and multifaceted trauma can shape a trajectory into the criminal justice system (Samaroden, 2018; Spillane et al., 2023).

In 2022, Motiuk and Keown reported that 78.6% of FSIW reported experiencing intimate partner violence (IPV). A study by Aranda-Hughes et al. (2025) examined how negative social reactions to disclosures of IPV worsened mental health, including higher PTSD, depression, and emotional processing difficulties (e.g., alexithymia) among Indigenous women. Findings show that unsupportive responses correlate with worse mental health outcomes and emotional processing challenges, highlighting the importance of culturally grounded support for trauma recovery. Despite the study's

limitations, such as a small sample size and a narrow geographic focus on Indigenous women from a single location, these findings support the historical trauma framework, which suggests that experiences of rejection and isolation can trigger or strengthen trauma responses that are passed down across generations (Brave Heart et al., 2011).

In the context of Indigenous people in Canada, systemic and structural stressors are deeply rooted in the social fabric, and their origins can be traced back to the historical processes of colonization and forced displacement (Ansloos & Cooper, 2023). For some Indigenous women, these stressors have triggered poverty cycles, long-term health and well-being barriers, such as poor access to healthcare services and culturally-based care (Ansloos & Cooper, 2023; Lin et al., 2023). These stressors can occur throughout the life course, with intergenerational trauma influencing the range of responses (Aranda-Hughes et al., 2025; Substance Abuse and Mental Health Services Administration [SAMHSA], 2014). Gendered and Indigenous coping mechanisms to life stressors and trauma are considered survival strategies, such as avoidance and self-medication (SAMHSA, 2014; Simon et al., 2025). The reactions of traumatic stress are highly heterogeneous; people often use various behavioral strategies to manage the aftermath of traumatic events, the severity of emotion, or the disturbing aspects of the trauma episode (SAMHSA, 2014). Some alleviate tension or arousal using avoidant, self-medicating styles (e.g., alcohol misuse), compulsive styles (e.g., hyperphagia), impulsive behaviors (e.g., involvement in high-risk behavior), and/or self-injurious behavior (SAMHSA, 2014). On the other hand, there are those who strive to re-establish control over their experiential world through the expression of aggression or unconsciously recreating elements of the trauma (SAMHSA,

2014).

Such gendered coping strategies have been misunderstood in the justice systems as signs of noncompliance or even danger, thus strengthening punitive reactions at the cost of trauma-informed care. Understanding these cumulative experiences is essential to contextualizing FASD-related vulnerabilities and the risks of criminalization (Kambeitz et al., 2019; McQuaid et al., 2022). Trauma-informed and culturally grounded interventions are critical to breaking these cycles and addressing the intersecting impacts of FASD, trauma, and systemic inequities (TRC, 2015a, 2015b). Simon et al. (2025) also shed light on how women's experiences with stressors and coping mechanisms can strengthen or skew their understanding of autonomy and their capacity to control their own lives.

AT

AT, developed by Bowlby (1969), emphasizes the importance of early bonds between caregivers and infants in shaping social and emotional development, offering key insights into the relational and emotional effects of disrupted caregiving. Bowlby emphasized the importance of early caregiver-child bonds in shaping self-concept and emotional regulation by developing internal working models (Bowlby, 1969, 1988). Building on Bowlby's foundational work in attachment theory, Ainsworth (1978) expanded these concepts by developing the Strange Situation Procedure, a method for assessing attachment styles in young children. It identifies key attachment pattern styles: secure attachment and insecure types, such as anxious-avoidant and anxious-resistant attachment (Ainsworth, 1978).

Main and Solomon (1986, 1990) further expanded the theory and introduced the concept of disorganized attachment, often linked to trauma and caregiving inconsistencies. For instance, alcohol use during pregnancy disrupts attachment formation and exacerbates neurodevelopmental impairments associated with PAE. This combination can lead to insecure or disorganized attachment patterns, maladaptive coping mechanisms, and significant emotional dysregulation (Duschinsky, 2015; Mukherjee et al., 2019; Parolin & Simonelli, 2016). For children with FASD, these disruptions compound vulnerabilities, perpetuating cycles of multifaceted trauma and behavioral challenges (Pei & Burke, 2018).

Indigenous children with PAE encounter compounded adversities, including cultural disconnection and systemic inequities, mainly when they are part of child welfare systems (CWSs). As highlighted by Narayan et al. (2021), caregivers' ACEs significantly shape attachment dynamics, thereby reinforcing cycles of multifaceted trauma. AT can be considered intergenerational, as caregivers' ability to respond sensitively to newborns is directly proportional to their attachment experiences with their parents/caregivers, potentially resulting in intergenerational trauma (Gone & Kirmayer, 2020; Kirmayer et al., 2014). This trauma, exacerbated by historical and psychological oppression, can result in human rights violations, cultural loss, and systemic discrimination (Gone & Kirmayer, 2020; Kirmayer et al., 2014; Wright et al., 2025). It is thus crucial to prioritize Indigenous perspectives in service approaches and incorporate cultural components in interventions to recognize and respond to trauma transmitted through generations.

Indigenous youth with FASD face higher risks of substance use, maladaptive

coping, and delinquency due to attachment disruptions, early trauma, and deficits in affect regulation (Greenspan & Woods, 2018; Tan et al., 2022; Tan et al., 2025; Temple et al., 2019). Neurological impairments resulting from PAE hinder the formation of secure attachments, while unresolved trauma can drive substance abuse as a coping mechanism, exacerbating cycles of adversity and criminal behavior (Mukherjee et al., 2019; Pei & Burke, 2018). In a 2019 study, Cram and MacDonald found that 20% of FSIW used alcohol in the year leading up to their arrests. By 2023, this figure had risen to 81%, suggesting alcohol's significant role in criminal behavior among FSIW. Although alcohol use during pregnancy decreased, drug use rose, raising concerns about PAE and its impact on behavior (Cram & MacDonald, 2023). This highlights the need for targeted therapies to address substance abuse among FSIW and prevent further involvement with the criminal justice system.

Maternal Alcohol Abuse and Attachment Disruption

Alcohol use during pregnancy disrupts attachment formation and exacerbates neurodevelopmental impairments associated with PAE. This combination can lead to insecure or disorganized attachment patterns, maladaptive coping mechanisms, and significant emotional dysregulation (Duschinsky, 2015; Mukherjee et al., 2019; Parolin & Simonelli, 2016). For children with FASD, these disruptions compound vulnerabilities, perpetuating cycles of multifaceted trauma and behavioral challenges (Pei & Burke, 2018). Indigenous children with PAE encounter compounded adversities, including cultural disconnection and systemic inequities, mainly when they are part of child welfare systems (CWS).

As highlighted by Narayan et al. (2021), caregivers' ACEs significantly shape attachment dynamics, thereby reinforcing cycles of multifaceted trauma. AT can be considered intergenerational, as caregivers' ability to respond sensitively to newborns is directly proportional to their attachment experiences with their parents/caregivers, potentially resulting in intergenerational trauma (Gone & Kirmayer, 2020; Kirmayer et al., 2014). This trauma, exacerbated by historical and psychological oppression, can result in human rights violations, cultural loss, and systemic discrimination (Gone & Kirmayer, 2020; Kirmayer et al., 2014; Wright et al., 2025). It is crucial to prioritize Indigenous perspectives in service approaches and incorporate cultural components in interventions to recognize and respond to trauma throughout generations.

For Indigenous youth, the combined effects of attachment disruptions, early trauma, and Affect Regulation (AR) deficits linked to FASD markedly increase the risks of substance use, maladaptive coping strategies, and delinquent behaviors (Greenspan & Woods, 2018; Tan et al., 2022; Tan et al., 2025; Temple et al., 2019). Neurological impairments resulting from PAE further obstruct the formation of secure attachments (Mukherjee et al., 2019; Pei & Burke, 2018). Unresolved early trauma may predispose individuals to substance abuse as a coping mechanism, thereby perpetuating cycles of adversity and criminal behavior (Mukherjee et al., 2019; Pei & Burke, 2018). In Australian Aboriginal youth with FASD, particularly those in child welfare systems (CWS), Tan et al. (2022) observed that they often exhibited early-onset offending behaviors linked to AR deficits and disordered attachment patterns. This has further been evidenced by Narayan et al. (2021), who found that caregivers' ACEs significantly shape

attachment dynamics, thereby reinforcing cycles of multifaceted trauma.

In 2019, Cram and MacDonald reported that 20% of FSIW used alcohol in the 12 months preceding their arrests. In 2023, Cram and MacDonald found an increase of 61% in FSIW for the consumption of alcohol prior to arrest. These findings suggest that alcohol may be a major criminogenic factor for FSIW, necessitating the development of precisely targeted therapies. While incarcerated, alcohol use was reduced during pregnancy, but it nevertheless continued, raising concerns associated with PAE (Cram & MacDonald, 2023). The decrease in alcohol use during pregnancy among FSIW may also suggest increased awareness. However, the decrease in alcohol use was marked by a rise in drug-only use, signaling a need for enhanced prevention and treatment efforts (Cram & MacDonald, 2023).

Attachment and Criminal Behavior

Research highlights the disproportionate impact of disrupted attachment and trauma among Indigenous populations, with historical and systemic factors such as colonization, residential schools, and child protection involvement compounding vulnerabilities (Freckelton, 2016; Haskell & Randall, 2009; Wright et al., 2025; Zephier Olson & Dombrowski, 2020). In environments characterized by PAE, disrupted caregiving is strongly associated with insecure and disorganized attachment styles, which elevate the likelihood of maladaptive behaviors, including criminal activities (Cook et al., 2021; Greenspan & Woods, 2018). Tan et al. (2022) observed that Australian Aboriginal youth with FASD, particularly those in CWSs, often exhibited early-onset offending behaviors linked to AR deficits and disordered attachment patterns. Similar findings

suggest that early childhood trauma and PAE-related neurodevelopmental impairments increase the risk of maladaptive behaviors and criminality among Indigenous populations (Cook et al., 2023; Greenspan & Woods, 2018; Mukherjee et al., 2019; Reid et al., 2020; Reid et al., 2023; Sessa et al., 2022).

Application of AT

AT has been extensively applied to understand the developmental impacts of maternal substance abuse and PAE on children's attachment patterns (Mukherjee et al., 2019; Pei & Burke, 2018; Pielage et al., 2023). These studies emphasize how insecure and disorganized attachment styles, influenced by PAE, sustain multifaceted cycles of trauma and behavioral challenges (Flykt et al., 2021; Mukherjee et al., 2019; Parolin & Simonelli, 2016; Zephier Olson & Dombrowski, 2020). For Indigenous populations, attachment disruptions and systemic inequities necessitate culturally informed applications of AT to break cycles of trauma and reduce the risk of criminal behavior among individuals with FASD.

Cultural Adaptations

Critiques of AT highlight its Eurocentric bias, which prioritizes dyadic caregiver–child relationships over the kinship networks central to Indigenous worldviews (Choate et al., 2019; Choate et al., 2020; Choate et al., 2021). In the framework of Canadian child-protection jurisprudence, AT, as applied through a Eurocentric prism, is given priority over Indigenous cultural considerations in precedent-setting court decisions (Choate & Tortorelli, 2022). Scholars advocate for shifting from attachment to connectedness, reflecting relational harmony and community well-being (Carriere & Richardson, 2009).

Such adaptations align with the Truth and Reconciliation Commission's (TRC, 2015a, 2015b) call for culturally responsive approaches to address multifaceted trauma.

MIDF

In her widely recognized 2003 dissertation, Tait critically examines the sociocultural and systemic factors shaping the conceptualization of FASD in Canada. She explores the impact of colonial systems, particularly residential schools, demonstrating how these institutions have contributed to health disparities among Indigenous populations, including the rise of FASD. This work serves as a foundational resource for understanding how the legacy of residential schools indirectly amplifies the vulnerabilities associated with FASD in Indigenous communities. My research focused on the complex connections between FASD-related impairments, criminal behavior, and the disproportionate incarceration of FSIW, situating this issue within the broader context of institutional oppression and colonial laws. The exact mechanisms that perpetuated past injustices, such as the long-term impacts of residential schools, have exacerbated these circumstances, resulting in a higher prevalence of FASD and significant social and legal ramifications.

Thus, applying culturally informed frameworks, such as HT and AT, within a conceptual framework, such as the MIDF, is essential for effectively addressing these interwoven adversities. The MIDF integrates HTT and AT to provide a culturally grounded, holistic framework addressing FASD, multifaceted trauma, attachment issues, criminality, and systemic inequities. Its four dimensions, Trauma, Neurodevelopmental, Structural, and Cultural, emphasize the interconnectedness of relational, cognitive, and

systemic factors.

- Trauma dimensions link ACEs, multifaceted trauma transmission, disrupted attachment, and cultural disconnection to cycles of victimization and incarceration (Evans-Campbell, 2008).
- Neurodevelopmental dimensions examine the cognitive and emotional impairments caused by PAE, highlighting their intersection with disrupted caregiving (Mukherjee et al., 2019; Pei & Burke, 2018).
- Structural dimensions critique Western-centric risk tools and policies, such as the limited application of *Gladue* principles, which perpetuate the overincarceration of Indigenous women (Bedard et al., 2023; Lee et al., 2023).
- Cultural dimensions prioritize relational connectedness, kinship, and cultural identity as protective factors against criminalization (Carriere & Richardson, 2009).

The MIDF underscores the need for culturally tailored correctional practices, including access to initiatives like healing lodges for FSIW, to address systemic inequities and break cycles of incarceration.

Literature Review Related to Key Concepts

PAE

Prenatal Alcohol Exposure (PAE) is the sole cause of FASD, significantly impairing cognitive, behavioral, and adaptive functioning. These impairments can range from neurodevelopmental issues to distinctive facial features (Banerji & Shah, 2017; Dylağ et al., 2023; McLachlan et al., 2019; Mela, 2023; Popova et al., 2023). The

neurodevelopmental impacts of PAE are well established, with affected individuals experiencing deficits in intelligence, motor skills, attention, language, and executive functioning (Banerji & Shah, 2017; Mattson et al., 2019). These deficits, compounded by heightened impulsivity and stress reactivity, increase vulnerabilities to adverse outcomes, including involvement with the criminal justice system (Flannigan et al., 2022a; Pei et al., 2016a).

Impacts of PAE

The neurodevelopmental deficits caused by PAE often co-occur with other conditions, such as Attention Deficit Hyperactivity Disorder (ADHD), substance use disorders, and psychotic disorders (Brown et al., 2019; Brown et al., 2022a; Cook et al., 2016; Mela et al., 2018). These comorbidities exacerbate difficulties with mood regulation, impulse control, and problem-solving, increasing the likelihood of behaviors that might be interpreted as criminal (Brown et al., 2022a; Cook et al., 2016; Mela et al., 2018). Deficits in executive functioning, particularly planning and foresight, can further lead to actions misunderstood within the criminal justice system, complicating assessments of culpability and intent (Brown & Greenspan, 2021; Hashmi et al., 2021). Individuals with FASD also face heightened mortality risks, including a life expectancy of approximately 34 years, with suicide and substance abuse being the leading causes of death (Flannigan et al., 2021b; Thanh & Jonsson, 2016).

Persistent systemic barriers further exacerbate the challenges these individuals face in the justice system. These can include misinterpretation of their legal rights, communication difficulties, and susceptibility to coercion during interrogations

(Flannigan et al., 2021c; Gilbert et al., 2023a). Neurocognitive disorders related to FASD, such as memory impairments, suggestibility, and confabulation, have been highly reported (Gilbert et al., 2025). These shortcomings increase the vulnerability to false confessions, the risk of unreliable testimony, and the complexity of legal proceedings and sentencing, heightening concerns about potential miscarriages of justice (Allely & Mukherjee, 2019; Gilbert et al., 2025; Gudjonsson, 2018; Reid et al., 2020). Mimicry has been shown to occur unconsciously and significantly influence social interaction (Chartrand & Lakin, 2013); however, the nexus of mimicry and FASD has not been sufficiently studied. Mimicry as a phenomenon is not a primary neurocognitive deficit; however, it can be a behavioral manifestation of neurocognitive vulnerabilities commonly witnessed in patients with FASD. These vulnerabilities can be mitigated by individualized, trauma-informed interventions that take into consideration unique neurocognitive traits (Shah et al., 2026).

Criminal Justice Implications

The cognitive and emotional impairments associated with FASD, such as difficulties with judgment, social skills, and emotional regulation, can obscure the true prevalence and impact of the disorder, thereby influencing how individuals interact with the legal system (Hashmi et al., 2021). For instance, structural brain damage caused by PAE impairs rational decision-making, increasing susceptibility to impulsive actions and false confessions (Tan et al., 2022). These limitations can raise ethical concerns regarding competency to stand trial and equitable treatment under the law (Flannigan et al., 2021c; McLachlan, 2021). While there is now an awareness of the impacts of FASD, the

inconsistent application of diminished culpability principles remains a significant barrier to justice (Brown et al., 2022a; Greenspan & Woods, 2018; Mela et al., 2024).

Understanding their neurodevelopmental and behavioral difficulties could guide institutional improvements that facilitate equitable care and mitigate the overincarceration of vulnerable populations.

Early diagnosis of FASD, particularly before age seven, can, therefore, provide significant protective benefits, reducing the likelihood of criminal behavior. Early identification of FASD was initially emphasized by Jones and Smith (1973), and in 2023, Kable and Jones stressed the need for reliable screening tools and standardized diagnostic frameworks to support timely intervention. Research indicates that early identification and tailored support can significantly lower the risk of criminal conduct and recidivism in justice-involved individuals (Flannigan et al., 2019; Flannigan et al., 2023). Brown and Greenspan (2021) and McLachlan (2021) further evidence the correlation between early diagnosis and improved outcomes, highlighting the role of early diagnosis in reducing interactions with the criminal justice system.

Challenges

FASD was officially recognized in Canada in the 1970s after a U.S. study by Drs. David Smith and Kenneth Jones defined Fetal Alcohol Syndrome (FAS) (Jones & Smith, 1973). Subsequently, the 4-Digit Diagnostic Code dramatically improved FASD diagnoses by facilitating analyses of growth deficit, facial traits, central nervous system dysfunction, and PAE (Astley, 2004; Astley & Clarren, 2000). The Diagnostic and Statistical Manual of Mental Disorders (DSM-5) does not recognize FASD as a single

condition. It does include FAS, partial FAS (pFAS), alcohol-related neurodevelopmental disorder (ARND), and alcohol-related congenital disabilities (ARBD) under neurodevelopmental disorders linked to PAE (American Psychiatric Association [APA], 2013).

Canadian diagnostic guidelines for FASD emphasize a multidisciplinary approach that incorporates medical, cognitive, and behavioral assessments (Chudley et al., 2005; Chudley et al., 2007; Chudley, 2018; Cook et al., 2016). However, the 2015 revisions to these guidelines, which exclude moderate neurodevelopmental dysfunction and growth deficiency as diagnostic criteria, have been criticized for leaving many individuals undiagnosed (Hemingway et al., 2019). Coles et al. (2020) further examined three FASD diagnostic systems, Collaboration on FASD Prevalence (COFASP), the 4-Digit Code, and the 2016 Canadian Guidelines, to determine their diagnostic accuracy. Their results showed inconsistent findings due to differences in diagnostic criteria for growth, physical features, neurobehavior, and alcohol use (Coles et al., 2020). The relative accuracy of these systems requires a validity measure that does not exist, suggesting that a more empirically based, standardized diagnostic schema is needed.

This critique aligns with the findings of J.M. Brown et al. (2018) and Hemingway et al. (2019), who highlight inconsistencies in FASD diagnoses due to differing definitions and diagnostic systems. These inconsistencies lead to misdiagnosis, inadequate management, increased risks of secondary disabilities, and difficulties in determining global prevalence, suggesting the need for an international diagnostic standard (Lim et al., 2022; Reid et al., 2022). Despite advancements in the field,

inconsistencies in diagnostic practices and the stigma surrounding PAE continue to hinder early detection and intervention (Aspler et al., 2021; Chow et al., 2022; Dugas et al., 2022). In response to criticism from Eliason et al. (2024), the Canada FASD Research Network (CanFASD, 2024) and the National Organisation for FASD Australia (NOFASD Australia, 2024) have defended the use of the term FASD, asserting that it provides a clear framework for identifying and supporting individuals affected by PAE. CanFASD (2024) argues that societal stereotypes, not the diagnostic term itself, are the root cause of FASD stigma, advocating for education rather than term elimination. The network also recommends acknowledging neurodevelopmental complexity, improving access to care, and refining diagnostic techniques to better represent PAE and FASD.

Alberta is a leader in research and practice related to FASD and has made significant advancements through the implementation of its 10-year strategic plan (Tait et al., 2017). This initiative has enabled clinics to conduct multidisciplinary assessments (Popova et al., 2024; Tait et al., 2017). Despite these advancements, however, inconsistencies in diagnostic practices and the stigma surrounding PAE impede early detection and intervention (Aspler et al., 2021; Chow et al., 2022; Dugas et al., 2022). Further, national-level data remain inconsistent due to variations in diagnostic codes and the stigma surrounding PAE (Chow et al., 2022; Flannigan et al., 2022a; Harding et al., 2019). The perspectives cited in this section, including those by J.M. Brown et al. (2018), CanFASD (2024), Coles et al. (2020), Hemingway et al. (2019), and NOFASD Australia (2024), constitute a robust case for the development and implementation of an international diagnostic standard.

The process of diagnosing FASD is particularly difficult, expensive, and time-consuming (Cook et al., 2016; Elias et al., 2018), and the current diagnostic systems are multidisciplinary and based on complex procedures that are highly dependent on the technical rigour of dysmorphology, making them unscaleable without expert knowledge (Gomez & Abdul-Rahman, 2026). A systematic review by Gomez and Abdul-Rahman (2026) examined how machine learning and facial imaging (both 3D and 2D) could advance the diagnosis of FASD in clinical practice. They found that these new technologies have the potential to standardise assessment procedures, increase diagnostic coverage, and help identify overt and subclinical symptoms of FASD more quickly (Gomez & Abdul-Rahman, 2026). The ideal characteristics of a facial-imaging screening device, as defined by Roomaney et al. (2022), include cost-effectiveness, reliability, portability, and applicability across diverse populations. Although the available studies are still preliminary and have their own strengths and limitations, they are on a fast-developing frontier with significant clinical potential. With the further development of diagnostic technologies and the increased acceptance of digital and remote forms of assessment among clinicians, such tools will contribute to the earlier and more accurate diagnosis of FASD- including atypical or subclinical manifestations of the condition- and thus improve diagnostic equity and decrease the share of undiagnosed PAE worldwide (Gomez & Abdul-Rahman, 2026).

Stigmas and Misconceptions

The belief that FASD is a stigmatizing diagnosis is pervasive not only in Canada but also in the United States, Australia, and New Zealand (Choate & Badry, 2019; Chu et

al., 2024; Flannigan et al., 2018b; McCormack et al., 2024). Lack of awareness of FASD, as well as outdated knowledge and myths about the disorder, further contributes to this stigma (Choate & Badry, 2019; Chu et al., 2024). Ineffective identification, management, and treatment of those with FASD perpetuate the stigmatization of at-risk groups and result in a cycle of injustice, systemic inefficiency, and stigmatization of vulnerable populations (Brown et al., 2024). Kerimofski et al. (2024) found that for Australian psychologists, barriers to PAE assessment include fear of shaming biological mothers, uncertainty, and lack of formal training. Although PAE is the sole indicator of FASD, the stigma associated with reporting maternal alcohol use during pregnancy creates significant barriers to accurate FASD diagnosis (Aspler et al., 2021; Choate & Badry, 2019; Cook et al., 2023; McLachlan & MacKillop, 2023). This stigma, coupled with the overlap of symptoms between FASD and other neurodevelopmental, neurocognitive, and neuropsychiatric disorders, complicates the diagnostic process and often leads to underdiagnosis or misdiagnosis (Brown et al., 2024; Winsor, 2020).

The prevailing and harmful misconception associated with FASD is that it is an Indigenous issue, but little high-quality evidence substantiates this claim. As Flannigan et al. (2024) note, despite the supposition that Indigenous communities have the highest rates of FASD, the evidence is inconsistent and does not support the belief. This fallacy stems from referral bias, mixed research findings (Tait et al., 2017; Wolfson et al., 2019), and historical and systemic racism (Milward, 2014a, 2014b). Furthermore, the failure to address the unique neurodevelopmental and cultural needs of Indigenous communities perpetuates harm (Flannigan et al., 2024; Reid et al., 2023). Stigma and negative

stereotyping, both inside and outside of the criminal justice system, further reinforce misperceptions about Indigenous people and communities around alcohol, as well as the erroneous belief that FASD is overrepresented in these populations (Flannigan et al., 2021a; McLachlan et al., 2020b; Stewart & Glowatski, 2018; Wolfson et al., 2019).

Moving Forward

Understanding the role of FASD-related deficits in criminal behavior is crucial for developing trauma-informed and culturally responsive correctional policies that address overincarceration and foster rehabilitation (Pei et al., 2016a). PAE results in FASD, and its associated neurodevelopmental and behavioral vulnerabilities could increase one's risk of criminal behavior (Flannigan et al., 2019; Flannigan et al., 2023). According to Hoyme et al. (2026), the FASD diagnosis is a complex medical diagnostic task that is best carried out through a multidisciplinary approach, with a team of clinical professionals with varied expertise, qualifications, and competencies undertaking it. Cognitive and neurobehavioral phenotypes of children with FASD may not be specific and often overlap with those of other neurodevelopmental disorders (Hoyme et al., 2026). Therefore, early identification and tailored interventions are essential for reducing criminal behavior and recidivism among justice-involved individuals. In this regard, enhancing diagnostic and screening tools in correctional settings and implementing comprehensive frameworks can help meet the unique needs of FSIW with FASD, breaking cycles of exploitation and overincarceration.

The Overincarceration of FSIW

The overincarceration of FSIW in Canada reflects the enduring legacies of

colonialism, systemic inequities, and intergenerational trauma. Socioeconomic marginalization and systemic barriers, such as racial biases and the lack of culturally appropriate sentencing practices, perpetuate cycles of victimization and criminalization (Grekul, 2020; Submissions & Holmes, 2017; Walsh et al., 2023). Similar patterns are evident in Australian prisons, where Indigenous women, often affected by settler colonialism and intergenerational trauma, are incarcerated at increasing rates, frequently for violent offenses (Fischer et al., 2024; Tubex & Cox, 2020). Walsh et al. (2023) highlight the overincarceration of Indigenous individuals with disabilities across Australia, New Zealand, the U.S., and Canada, linking it to colonial legacies, systemic racism, and inadequate disability recognition. Many individuals with cognitive impairments, including those related to FASD, remain undiagnosed or misinterpreted, leading to harsher sentencing and high recidivism rates. Without culturally appropriate, trauma-informed interventions, the justice system continues to default to punitive measures rather than rehabilitation (Walsh et al., 2023).

Indigenous women embody a paradox of strength and resilience (Gilbert et al., 2023b; Ogden & Tutty, 2024) and vulnerability resulting from their social history and a continuum of victimization, criminalization, and incarceration (Flannigan et al., 2018a; Flannigan et al., 2018d; Grekul, 2020). The combined effects of trauma, institutional inequities, and FASD create a paradigm of failure, yet within this paradigm lies the possibility for transformative change (Spillane et al., 2023; Toombs et al., 2023). Recognizing these paradoxes and paradigms is essential to addressing systemic injustices and dismantling harmful stereotypes that further entrench inequities, such as the

unfounded belief that FASD is disproportionately prevalent in Indigenous communities (Milward, 2014a, 2014b; Tait et al., 2017; Wolfson et al., 2019). Addressing such intricate issues necessitates a nuanced strategy that acknowledges the systemic inequities and historical injustices encountered by Indigenous women, while also highlighting their agency, strengths, and potential for significant transformative change. Through deconstructing these paradigms and rectifying prevailing misconceptions, this research endeavors to contribute to the establishment of more equitable and culturally sensitive practices that promote resilience and mitigate the overincarceration of Indigenous women with FASD.

Contributing Factors

Indigenous women are disproportionately affected by victimization, including intimate partner violence (IPV), human trafficking, and systemic poverty, all of which contribute to their overrepresentation in the criminal justice system (CJS). Between 2009 and 2021, homicide rates for Indigenous women were six times higher than for non-Indigenous women, with 81% of victims killed by someone they knew (Burczycka & Cotter, 2023; Statistics Canada, 2023c). Substance use, prior criminal records, and countercharges in IPV-related cases further entrap Indigenous women in the justice system, reinforcing cycles of criminalization (McGuire & Murdoch, 2022; Miller, 2017; MMIWG, 2019a; Murphy, 2014; Sheehy et al., 2012). Although Indigenous women are overrepresented as offenders, they are also disproportionately victims of violence, with 78.6% of FSIW reporting experiences of IPV (Grekul, 2020; Motiuk & Keown, 2022b; PSC, 2023a). The link between IPV and FASD further highlights these vulnerabilities, as

IPV increases the risk of FASD through alcohol consumption during pregnancy, often used as a coping mechanism for trauma (Sessa et al., 2022).

Cognitive impairments associated with FASD further exacerbate these challenges, limiting FSIW's ability to navigate legal processes effectively (Sweet, 2014; Wolfson et al., 2023). Systemic barriers, including restricted access to legal representation and judicial bias, often result in guilty pleas, harsher sentences, and confinement in maximum-security institutions, which, in turn, limit access to rehabilitative programs such as the Mother-Child Program (Anderson et al., 2018; Miller, 2017). Security classification tools frequently fail to consider the broader context of an offense, particularly in cases where Indigenous women commit violent crimes in response to or in an attempt to escape violent situations (Office of the Auditor General of Canada [OAG], 2022; Senate of Canada, 2024). These tools also overlook the ongoing impacts of colonialism, which have normalized and perpetuated gendered violence against Indigenous women (McGuire & Murdoch, 2022; MMIWG, 2019a, 2019b; Senate of Canada, 2024). Addressing these systemic failures requires trauma-informed, culturally responsive policies that acknowledge the intersection of colonial violence, cognitive impairments, and systemic inequities in the criminalization of Indigenous women.

The forcible sterilization of Indigenous women in Canada exemplifies victimization rooted in colonial discourses, similar to those that shaped the residential school system and the Sixties Scoop (Shawana et al., 2021). While no direct link between forced sterilization, criminality, and FASD has been established, the resulting multifaceted trauma cannot be ignored. Forced sterilization harms Indigenous women

mentally and physically (Shawana et al., 2021; Stote, 2015), and alcohol misuse as a coping mechanism may contribute to adverse outcomes. This raises critical concerns about the potential indirect role of forced sterilization as a risk factor for FASD and its broader implications for Indigenous women's involvement in the criminal justice system. Environmental adversities and systemic challenges further compound these risks, reinforcing cycles of victimization and criminalization (Flannigan et al., 2022b).

Offenders with FASD face compounded challenges arising from systemic inequities, cultural misunderstandings, and cognitive vulnerabilities, which heighten their risk for criminal behavior and overincarceration (Hashmi et al., 2021; Mussell & Orsini, 2021; Tait et al., 2017). Many FSIW in Alberta, including those from Métis and First Nations communities, encounter language barriers that hinder their ability to engage with legal proceedings. These barriers stem from the diversity of Indigenous languages spoken in Canada, including Cree and Michif, particularly among those raised on reserves or outside Alberta. Linguistic challenges and difficulties in affect regulation, such as alexithymia, might lead to misinterpretations of emotional cues, such as remorse, further stigmatizing these women within the justice system (Brown, 2022; Temple et al., 2019). These intersecting factors amplify Indigenous women's vulnerability within the legal system and contribute to their overrepresentation in correctional facilities.

Indigenous women with FASD are particularly disadvantaged in the justice system, as cognitive deficits in executive functioning, memory, and emotional control impair their ability to understand legal rights and advocate for themselves (Brown & Greenspan, 2021; Flannigan et al., 2021c; McLachlan, 2021). Compromised boundary-

making, systemic stigma, early involvement in child welfare systems, and frequent runaways contribute to heightened risks of exploitation (Bombay et al., 2014; Brockie et al., 2015; Palines et al., 2020). The overrepresentation of Indigenous women in Vancouver's sex trade, particularly in survival sex work, is evidence of Canada's colonial legacy (Shumka & Benoit, 2021). Even with laws like Bill C-36, which recognizes prostitution as sexual exploitation disproportionately affecting women and girls, Indigenous women continue to face systemic neglect and incarceration (Machat, 2023). Despite comprising only 5% of the national population, Indigenous women represent 50% of human trafficking victims in Canada, highlighting the urgent need for intervention (MMIWG, 2019a, 2019b; Palines et al., 2020).

Diminished Criminal Responsibility

Courts in Canada, Australia, and other countries are beginning to recognize FASD as a mitigating factor during sentencing (Allely & Mukherjee, 2019; Brown & Greenspan, 2021; Fischer et al., 2024). The justice system has begun to acknowledge the diminished culpability of individuals with FASD, as cognitive impairments significantly affect reasoning, impulse control, and judgment, key components of criminal responsibility (Brown & Greenspan, 2021; Fischer et al., 2024). However, the inconsistent application of FASD-related considerations in legal proceedings remains a significant issue in Canada (Mullally et al., 2023). Some courts apply these considerations in sentencing, while others fail to do so due to a lack of clear guidelines or judicial awareness. This disparity results in sentencing inconsistencies that undermine the equitable treatment of individuals with FASD. Addressing this issue requires

standardized protocols to ensure fairness in legal proceedings.

Psychologists and psychiatrists conducting forensic assessments face significant barriers when working with clients with FASD due to a lack of knowledge about the disorder (McLachlan et al., 2020a; Passmore et al., 2018; Passmore et al., 2020). Research by McCormack et al. (2024) and Chu et al. (2024) indicates that most justice and health professionals generally understand FASD's effects but lack familiarity with standardized diagnostic tools and guidelines. This knowledge gap leads to fewer referrals for FASD assessments, leaving affected individuals without adequate recognition of their cognitive difficulties (Gilbert et al., 2023a; McLachlan et al., 2022). Kerimofski et al. (2024) and Kerimofski et al. (2025) found that although most Australian psychologists are familiar with FASD and its effects, many lack confidence in conducting comprehensive diagnostic assessments. Individuals with FASD may, therefore, be misdiagnosed or entirely overlooked in legal proceedings. Raising awareness and training are essential for improving the identification and support of individuals with FASD. In addition, standardized screening protocols and interdisciplinary collaboration can help bridge these gaps.

Neurological deficits, such as impairments in memory and affect regulation, hinder rational decision-making and often lead to behaviors that are misinterpreted as intentional or deceitful (Brown & Greenspan, 2021; Sessa et al., 2022). Individuals with undiagnosed FASD are frequently mislabeled as manipulative rather than as having neurodevelopmental limitations (Fast & Conry, 2009; Wolfson et al., 2023). Their cognitive vulnerabilities make them highly susceptible to confabulation and suggestibility

during legal proceedings, increasing their risk of wrongful admissions or coerced confessions (Allely & Mukherjee, 2019; Brown & Greenspan, 2021; Gilbert et al., 2022; Gilbert et al., 2023a; Gilbert et al., 2023b; Gudjonsson, 2018). This susceptibility makes them particularly vulnerable to interrogation tactics that involve pressure or leading questions. Legal professionals often misinterpret their inconsistencies in testimony as dishonesty, further disadvantaging them in court. Brown et al. (2024) therefore asserted that all professionals involved in the care, management, or adjudication of offenders with FASD, including judges, lawyers, correctional personnel, psychologists, and psychiatrists, should have access to and participate in specialized FASD-focused training.

Difficulties in affect regulation (AR) further exacerbate mental health challenges, increasing the likelihood of criminal behavior (Temple et al., 2019). For Indigenous offenders with FASD, these challenges are compounded by cultural misunderstandings, language barriers, and systemic stigma (Mussell & Orsini, 2021; Tait et al., 2017). Many Indigenous individuals struggle to express emotions such as remorse in ways that align with Western legal expectations, leading to misinterpretations of their behavior. This disconnect can result in harsher sentences or fewer rehabilitative opportunities due to a perceived lack of accountability. Addressing these disparities requires adopting culturally sensitive legal practices incorporating trauma-informed, neurodevelopmentally appropriate approaches (Mussell & Orsini, 2021; Shah et al., 2026; Tan et al., 2022). Early intervention strategies and specialized legal support can foster equitable treatment and reduce recidivism among individuals with FASD.

Risk Assessment Tools

Risk assessment tools, such as the Custody Rating Scale (CRS), Security Reclassification Scale for Women (SRSW), and Risk-Need-Responsivity (RNR) model, play a critical role in determining security classifications, parole eligibility, and correctional planning (Brown et al., 2023; McKendy et al., 2023). However, these tools exhibit significant limitations that disproportionately affect FSIW, particularly those with FASD, thus perpetuating systemic inequities and contributing to overincarceration (Barmaki, 2023; Gutierrez & Wanamaker, 2022; Montford & Hannah-Moffat, 2020). The CRS assigns an initial security classification based on criminal history and institutional adjustment (McKendy et al., 2023). If this initial classification is deemed inappropriate, correctional staff use structured professional assessments to adjust the Offender Security Level (OSL), either increasing or decreasing security classifications (OAG, 2022; OCI, 2023).

The 2022 OAG audit reported that frequent overrides of the CRS resulted in 53% of FSIW minimum-security placements being transferred to maximum-security levels. Furthermore, there were fewer overrides to minimum security, and Correctional Service Canada (CSC) did not monitor whether staff adequately considered Indigenous social history (ISH) factors in security classification decisions (OAG, 2022). Consequently, due to the higher security levels, FSIW accounted for 70% of maximum-security placements in 2023 and 75% in 2024 (OCI, 2024). Placement in maximum security delays access to correctional programs, prolongs custodial stays, and reduces opportunities for community reintegration (OCI, 2024).

Developed using male offender samples, the CRS has not been revalidated since 2012, raising questions about its applicability to FSIW (OAG, 2022). Earlier assessments supported the CRS and OSL as valid predictors of institutional outcomes for FSIW (Barnum & Gobeil, 2012; Blanchette et al., 2002). In 2023, McKendy et al. reported a 70% concordance rate between CRS and OSL classifications but highlighted that the frequent overrides were informed by professional judgment. While these findings affirmed the predictive validity of the CRS at intake, they underscore the need for regular revalidation across diverse offender subgroups. Despite the availability of CSC's Indigenous social history (ISH) tool to guide case management, crucial considerations such as multifaceted trauma and restorative justice options are often overlooked (OAG, 2022). The CRS and OSL focus heavily on static factors such as criminal history and institutional adjustment, while failing to account for broader socio-economic contexts, systemic discrimination, and the cognitive and behavioral challenges associated with FASD (Barnum & Gobeil, 2012; Blanchette et al., 2002; McKendy et al., 2023).

Overclassification

The compounded effects of multifaceted trauma, including historical, intergenerational, and transgenerational trauma, contribute to behavioral issues often misinterpreted as noncompliance or dangerousness (Gutierrez & Wanamaker, 2022; Taylor et al., 2023). The lack of integration of Indigenous social history (ISH) and trauma-informed approaches into tools like the CRS perpetuates disparities and systemic inequities, reinforcing cycles of criminalization rather than addressing root causes (Motiuk & Keown, 2023). The Indigenous social history (ISH) tool is explicitly not

intended for higher security designations (OAG, 2022). However, many FSIW report that their personal histories are used against them, resulting in harsher classifications (MMIWG, 2019a, 2019b).

Similarly, the SRSW, designed to reassess security classifications for incarcerated women, fails to address intersectional vulnerabilities related to FASD and Indigenous identity. Evidence indicates that FSIW are disproportionately classified as high risk, 26% compared to 14% of non-Indigenous women, while only 18% are deemed low risk versus 43% of non-Indigenous women (Taylor et al., 2023). These disparities highlight systemic biases in existing frameworks and their inability to integrate cultural and neurodevelopmental considerations.

Limitations of the RNR Model

The RNR model, widely used in correctional settings, aligns interventions with offenders' criminogenic needs and responsivity factors (Andrews et al., 1990; Andrews et al., 2011; Brown et al., 2023). While effective in addressing criminogenic needs, the model inadequately considers neurodevelopmental challenges associated with FASD, such as impulsivity and emotional dysregulation, which elevate the risk of criminal behavior (Brown et al., 2023; Fast & Conry, 2009; Pei & Burke, 2018). Furthermore, the cognitive-behavioral foundation of the RNR model overlooks systemic issues such as colonialism and intergenerational trauma, thereby exacerbating stigmatization and inequities (Barmaki, 2023; Gutierrez & Wanamaker, 2022; Venner et al., 2023). Critics of the RNR model identify inconsistencies and low-quality evidence regarding its reliability and validity, particularly for Indigenous offenders (Barmaki, 2023; Fazel et al.,

2024).

Barriers

Indigenous peoples in Canada face a double injustice: overrepresentation in the prison system and among the wrongfully convicted (Vijaykumar, 2018). Systemic racism, multifaceted trauma, and distrust in the justice system contribute to miscommunication between Indigenous clients and non-Indigenous lawyers, increasing the likelihood of wrongful convictions, through false confessions or guilty pleas (Montana, 2023; Vijaykumar, 2018). Lawyers lacking cultural competency often fail to recognize these barriers and, thus, are unable to provide effective legal representation (Vijaykumar, 2018). Differences between Standard English and Aboriginal English dialects further exacerbate communication gaps (Montana, 2023). Cultural norms emphasizing responsibility might also increase the likelihood of false guilty pleas among Indigenous peoples, as responsibility is often misinterpreted as an admission of legal guilt (Vijaykumar, 2018). Combined with low literacy levels and conditions like dysthymic disorder, these challenges reflect the systemic inequities that amplify wrongful convictions (Carling, 2017; Montana, 2023).

Updated Findings from the OCI

Since most of the research mentioned above had been completed, the Office of the Correctional Investigator (OCI) published a 2025 report that highlighted many of the unresolved issues identified over the years in this review and exposed a gap in the trauma assessment procedures used by the Correctional Service Canada (CSC). The OCI 2025 report reaffirmed many of the long-standing issues identified in the literature and

highlighted current gaps in CSC's trauma-related practices. The OCI has used previous dated studies, including Tam and Derkzen (2014), to repeat the information that federally sentenced women have disproportionately high rates of trauma, victimization, and Post-Traumatic Stress Disorder (PTSD) effects that are even stronger in Indigenous women because of intergenerational and collective trauma. Despite such evidence, CSC continues not to categorize trauma as a criminogenic need, which brings up the question of whether the existing methods of assessment and intervention are gender-responsive, culturally based, and trauma-informed.

The OCI further claimed that CSC does not regularly screen for adverse childhood experiences (ACEs) despite a 2023 CSC study identifying ACEs to be extremely widespread, particularly with Indigenous female offenders, and strongly associated with poor institutional and community outcomes. The fact that there are still no trauma or ACEs-specific screening tools means that CSC is not well-equipped to offer meaningful trauma-informed care. The inquiry also found little staff awareness of Indigenous history, culture, and trauma and inconsistent support of Elders, cultural programs, and ceremonies (OCI, 2025). The gaps compromise the attempts to establish culturally feasible healing pathways. Lastly, the OCI observed that the excessive representation of the Indigenous peoples, almost a third of the federal prison population, together with criminalizing mental illness, has led to vast unmet mental health needs. Studies still indicate very high prevalence rates of mental disorders and self-harm among the Indigenous individuals in custody, which highlights the need to focus on dealing with trauma-related challenges in the federal corrections system (G. Brown et al., 2018; OCI,

2025).

Recommendations

In *Ewert v. Canada* (2018), the Supreme Court highlighted the cultural bias inherent in risk assessment tools and called for empirical validation to ensure their fairness for Indigenous offenders, underscoring the systemic biases in risk assessment tools (Bedard et al., 2023; Lee et al., 2023). It ruled that the use of actuarial risk assessment tools with Indigenous offenders violated principles of fairness and equality, as these tools were neither validated for Indigenous populations nor capable of accounting for their unique sociohistorical and cultural contexts (*Ewert v. Canada*, 2015, 2018). This decision highlights the inherent limitations of these tools and their potential to perpetuate systemic discrimination, underscoring the urgent need for culturally informed risk assessment. Despite this ruling, concerns persist regarding reliance on these flawed assessment tools in correctional settings. The absence of meaningful reforms underscores the challenges in addressing systemic biases within the risk assessment process.

Six years after the *Ewert* decision, concerns remain about the applicability of assessment and classification tools for Indigenous offenders. Over the past two decades, the Office of the Correctional Investigator (OCI) has issued eight public recommendations urging Correctional Service Canada (CSC) to ensure that these tools are valid, reliable, and culturally informed and address the overclassification of Indigenous offenders, particularly FSIW (OCI, 2024). Olver et al. (2024) did not assess the CRS but reported that most tools used by CSC lack accuracy for Indigenous peoples and meet only acceptable validity standards. Moreover, no tool incorporates culturally

relevant factors in risk estimations and measurements (Olver et al., 2024). Despite these findings, CSC continues to rely on tools such as the CRS, CRI, and SFA, which rely on static factors, thereby reinforcing classification biases.

Based on the information provided by OCI (2024) and Olver et al. (2024), it is reasonable to assume that these assessment tools contribute to the overrepresentation of FSIW in maximum security settings. They prioritize static factors, such as past convictions and institutional behavior, without adequately considering the broader sociohistorical and neurodevelopmental contexts that shape their involvement with the justice system. As a result, Indigenous women with histories of trauma, systemic marginalization, and cognitive impairments are often classified as high risk, leading to restrictive security placements that limit their access to culturally relevant rehabilitation programs. Maximum-security classifications further reduce opportunities for parole, participation in healing lodges, and engagement in educational and vocational programs, all of which are essential for successful reintegration. Moreover, the heightened restrictions associated with these classifications expose FSIW to harsher conditions, including greater surveillance, segregation, and limited interactions with support networks. Without access to trauma-informed and culturally appropriate interventions, FSIW remain entrenched in cycles of institutionalization, reinforcing systemic inequities and delaying meaningful reintegration into their communities.

In summary, existing risk assessment frameworks fail to address the complex interplay of neurodevelopmental vulnerabilities, systemic inequities, and cultural contexts faced by FSIW. These limitations result in their overrepresentation in high-risk

classifications and maximum-security settings, perpetuating cycles of victimization and criminalization (Gutierrez & Wanamaker, 2022; Wanamaker & Chadwick, 2023). The continued reliance on static risk factors exacerbates these disparities and impedes efforts to create equitable correctional policies. Addressing these shortcomings requires culturally informed, trauma-sensitive, and neurodevelopmentally appropriate approaches to risk assessment and correctional practices. Implementing these reforms is essential to mitigating the systemic disadvantages FSIW face and ensuring their fair treatment within the justice system.

Screening for FASD

Case Study

The case of Renee Acoby, Canada's first female dangerous offender, exemplifies systemic failures in addressing FASD and other vulnerabilities within correctional systems. Acoby, an Indigenous woman, was sentenced in 2000 and spent seven years in administrative segregation before being transferred to maximum security (*R v. Acoby*, 2009, 2015; *R v. A.B.*, 2017). Despite evidence of diminished intellectual capacity and suspected FASD, she endured punitive interventions instead of trauma-informed care (McConnell, 2020). Her case highlights how the criminal justice system often exacerbates vulnerabilities rather than addressing underlying conditions. This reflects broader patterns of systemic neglect, where cognitive impairments and trauma histories remain overlooked in favor of disciplinary measures. Addressing such cases requires a shift toward rehabilitation-focused interventions that recognize the unique needs of individuals with FASD.

Challenges

The lack of reliable screening tools and limited access to diagnostic services causes many offenders to enter the correctional system undiagnosed (Boland et al., 2002). In 2004, Bell et al. noted that no study had examined the prevalence of FASD specifically among FSIW. McLachlan et al. (2019) estimated that 17.5% of incarcerated individuals may have FASD, but their study did not account for gender or Indigenous status, leaving significant gaps in the data. In 2024, substantial measures to address these gaps remain lacking, perpetuating systemic neglect. Without accurate data, correctional policies fail to address the needs of FSIW with FASD adequately. Investing in research and targeted interventions is essential to closing these critical knowledge gaps.

FASD Screening Tools

Tools such as the Brief Screen Checklist (BSC) show promise in identifying FASD in correctional environments, but their reliance on supplementary clinical diagnoses and lack of cultural sensitivity limit their effectiveness for Indigenous populations (MacPherson et al., 2011; McLachlan et al., 2024). Practical screening tools must address cultural and contextual factors, as empirical evidence demonstrates that culturally tailored instruments enhance accuracy and acceptance (Reid et al., 2023; Tait, 2003). Programs such as the Alexis Nakota Sioux Nation FASD Justice Program illustrate the potential of culturally informed approaches (Flannigan et al., 2018c). However, broader implementation remains hindered by resource limitations and stigma (Flannigan et al., 2018b; Mela et al., 2022). Expanding access to culturally responsive screening can help ensure that FSIW with FASD receive appropriate interventions.

Without such measures, systemic barriers will continue to impede justice for Indigenous women.

Correctional Settings and Training

Correctional staff often lack the training necessary to recognize FASD and its manifestations, leading to misinterpretations of behavior as willful defiance or high risk (Passmore et al., 2018). Comprehensive diagnostic assessments by specialized experts remain indispensable for addressing the complex needs of individuals with FASD (Cook et al., 2016). However, correctional professionals may fail to identify cognitive impairments without adequate training, resulting in inappropriate disciplinary actions. Hoyme et al. (2026) stated that, as obtaining a FASD diagnosis is a complex medical diagnostic task, it is best carried out through a multidisciplinary approach, with a team of clinical professionals with varied expertise, qualifications, and competencies undertaking it. Training in cultural competency and trauma-informed care is critical for improving the accuracy and sensitivity of FASD assessments (McLachlan et al., 2024; Shah et al., 2026). Implementing such training programs can help reduce misdiagnosis and improve rehabilitation efforts. By integrating FASD awareness into correctional policies, institutions can better support affected individuals and reduce recidivism.

Systemic Consequences of Bias

Systemic biases in risk assessment tools disproportionately classify FSIW as high-risk offenders, limiting their access to rehabilitative programs and increasing their likelihood of prolonged confinement (Motiuk & Arnet-Zargarian, 2021). Structured Intervention Units (SIUs), introduced to replace administrative segregation, continue to

disproportionately house FSIW, exacerbating mental health issues and perpetuating systemic inequities (PSC, 2022c; Senate of Canada, 2024). Additionally, practices such as double-bunking and interregional transfers further undermine the well-being of FSIW and violate human rights obligations (OCI, 2024). These policies fail to account for the specific vulnerabilities of Indigenous women with FASD, reinforcing cycles of institutional harm. Addressing these inequities requires policy reforms that prioritize rehabilitation over punitive measures. Without systemic change, the correctional system will continue to criminalize Indigenous women disproportionately.

Moving Forward

Addressing systemic inequities requires developing culturally appropriate and validated screening tools for FASD, actively collaborating with Indigenous communities, and providing comprehensive training for correctional staff. Such measures are essential to ensuring meaningful and equitable support for FSIW while reducing overincarceration and breaking cycles of criminalization and exploitation. Implementing trauma-sensitive and culturally informed approaches can help correctional systems respond more effectively to the needs of FSIW with FASD. Expanding access to community-based alternatives and specialized support programs can further reduce reliance on incarceration. A justice system that recognizes the unique challenges faced by Indigenous women with FASD is necessary to promote fair and humane treatment. Without these interventions, the cycle of victimization and incarceration will persist.

The Legal Framework and FSIW

Gladue Principles

Gladue principles require Canadian courts to consider the unique circumstances of Indigenous offenders when determining sentencing, particularly the historical and systemic factors that contribute to their overrepresentation in the justice system (Dickson & Stewart, 2021; Ewing & Kerr, 2023; JUS, 2023a). Rooted in Section 718.2(e) of the Canadian *Criminal Code*, these principles emphasize rehabilitation, community-based alternatives to incarceration, and culturally appropriate sentencing approaches (*Criminal Code*, 1985, s. 718.2(e); *R v. Gladue*, 1999). The Supreme Court reaffirmed this obligation in *R v. Ipeelee* (2012), clarifying that judges must meaningfully apply *Gladue* factors rather than treating them as discretionary. These principles align with broader efforts to address the intergenerational harms of colonialism, including those recognized in the Truth and Reconciliation Commission (TRC) Calls to Action. Specifically, the TRC highlights the link between FASD and colonial trauma, reinforcing the need for justice reforms that integrate *Gladue*-informed and trauma-responsive approaches (Dickson & Stewart, 2021; Ewing & Kerr, 2023; JUS, 2023a).

The intersection of the TRC, *Gladue* principles, and FASD reflects the deep-rooted impacts of colonialism and systemic discrimination on Indigenous communities in Canada (TRC, 2015a, 2015b). TRC Calls to Action 33 and 34 underscore the need for FASD prevention programs, acknowledging its connection to the legacy of residential schools and multifaceted trauma (TRC, 2015a, 2015b). Similarly, *Gladue* principles mandate the consideration of systemic and historical disadvantages during sentencing,

promoting restorative justice approaches that prioritize rehabilitation over punishment (Dickson & Stewart, 2021; JUS, 2023a). Landmark cases such as *R v. Gladue* (1999) and *R v. Ipeelee* (2012) have solidified the legal framework for personalized sentencing, requiring courts to consider alternatives to incarceration for Indigenous offenders while promoting culturally appropriate approaches (Dickson & Stewart, 2021; Ewing & Kerr, 2023; JUS, 2023a; Marchetti et al., 2023). However, despite these legislative advancements, the application of *Gladue* principles remains inconsistent (JUS, 2023a, 2023b; Mullally et al., 2023).

This challenge is particularly acute for Indigenous women with FASD, whose complex needs often go unrecognized within the criminal justice system (Dickson & Stewart, 2021; Murti, 2023; Sandulescu, 2021). Alberta has one of the largest Métis populations in Canada, with more Cree speakers than Michif, their mother tongue (GC, 2021). The Otipemisiwak Métis Government, established in 2023, promotes Métis identity and governance in the province, addressing systemic factors like FASD and Indigenous women's overincarceration. However, the intersection of Métis citizenship and systemic biases in the criminal justice system can compound vulnerabilities for Métis FSIW with FASD. These challenges include misdiagnosis, lack of culturally appropriate interventions, and inadequate application of *Gladue* principles (GC, 2021).

The Indigenous Justice Strategy (IJS), introduced in March 2025, marks a pivotal shift in Canada's approach to Indigenous justice (JUS, 2025). Developed in response to a mandate from the Minister of Justice and Attorney General, the strategy seeks to address systemic discrimination and the overrepresentation of Indigenous peoples within the

justice system (JUS, 2025). Central to the IJS is a focus on Indigenous-led, culturally appropriate alternatives to incarceration, aligning with TRC Calls to Action 33 and 34. These Calls to Action call for public health responses to FASD and reforms to the criminal justice system to better support Indigenous individuals affected by FASD (JUS, 2025; TRC, 2015a).

The strategy outlines 26 action items and distinction-based chapters, reflecting the priorities of First Nations, Inuit, and Métis co-development partners (JUS, 2025). A key element involves collaborating with these communities, provinces, and territories to review and amend existing tools, such as security classifications in institutions and *Gladue* reports for sentencing and parole, to reduce barriers and combat systemic discrimination (JUS, 2025). The IJS also proposes enhancing access to *Gladue* services, exploring options for national standards to produce *Gladue* reports, and providing support for Inuit-specific *Gladue* report-writing services (JUS, 2025). For the Métis, the strategy emphasizes reducing barriers to access and increasing the availability of Métis-developed and delivered *Gladue* services across all justice processes, ensuring that Métis-specific circumstances are fully considered (JUS, 2025).

Colonial Legacies, Wrongful Convictions, and Interrogation Bias

Indigenous people are overrepresented in Canadian wrongful convictions for serious crimes and face more barriers to successful reintegration than their non-Indigenous counterparts (Pacholski & Anderson, 2023). False confessions and wrongful convictions often stem from systemic bias and the enduring legacy of colonialism. Tunnel vision, or confirmation bias, often occurs during investigations, leading law

enforcement to hyperfocus on suspects while neglecting critical evidence (Roach, 2023). Roach (2023) notes that tunnel vision is not misconduct but an unconscious cognitive process prevalent in public inquiries into wrongful convictions.

Colonial legacies have also contributed to high rates of FASD in Indigenous communities, which increases the risk of wrongful convictions. Individuals with FASD are particularly vulnerable due to memory impairments, impulsivity, and suggestibility, making them more susceptible to coercive interrogation tactics (Montana, 2023). The Reid interrogation method relies on verbal and nonverbal cues to detect deception and is, therefore, particularly problematic for Indigenous offenders due to its incompatible nature with their cultures (Carling, 2017; Chapman, 2020; Montana, 2023). Cultural factors, such as language and communication styles, can influence Indigenous accused individuals to confess to actions they did not commit (Chapman, 2020).

Factors such as racism, intellectual impairments, and mental health conditions further heighten the risk of false confessions and guilty pleas (Carling, 2017). While Canada has begun to move away from the Reid method in favor of alternative or hybrid interrogation models, these methods continue to pose risks for vulnerable populations, including individuals with FASD (Anggadol, 2024). Gilbert et al. (2023b) found that there is a need for alternative interviewing methods when interacting with individuals with FASD, as few studies have published their voices on the factors that lead them to encounter the justice system. Further research is needed to explore the damaging effects of police interrogation techniques on Indigenous suspects, as cultural factors linking language and communication styles may cause Indigenous accused to confess to

something they did not do (Carling, 2017; Chapman, 2020).

Challenges in Applying FASD Evidence and Gladue Principles

Mullally et al. (2023), upon reviewing 350 Canadian criminal cases registered between 2012 and 2020, found an overrepresentation of Indigenous offenders at 76.9% in FASD and PAE cases. Western Canada was the predominant source of these cases, despite accounting for just 20% of the national Indigenous population. FASD evidence was noted in 33.1% of cases, and a formal diagnosis was made in 53.1%. Confirmation of FASD was deemed relevant and utilized by judges to balance key sentencing principles (proportionality, public safety mitigation, risk, rehabilitation) in 21.7% of the rulings. However, less than 25% of cases had precise information on a formal FASD assessment (Mullally et al., 2023).

In addition, Mullally et al. (2023) found that two-thirds of criminal responsibility cases resulted in findings of not criminally responsible owing to a mental disease. FASD evidence influenced solely two fitness-to-stand-trial cases (Mullally et al., 2023). Systemic challenges to applying FASD evidence include a lack of understanding of the disorder among legal professionals, limited diagnostic tools, and inadequate culturally appropriate support programs (McLachlan et al., 2020b; Mullally et al., 2023; Reid et al., 2020). One of the limitations of the study by Mullally et al. (2023) was the unspecified gender distribution of Indigenous defendants, highlighting a continued gap in understanding cases of FSIW with FASD within the legal system. Nevertheless, all cases presented decision-making challenges because of competing considerations: risk, public safety, rehabilitation, and the enduring effects of the disability.

Breaking the Cycle of Criminalization, Exploitation, and Stigmatization

FSIW with higher risk classifications are less likely to be released on parole and excluded from reintegrative opportunities (Stewart et al., 2019). As a result, they are more likely to be released at their statutory release date, with little preparation for life outside their community (Stewart et al., 2019). Upon release, FSIW are placed in institutions away from their home communities, which effectively sets them up for failure (McGuire & Murdoch, 2022). FSIW are more likely to fail upon release by reoffending, due to their vulnerability to exploitation, and getting reincarcerated; they exhibit higher rates of reoffending and violent offenses (McGuire & Murdoch, 2022; Stewart et al., 2019).

The irony is that the offending behavior that leads to incarceration and higher risk classification, followed by reoffending and reincarceration, can be caused by inadequate detection of FASD-specific deficits such as impaired impulse control and difficulties with social reasoning (Bedard et al., 2023; Gutierrez & Wanamaker, 2022; Pei et al., 2016b). However, as demonstrated in this chapter, federal institutions lack culturally appropriate risk assessment instruments, comprehensive FASD diagnostic assessments, and specialized experts. Psychologists, particularly forensic psychologists, have a vital role in identifying and addressing these vulnerabilities. This research consequently emphasizes the need to investigate psychologists' and psychiatrists' perspectives on the judicial system's management of FSIW with FASD, specifically, how FASD risk-related behavior can result in criminality, thereby contributing to overincarceration, reoffending, and reincarceration.

Addressing the Needs of FSIW with FASD

Healing lodges, created under Section 81 of the Corrections and Conditional Release Act, are designed to offer culturally affirming, trauma-informed spaces that support the rehabilitation and reintegration of FSIW (CSC, 2021; CSC, 2024). These facilities focus on traditional Indigenous practices, such as ceremonies and teachings, to foster healing from intergenerational trauma and systemic inequities. While healing lodges have been linked to successes such as reduced recidivism and increased empowerment (OCI, 2022, 2023), significant challenges remain (Clark, 2019). For instance, eligibility restrictions and limited capacity prevent many FSIW, especially those classified as maximum security, from accessing these culturally relevant programs (CSC, 2021; Montford & Hannah-Moffat, 2020). The absence of mandatory participation further complicates the reintegration process, as many FSIW are released directly from mainstream facilities and lack appropriate support (Clark, 2019).

The Aboriginal Women Offender Correctional Program (AWOCP), another critical initiative, provides culturally specific rehabilitation for FSIW, focusing on trauma, substance abuse, and interpersonal conflict. However, FSIW with FASD will face potential barriers to benefiting from this program due to cognitive impairments related to their neurodevelopmental disabilities (Popova et al., 2018). The lack of tailored programming and insufficient screening and diagnosis of FASD prevent these women from receiving the accommodations they need (Tait et al., 2017). In addition, according to Hoyme et al. (2026), because the FASD diagnosis is a complex medical task, a multidisciplinary approach involving a team of clinical professionals with varied

expertise, qualifications, and competencies is recommended. Recommendations emphasize the need for more inclusive programs, such as adapting Aboriginal Women Offender Correctional Program (AWOCP) and healing-lodge curricula to meet the needs of women with FASD, improving diagnostic screenings upon intake, and ensuring staff receive adequate training (Popova et al., 2018; Tait et al., 2017).

The broader movement toward indigenizing prisons has faced criticism for potentially reinforcing colonial structures within the correctional system rather than offering genuine community-based alternatives (Bird, 2024; McGuire & Murdoch, 2022; Vecchio, 2018). However, restorative justice (RJ) approaches, which emphasize community-based healing and collective processes, align more closely with Indigenous values and offer a promising framework for addressing the overincarceration of FSIW—particularly those with FASD (Evans & Bourgon, 2020; Webb, 2024). Programs such as the Alexis Nakota Sioux Nation FASD Justice Program (Flannigan et al., 2018b; Flannigan et al., 2021c) and the In Reach project integrate neurocognitive assessments with culturally relevant practices, promote healing, and reduce recidivism (Tremblay et al., 2024; Webb, 2024). These restorative approaches emphasize relationship-building and community connection, addressing the underlying systemic factors contributing to criminalization, such as intergenerational trauma and systemic racism (McGuire & Murdoch, 2022; TRC, 2015a).

While healing lodges and Aboriginal Women Offender Correctional Program (AWOCP) provide valuable rehabilitation opportunities, they are insufficient on their own to address the complex needs of FSIW. For FSIW with FASD or suspected FASD,

this poses more challenges. To ensure that FSIW, particularly those with neurodevelopmental disorders, receive the necessary care, there must be a transition toward more inclusive, restorative, and community-based justice models. By extending access to culturally sensitive, trauma-informed therapies and embracing RJ concepts, psychologists and psychiatrists may better integrate these efforts with TRC Calls to Action to prevent the overincarceration of Indigenous people.

Implications

Future research must address the intersection of FASD, Indigenous populations, and the criminal justice system through collaborative, Indigenous-led methodologies that honor Indigenous ways of knowing and prioritize community agency (Gutierrez & Wanamaker, 2022). Currently, there is a significant gap in research on FSIW, criminal behavior, and FASD-related deficits. This gap must be bridged to develop more equitable correctional practices and reduce the overincarceration of FSIW. Another critical need is to embed evidence-based FASD knowledge into legal and forensic practices, supported by culturally informed resources that center on Indigenous perspectives (Stewart & Glowatski, 2018).

In addition, legal, clinical, and forensic professionals require specialized training to identify and understand FASD and its implications for decision-making (McLachlan et al., 2019; Passmore et al., 2018; Passmore et al., 2020; Reid et al., 2020). Such training should also enable clinicians to conduct thorough forensic evaluations that address the nuanced challenges posed by FASD in legal contexts, including cognitive and behavioral impairments such as impulsivity and emotional dysregulation (Flannigan et al., 2021a;

Reid et al., 2020). Encouraging professionals to pursue FASD-specific education can enhance the justice system's capacity to meet the needs of individuals with FASD, thus reducing misclassification and systemic inequities (Dickson & Stewart, 2021; Stewart & Glowatski, 2018). Instituting teams of clinical professionals with varied expertise, qualifications, and competencies provides a multidisciplinary approach, given the complexity of diagnosing FASD (Hoyme et al., 2026).

Risk Assessment Tools

Existing risk assessment tools, including the CRS, SRSW, and RNR models, perpetuate systemic biases by failing to account for the sociocultural and neurocognitive challenges faced by FSIW. Developing Indigenous-specific risk assessment tools in collaboration with Indigenous scholars and experts is essential to addressing these shortcomings (Gutierrez & Wanamaker, 2022). Furthermore, integrating *Gladue* principles into existing frameworks such as the CRS, SRSW, and RNR model is necessary to promote more equitable outcomes and reduce the overrepresentation of FSIW in correctional facilities (Robinson et al., 2023). Future research should explore Indigenous differences in forensic risk assessment with greater nuance to better reflect this diversity and examine issues of intersectionality (Olver et al., 2024). Shawana et al. (2021) stress the importance of ensuring that trained Indigenous-language interpreters are available at all healthcare facilities nationwide so unilingual Indigenous patients fully understand their services and provide informed consent.

The Canadian Registry of Wrongful Convictions notes that 15 cases involving remedied guilty pleas involved crimes that never occurred, underscoring the systemic

flaws that perpetuate miscarriages of justice (Carling, 2017; Roach, 2023). Indigenous peoples face disproportionate impacts due to tunnel vision, ineffective legal counsel, and systemic bias (Levy, 2023; Roach, 2023). These compounded vulnerabilities highlight the need for culturally informed legal practices, improved training for lawyers, and trauma-sensitive approaches tailored to Indigenous offenders' unique circumstances. Culturally responsive justice practices must also address the impacts of colonialism, residential schools, and historical trauma on Indigenous communities (Mussell & Orsini, 2021). Aligning legal practices with Indigenous knowledge systems and community-led interventions can foster more just and rehabilitative outcomes.

Reforms must also acknowledge the lasting effects of colonization, systemic racism, and intergenerational trauma, aligning correctional practices with the TRC Calls to Action 33 and 34, which emphasize addressing FASD and reducing Indigenous overincarceration (TRC, 2015a). Implementing trauma-informed, culturally responsive, and evidence-based approaches can dismantle systemic barriers while promoting equity in sentencing. Investing in community-based rehabilitation programs and Indigenous-led justice initiatives is essential to ensuring meaningful change. By prioritizing these reforms, the justice system can move toward reducing the disproportionate criminalization of Indigenous women, particularly those with FASD, and fostering long-term systemic change.

Summary and Conclusions

This chapter reviewed the key theoretical and empirical literature relevant to understanding the overincarceration of FSIW and its potential links with criminality and

FASD. It explored the complex interplay between multifaceted trauma, including historical, intergenerational, and transgenerational trauma, attachment disruption, and systemic inequities resulting from colonial policies. The chapter also highlighted PAE and the neurodevelopmental effects of FASD, such as impaired emotional regulation and executive functioning, which increase individuals' vulnerability to justice system involvement. These vulnerabilities are compounded by ACEs, cultural disconnection, and limited access to trauma-informed, culturally responsive services. Theoretical foundations from HTT, AT, interwoven within the MIDF provided a culturally grounded lens for understanding these intersecting challenges.

From the literature, it is evident that FSIW are often caught in cycles of victimization, criminalization, and inadequate reintegration support, with FASD exacerbating their situation. Despite growing recognition of the links between trauma, FASD-related cognitive deficits, and criminalization, the literature reveals key gaps. There is limited research exploring FASD's prevalence and lived impacts among justice-involved Indigenous women, and few studies center on Indigenous worldviews or the perspectives of mental health professionals. Legal and health systems often lack FASD-specific training, leading to underdiagnosis and insufficient support. This absence contributes to continued misunderstandings of FASD's legal implications and missed opportunities for prevention and diversion. There also remains limited exploration of how FASD intersects with the victimization–offending continuum within culturally grounded frameworks. Although systemic reforms have been proposed, gaps remain in their practical application and effectiveness, particularly in addressing the reintegration needs

of FSIW.

By drawing on insights from psychologists and psychiatrists specializing in FASD and working with FSIW, this study sought to fill these knowledge gaps and inform culturally responsive practices. Through a trauma-informed lens, the findings are expected to support evidence-based reforms that acknowledge the enduring effects of colonization, promote healing, and reduce overincarceration. This research contributes to a more just and inclusive approach to supporting Indigenous women with FASD in the criminal justice system. Unless the justice system recognizes the unique challenges faced by Indigenous women with FASD and promotes fair and humane treatment, the cycle of victimization, incarceration, and reincarceration will persist.

Chapter 3 will outline the methodological framework used to achieve these objectives, detailing the sampling strategies, semi-structured interview protocols, data analysis approaches, and ethical considerations central to the study. The next chapter builds upon the identified gaps and themes in the literature, guaranteeing a cohesive and methodologically rigorous approach to answering the research question.

Chapter 3: Research Method

The purpose of this study was to examine psychologists' and psychiatrists' perspectives on how FASD-related neurocognitive deficits may contribute to the risk of criminal behavior among FSIW. This research addressed a significant gap in the academic literature regarding the impact on the likelihood of criminal behavior among FSIW in Western Canada. By collaborating with psychologists or psychiatrists specializing in this area, my study explored how cognitive deficits related to FASD could contribute to the elevated rates of incarceration and reincarceration among FSIW in the region. This chapter outlines the research design and its rationale, detailing the researcher's role, the selected methodological approach, and the qualitative procedures employed in participant recruitment, data collection, and analysis. Furthermore, I discuss how trustworthiness and ethics were ensured throughout the study, particularly emphasizing understanding the context, maintaining reflexivity, and mitigating personal biases as a non-Indigenous researcher.

Research Design and Rationale

This study focused on the following research question to explore the views, perspectives, and opinions of psychologists or psychiatrists with expertise in FASD and FSIW on the role that cognitive deficits related to FASD may play in the risk for criminal behavior, resulting in the overincarceration and reincarceration of FSIW in Western Canada: What are psychologists' and psychiatrists' views, perspectives, and opinions on the role that FASD-related cognitive deficits may play in the risk for criminal behavior resulting in the overincarceration and reincarceration of FSIW in Western Canada (the

Prairie Region and British Columbia)?

To address my research inquiry, a tailored qualitative approach was employed to align with the specific requirements of my study, which was designed to explore and understand a particular phenomenon from the perspectives of the research participants. Qualitative research entails an exhaustive examination of phenomena, scrutinizing their inherent characteristics, varied manifestations, contextual intricacies, and diverse viewpoints (Busetto et al., 2020). This approach is particularly adept at investigating the fundamental essence of phenomena, elucidating the underlying rationales for observed phenomena, assessing complex multi-component interventions, and refining intervention strategies to optimize effectiveness (Busetto et al., 2020; Malterud et al., 2016). In contrast to quantitative methodologies, qualitative inquiry prioritizes textual data over numerical measurements (Malterud et al., 2016).

A quantitative approach is used to measure a problem and its prevalence within a broader population, whereas a qualitative methodology focuses on understanding participants' experiences and perspectives (Creswell & Creswell, 2018; Ravitch & Carl, 2021). In general qualitative inquiry, data collection involves analyzing participants' insights on issues beyond their personal experiences (Creswell & Creswell, 2018; Patton, 2015; Ravitch & Carl, 2021). Given the exploratory nature of this study, I used a qualitative approach to examine the perspectives of psychologists and psychiatrists with expertise in addressing challenges faced by FSIW in Western Canada, particularly those suspected or diagnosed with FASD. Drawing on their practical experience, this research strived to provide a nuanced understanding of how FASD-related deficits influence the

incarceration and reintegration of FSIW.

Kerimofski et al. (2025) conducted a similar exploratory qualitative study in Australia, utilizing a methodology aligned with that proposed in the current research, and reported valuable and impactful findings. Kerimofski et al. conducted semi-structured interviews with 10 psychologists and nine individuals with lived experience to examine experiences related to FASD assessment, training needs, and views on universal screening for PAE. Thematic analysis was used to code data in NVivo, identifying five key themes: stigma and stereotypes surrounding PAE; support for universal screening; issues of misdiagnosis or missed diagnosis; lack of post-diagnostic support; and the need for improved FASD-specific training for psychologists and psychiatrists. The study revealed that incorporating FASD education into psychology training programs can improve diagnosis accuracy, early identification, and targeted interventions for FASD clients, thereby overcoming biases and limited diagnostic services. A limitation noted was that the interviewed psychologists had a higher baseline level of FASD knowledge than in previous surveys (Kerimofski et al., 2024), which helped in productive discussion, but this may not accurately reflect most Australian psychologists' experiences.

I did not conduct direct interviews with FSIW due to the complex ethical, institutional, and cultural sensitivities. CSC has stringent guidelines for researchers to safeguard inmates' safety, privacy, and well-being, and obtaining permission is therefore next to impossible (GC, 2017). Furthermore, ethical guidelines specified in Canada's Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS-2) emphasize the need to prevent undue influence or coercion, as persons in vulnerable

circumstances, such as incarceration, may feel pressured to participate (GC, Interagency Advisory Panel on Research Ethics, 2022). Moreover, FSIW often experience significant trauma, including intergenerational and systemic trauma, which raises concerns about the potential for re-traumatization during interviews (GC, Interagency Advisory Panel on Research Ethics, 2022).

From a cultural perspective, engaging directly with FSIW requires adherence to Indigenous sovereignty principles, such as OCAP (Ownership, Control, Access, and Possession), to ensure respect for Indigenous data sovereignty (GC, Interagency Advisory Panel on Research Ethics, 2022). The absence of Indigenous partners or oversight bodies may lead to the perception of such research as exploitative. Walden University's policies similarly discourage doctoral students from conducting research with vulnerable populations to mitigate ethical risks and ensure feasibility (Walden University, Office of Research and Doctoral Services, n.d.). For my study, I, therefore, drew on the insights and expertise of psychologists or psychiatrists with extensive experience with criminal behavior, FSIW, and FASD. This approach aligned with my research objective of examining psychologists' or psychiatrists' insights into how FASD-related deficits influence criminal behavior and contribute to the high rates of incarceration and reincarceration among Indigenous women in correctional institutions in Western Canada. Shedding light on this phenomenon might offer insights into the prevalent social issue of overincarceration and high reincarceration rates of FSIW in Western Canada. This method enabled an ethical and culturally informed investigation of structural, psychological, and cultural factors impacting FSIW while respecting the sensitivities and

constraints of direct interaction.

Role of the Researcher

In qualitative research, the researcher's role is multifaceted, encompassing study design, methodological selection, and data collection and analysis guided by the research question (Crabtree & Miller, 2017). This involvement spans all phases of the study, from conceptualization to the reporting of identified themes and insights (Crabtree & Miller, 2017). Effective participant recruitment depends on the researcher's ability to establish rapport and trust, which is essential for gathering meaningful data (Collins & Stockton, 2022). Navigating role-related dilemmas requires a clear distinction between research and therapeutic roles and an understanding of effective interviewing techniques (Taquette & Borges da Matta Souza, 2022). Upholding ethical standards, maintaining boundaries, and acknowledging biases are critical to ensuring the study's rigor and credibility (Collins & Stockton, 2022; Crabtree & Miller, 2017).

Understanding Context and Reflexivity

Although this study did not involve direct interaction with Indigenous participants, consulting with Indigenous studies and cultural sensitivity experts helped contextualize my analysis. This approach ensured that my interpretations respect the cultural nuances relevant to psychologists' and psychiatrists' perspectives on FASD and Indigenous offenders. To maintain informed and respectful interpretations, I critically examined Indigenous justice issues and FASD within broader social, historical, and cultural contexts. Additionally, I kept a reflexive journal to assess potential biases and enhance self-awareness throughout the research process. This approach ensured that my

analysis respects the cultural nuances relevant to the psychologists' or psychiatrists' perspectives on FASD and Indigenous offenders.

Researcher reflexivity is a continuous, collaborative, and multifaceted process in which researchers critically examine how their subjectivity and contextual factors shape their work (Olmos-Vega et al., 2023). Recognizing one's background and perspective within the social context is essential in qualitative inquiry, as personal factors inevitably influence data generation and interpretation (Olmos-Vega et al., 2023). Engaging in reflexivity and ongoing learning enhances credibility, ensuring qualitative researchers remain attuned to evolving methodologies and ethical standards (Crabtree & Miller, 2017; Jerolmack, 2023). Responsibility extends to ethical practices, including informed consent, confidentiality, and participant well-being. Techniques such as member checking contribute to the validation of results (Crabtree & Miller, 2017; Taquette & Borges da Matta Souza, 2022). Transparent reporting is crucial for disseminating valuable insights, and a researcher's dynamic role requires a blend of methodological expertise, interpersonal skills, and ethical awareness (Crabtree & Miller, 2017). My commitment as a researcher lay in producing meaningful and valid outcomes that contribute to the academic community and beyond.

Personal Bias

As a non-Indigenous researcher exploring the intersection of FSIW and FASD, I remained vigilant of potential biases that could influence my research. Even if I did not directly interview Indigenous women but instead spoke with psychologists and psychiatrists who work with them, it was still crucial to be aware of potential biases that

could influence my research. These biases included cultural differences and nuances in the perspectives of psychologists and psychiatrists, which may have been influenced by their cultural backgrounds. Additionally, as the researcher, I could have had preconceived expectations or assumptions about the roles and experiences of Indigenous women and individuals with FASD, leading to confirmation bias in the questions I asked and the way I interpreted responses.

Acknowledgment of Biases and Reflexive Practices

My preconceived notions about the justice system and the role of cognitive-related deficits of FASD on criminal behavior could have influenced how I interpreted psychologists' and psychiatrists' perspectives. Researchers must be cautious when addressing social justice concerns about overrepresentation to avoid reinforcing causal narratives that may be misapplied in criminal justice contexts (Flannigan et al., 2018b). To mitigate this, I engaged in regular self-assessment and reflexive practices, challenging my assumptions to ensure they did not inadvertently shape the research outcomes. Additionally, I recognized that even among academics, stigma and stereotyping can persist due to insufficient awareness and understanding of FASD. In my analysis, I incorporated multiple viewpoints by engaging with research that offers alternative insights, ensuring a balanced interpretation of how psychologists and psychiatrists perceive FASD's impact on Indigenous populations. FASD United (2024) highlights the power of language, emphasizing that using precise, contextualized, and non-stigmatizing terminology is crucial for fostering awareness and preventing misleading representations.

There is also a risk of perpetuating stereotypes or reinforcing stigmatizing

attitudes toward FSIW and individuals with FASD, as well as an inherent power imbalance in the researcher-participant relationship. Furthermore, the historical and ongoing impacts of colonization continue to shape both the experiences of Indigenous communities and the perspectives of psychologists and psychiatrists working in this field. Recognizing these complexities, I actively engaged in reflexivity and cultural humility to ensure my research remains respectful and accurate. By acknowledging and addressing potential biases, I was better able to capture the nuances of psychologists' and psychiatrists' perspectives while fostering a research approach that prioritizes ethical integrity and cultural sensitivity.

Methodology

Participant Selection Logic

Expert sampling, a subtype of purposeful (or purposive) sampling, involves deliberately selecting individuals recognized as experts in a specific field (Elfil & Negida, 2017). While expert sampling falls under the broader category of purposive sampling, the two are not interchangeable (Elfil & Negida, 2017; Palinkas et al., 2015). Purposive sampling is a qualitative sampling strategy where participants are selected based on specific characteristics that align with the research objectives. It encompasses various approaches, including expert, maximum variation, and snowball sampling. Expert sampling focuses on selecting individuals with specialized knowledge to provide informed insights on a given research topic (Elfil & Negida, 2017; Palinkas et al., 2015).

For my study, I employed expert sampling in collaboration with the Northwest Central Alberta FASD Network (NWC FASD Network), also known as Willow Winds

Support Network. The NWC FASD Network includes several Alberta-based FASD Networks and the Edmonton Institution for Women, a multi-level security facility for women. The NWC FASD Network assisted initially in identifying psychologists and psychiatrists with expertise in FASD, particularly those working with FSIW. Interested psychologists and psychiatrists sent me an email expressing their interest in participating in the study. This approach enabled me to gather rich, nuanced data from professionals with in-depth subject knowledge, ensuring a comprehensive analysis (Elfil & Negida, 2017).

Through in-depth interviews with these experts, I explored complex issues related to FASD and Indigenous women, allowing for follow-up questions and deeper engagement with the topic. While expert sampling offers valuable depth, it also presents challenges, such as the risk of researcher bias if selection criteria are not well-defined (Berndt, 2020; Elfil & Negida, 2017). Additionally, ensuring a representative sample can be difficult, as selected experts might provide narrow perspectives. To address these limitations, I established clear inclusion criteria for expert selection and strive for sample diversity throughout the research process.

The inclusion criteria for this study were revised following Institutional Review Board (IRB) approval to better align with the study's purpose and to enhance the availability of qualified participants. The original inclusion criteria limited participation to licensed psychologists in Alberta with expertise in or experience working with Indigenous female offenders affected by FASD. Following IRB modification and approval (Walden University IRB approval number 08-13-25-1036715, expiry date of

August 12, 2026), the criteria were expanded to include licensed psychiatrists in addition to psychologists, and the geographical scope was extended from Alberta to the Prairie Region (Alberta, Saskatchewan, and Manitoba) and British Columbia. All data were collected in accordance with the revised criteria and the updated IRB approval.

The purpose of the study was to explore the views of the psychologists and psychiatrists dealing with Indigenous women with FASD in the criminal justice system. The NWC FASD Network, followed by a direct approach to both groups (psychologists and psychiatrists), was used to recruit participants. In the end, the study involved nine psychiatrists and one psychologist. Participation in the process was sound; however, psychiatrists were underrepresented, despite specific recruitment. The sample is an accurate indication of the access and availability of these professional populations.

Sample Size and Saturation

One limitation of qualitative research is the potential for misrepresenting the broader population (Jerolmack, 2023). However, Busetto et al. (2020) and Hennink and Kaiser (2022) argue that sample size need not be predetermined in qualitative research, with saturation being a more crucial indicator of adequacy and content validity. Saturation, which captures the diversity and depth of the issues studied, can be reached with as few as six participants, though larger samples may yield diminishing returns (Guest et al., 2006). Hennink and Kaiser (2022) emphasize that the richness of information and the researcher's analytical capabilities are more important than sample size in ensuring meaningful insights (Hennink & Kaiser, 2022; Hennink et al., 2016; Staller, 2021). For this study, I interviewed nine psychologists and one psychiatrist,

which aligns with the literature supporting that this sample size will suffice for an in-depth exploration of the topic.

Data saturation occurs when no new patterns, codes, or themes emerge from the data, indicating that the data have been comprehensively analyzed (Naeem et al., 2024). This study outlined a systematic approach to achieving saturation during thematic analysis, ensuring all data were fully explored. Unlike traditional methods that focus on saturation during data collection, this approach emphasized saturation during analysis to maximize the data's contribution to the research objectives. Staller (2021) suggests that thematic saturation is adequate when it involves additional evidence and sampling, as it enriches the study without altering identified themes. Conversely, it is problematic if no new insights are derived from existing data analysis (Guest et al., 2020; Hennink & Kaiser, 2022; Staller, 2021).

Instrumentation

As a researcher, I recognized the pivotal role of interviews in qualitative research for data collection. Given the exploratory nature of qualitative research, I used semi-structured interviews to ensure comprehensive data collection. These interviews maintained an informal atmosphere and used open-ended questions to encourage participants to express their perspectives freely. Ensuring participants' comfort and safety throughout the interview process was of utmost importance, including offering anonymity options and carefully selecting appropriate interview locations. Thorough planning, including developing a topic guide and flexibility in adapting questions based on responses, is crucial for conducting semi-structured interviews effectively (Barrett &

Twycross, 2018).

I incorporated an interview guide (Appendix B) that drew on relevant literature and included questions supplemented with probes and follow-up inquiries. It is imperative to craft appropriate questions, recognizing that participants will share perspectives on the topic under consideration that differ from my own (Barrett & Twycross, 2018). Transparency was maintained in all aspects of the study, including data acquisition, storage, and transcription methodology, to uphold integrity. Participants' inquiries and concerns were addressed throughout the study, underscoring the importance of confidentiality and anonymity in research ethics.

A 60- to 90-minute interview was conducted in face-to-face or telephone mode, with participant consent, as provided in Appendix A, and reaffirmed at the outset of each interview. Participant anonymity was safeguarded using pseudonyms, and participants were informed of the study's objectives, interview duration, procedural aspects, and their right to withdraw from the study at any time. The dataset was de-identified, and the resulting audiotapes and transcripts were stored securely on a password-protected computer, with access granted only to the dissertation committee members. After the interview, participants were informed of the subsequent data analysis, which involved manual transcription. Participants were encouraged to contact the researcher via e-mail if they had any queries or concerns after the interview.

Procedures for Recruitment, Participation, and Data Collection

Following Institutional Review Board (IRB) approval, I planned to initiate discussions and seek assistance from the NWC FASD Network to engage suitable

participants. Subsequently, I received e-mails from potential participants whom I had contacted directly to confirm their interest. I also sent an invitation letter and consent form to eligible participants, outlining their authorization to participate in the interview and to have sessions recorded for research purposes. Additionally, participants received follow-up communication via email or phone call to remind them of their scheduled interview appointments.

Data Analysis Plan

This study systematically analyzed data using Reflexive Thematic Analysis (RTA) and the Constant Comparative Analysis Method (CCA). While RTA emphasizes researcher reflexivity and the organic emergence of themes (Braun & Clarke, 2019, 2021), CCA enhances analytical rigor by continuously comparing new data with existing findings, refining categories, and capturing depth in participants' experiences (Fram, 2013). Although initially rooted in Grounded Theory, CCA is widely applicable across qualitative methodologies, including thematic analysis, to support the iterative and dynamic development of themes (Fram, 2013). By integrating RTA and CCA, this study strengthened the validity of findings through continuous comparison, critical reflection, and thematic refinement.

Thematic analysis can be either inductive, allowing themes to emerge naturally without pre-imposed codes, or reflexive, emphasizing the researcher's active role in shaping interpretations (Braun & Clarke, 2019, 2021; Guest et al., 2020). While both approaches identify patterns within data, reflexive thematic analysis (RTA) integrates ongoing self-awareness to mitigate biases. This study adopted a combined inductive and

reflexive approach, maintaining the openness of inductive analysis while embedding reflexivity to ensure transparency, depth, and rigor in the analytic process. This integration fostered a holistic, nuanced interpretation of participant experiences, particularly regarding the intersection of FASD-related deficits and criminalization among FSIW.

To enhance organization and consistency, this study employed a living codebook, a dynamic tool for tracking, refining, and documenting coding decisions throughout the research process (Reyes et al., 2024). This approach is particularly beneficial in solo research settings, allowing for systematic iteration as new themes emerge. By structuring the analysis within a living codebook, I maintained transparency in coding decisions and document changes, and revisited the data for continuous refinement. This iterative process ensures credibility, reliability, and a structured yet flexible analytical framework.

Steps for Conducting the Thematic Analysis

Microsoft Word's transcription feature was used to transcribe the interviews' audio recordings. All auto-generated transcripts were carefully reviewed and proofread multiple times to ensure accuracy before analysis. While transcription software is efficient, it may occasionally produce errors due to overlapping speech, accents, or background noise. I used Taguette since it is a qualitative coding software available as an alternative to NVIVO and contains import and export features to CodeBook (Rampin et al., 2021). Taguette can code text data, show all instances of a code, update, merge, and split codes, and have them updated along the way (Rampin et al., 2021). Since Taguette was downloaded to my computer and executed locally, my participants' confidential

information was not transmitted to an external server; the information was as safe as mine (Rampin et al., 2021).

Each clean, proofread transcript was uploaded as a document in my Taguette project. Text segments were highlighted and assigned a code; some codes were created in advance, while others emerged during the coding process. Taguette displays all instances of each code, allowing for the addition of short descriptions to clarify meaning. Once coding was complete, I exported the codebook (including all codes and their descriptions), the highlighted excerpts associated with each code, and a full report detailing the frequency of each code, the coded text, and the document from which it originated. The codebook was exported to my designated encrypted research folder on my C Drive as a .DOCX file.

Ultimately, integrating RTA, CCA, and a living codebook provided a rigorous, transparent, and adaptable approach to qualitative research. This methodology supports methodological integrity, enabling deep engagement with participant narratives while systematically and fluidly refining themes. The combined framework strengthened the depth, consistency, and credibility of the findings, ensuring a comprehensive understanding of the experiences of FSIW affected by FASD. Using encrypted research folder and drives and not saving any information on external server safeguarded participants confidential information.

Issues of Trustworthiness

Lincoln and Guba (1985) introduced the concept of trustworthiness as a parallel to the quantitative research standards of validity and reliability. Trustworthiness refers to the

strategies researchers use to align their epistemological and ontological foundations with the design and execution of their study. In qualitative research, it is critical to ensure rigor and reliability (Lincoln & Guba, 1985). A study's trustworthiness section emphasizes methodological transparency, allowing readers to assess the credibility of the findings. Given the subjective nature of qualitative research, Lincoln and Guba (1985) proposed credibility, dependability, confirmability, and transferability as the core tenets of trustworthiness. However, trustworthiness remains a debated topic due to its intersection with validity and the diverse methodologies used across qualitative research. To enhance the rigor of my study, I applied these four criteria throughout my research process.

Credibility

I implemented multiple strategies to ensure credibility in my research, including member checks, triangulation, and reflexivity (Creswell & Creswell, 2018; Lincoln & Guba, 1985). Member checking, or respondent validation, allows participants to review their transcripts and provide clarifications or additional insights, ensuring their perspectives are accurately represented (Korstjens & Moser, 2018). Additionally, methodological triangulation was used to compare findings across different data sources, reinforcing the trustworthiness of the results (Patton, 2015). Reflexivity was also integral, and I maintained a journal to critically examine how my background and assumptions influenced the research process (Korstjens & Moser, 2018). While challenges such as biased feedback and the resource-intensive nature of these techniques may arise, these credibility measures, as advocated by Lincoln and Guba (1985), ensured that my findings were rigorous, transparent, and reflective of participants' lived experiences.

Confirmability

Confirmability is the extent to which the findings of the study are based on the data and not on researcher bias or assumptions (Creswell & Creswell, 2018; Ravitch & Carl, 2021). To improve the confirmability, I kept a reflexive journal that recorded my assumptions, reactions, and decisions during the research process. This self-reflective practice prompted constant mindfulness, especially in coding and theme development. As more interviews were conducted, I would consciously re-examine previously made decisions in the analysis to avoid influencing future participants with the patterns that were emerging. Preserving a research trail, coding records, and memos ensured that the data itself supported interpretations.

Transferability

Transferability in qualitative research refers to the extent to which findings can be applied to other contexts or populations (Creswell & Creswell, 2018; Ravitch & Carl, 2021). To enhance transferability, I provided detailed descriptions of the research context, participant characteristics, and methodological choices, enabling future researchers to assess the applicability of my findings to their own studies. This aligns with research by Korstjens and Moser (2018) on transferability. Thick descriptions, rich and contextualized accounts of participants' lived experiences, capture the complexity of the phenomena under investigation (Lincoln & Guba, 1985). By incorporating participants' interpretations into their social and cultural contexts, I sought to produce findings that resonate beyond the immediate study setting. Providing transparent documentation of sampling strategies, data collection, and analysis procedures further

strengthened the potential for transferability.

Dependability

Dependability in qualitative research parallels reliability in quantitative studies, emphasizing consistency, stability, and methodological rigor (Yan & Fan, 2021). To ensure dependability, I maintained an audit trail documenting key research decisions, data collection processes, and analytic procedures, allowing for external review and verification (Korstjens & Moser, 2018). Systematic field notes and interview logs were kept to capture emerging themes and methodological adjustments. A structured and transparent research process was established to enhance the study's reliability by implementing these measures.

Ethical Procedures

No data collection occurred until Walden University's Institutional Review Board (IRB) thoroughly reviewed and approved the study's proposal. In terms of research ethics, ensuring participant confidentiality was paramount. To protect anonymity, pseudonyms were used instead of real names, and participants were advised not to disclose any identifying information during the interviews. Participants were informed of their rights, including the option to participate voluntarily and to withdraw at any time, in line with the recommendations of Taquette and Borges da Matta Souza (2022). Contact details for addressing concerns were provided, and debriefing sessions were conducted after the interviews to mitigate potential harm. The collected data was securely stored to ensure the confidentiality and protection of participants' information.

Summary

This research employed qualitative methods, including reflexive and inductive thematic analyses, CCA, alongside a living codebook to investigate the impact of FASD on criminal behavior among incarcerated Indigenous women in Western Canada, focusing on psychologists' and psychiatrists' perspectives. The chapter provides the rationale for selecting psychologists and psychiatrists with expertise in working with FSIW and FASD through purposive expert sampling. Data collection involved semi-structured interviews with these experts. Methodological considerations regarding trustworthiness, including credibility, transferability, dependability, and confirmability, are discussed, along with the importance of researcher reflexivity. Ethical protocols governing the study, emphasizing the protection of human subjects, are also outlined.

Chapter 4: Results

The purpose of this qualitative study was to examine psychologists' and psychiatrists' perspectives on how FASD-related neurocognitive deficits may contribute to the risk of criminal behavior among FSIW. The overrepresentation of FSIW in Canada is well-documented, with Indigenous women accounting for 46% of the federal female prison population, 75% of maximum-security placements, and 96% of stays in Structured Intervention Units (Motiuk & Keown, 2022a; OCI, 2023; PSC, 2022c, 2023b; Senate of Canada, 2024). Although research highlights high rates of FASD among Indigenous inmates (Flannigan et al., 2018b; McLachlan et al., 2019), few empirical studies have explored its potential role in the incarceration and recidivism of Indigenous women.

Data for this study were collected through interviews with psychologists and a psychiatrist who work with Indigenous female offenders and possess extensive knowledge of FASD and the challenges experienced by their clients. Grounded in HTT and AT within the MIDF, I used expert sampling to conduct semi-structured interviews. The research question guiding the study was as follows: What are psychologists' and psychiatrists' views, perspectives, and opinions on the role that FASD-related cognitive deficits may play in the risk for criminal behavior resulting in the overincarceration and reincarceration of FSIW in Western Canada (the Prairie Region and British Columbia)?

RTA and the CCA were used to enhance analytical depth and rigor. To mitigate bias, I maintained a reflexive journal throughout the study to document analytic decisions and ensure transparency. The findings of this study help address knowledge gaps related to FASD and FSIW, inform culturally responsive practices, support evidence-based

reforms, and contribute to reducing the overincarceration of Indigenous women who live with FASD. This chapter presents the data collection process, data analysis procedures, evidence of trustworthiness, and results based on the methodological approach outlined in Chapter 3. Taguette qualitative software was used to organize, code, and develop the themes.

Setting

Participants selected a date and time that were convenient for a one-hour or 90-minute interview, which could be conducted via Zoom, Microsoft Teams, or a telephone call. Once participants indicated their availability, I scheduled the meeting and sent the invitation. Participants were informed that interviews would be recorded only after they had given their consent. All participants provided consent via email, confirming that they had read and agreed to the terms of the consent form they received prior to scheduling their appointment. At the start of each interview, I reviewed the interview process, reconfirmed recording consent, and asked participants to provide a pseudonym.

All interviews were conducted virtually, except for one telephone interview, which was recorded using a digital audio recorder. I also took notes during interviews to help guide follow-up questions and enrich the data. Recordings were transcribed verbatim and returned to participants for member checking. As Creswell and Creswell (2018) noted, allowing participants to review the transcribed interview enhances accuracy and offers an opportunity for clarification or correction. Participants were reminded that they could withdraw at any time. There were no organizational conditions that influenced participants' ability to contribute freely, and no unwarranted influence on the study's

findings was identified.

Demographics

A total of nine psychologists and one psychiatrist participated in the study. All were registered practitioners with more than 15 years of experience working with Indigenous offenders and individuals with FASD. The sample included three male and seven female participants, aged 35 to 65 years. All participants had extensive experience working with Indigenous clients within correctional or forensic settings.

Data Collection

After receiving IRB approval, I forwarded the IRB-approved invitation email to the Executive Director of the Northwest Central Alberta FASD Network (NWC FASD Network). The invitation was then distributed to psychologists and psychiatrists within the network who met the inclusion criteria. Interested participants contacted me directly, and each received an email with a consent form. Participants reviewed the form and replied “I consent” to confirm their participation. A total of 10 participants were recruited for the study.

The semi-structured interview guide (Appendix) was used during each interview to maintain structure and alignment with the research question. Each interview lasted approximately 60 minutes and was recorded using Zoom or a digital recorder. Transcriptions were completed in Microsoft Word, checked manually for accuracy, and emailed to participants for review. All digital data was stored on a password-protected personal computer and backed up on a password-protected USB drive accessible only to me.

Data Analysis

A reflexive, iterative method, typical of RTA, and supplemented by aspects of the CCA method, was employed to analyze the data used in this qualitative study (Ravitch & Carl, 2021). The primary source of data was semi-structured interviews that were guided by a literature-informed interview protocol. The protocol provided comprehensive information about perceptions of the participants on how the neurocognitive deficit associated with FASD can lead to the risk of engaging in criminal activities among FSIW. I started the analysis by immersing myself in the data. I listened to each interview recording multiple times and read each transcript closely while taking initial analytic notes. Recurring terms, meaningful concepts, and patterns were highlighted during these early readings.

All transcripts were then imported into Taguette for systematic coding. To protect confidentiality, pseudonyms were used during the interview and for the transcription; for the analytic process, participants were assigned numerical identifiers (P1–P10). Next, I reviewed each transcript alongside my handwritten notes and began generating initial codes. In line with the categorical strategy for organizing qualitative data adopted by Rubin and Rubin (2012), I used coding to classify segments of text that reflected meanings related to my research question. My first list of 47 codes (tags) was compiled by reading the transcripts 15 times. All reviews were conducted by first-cycle coding, after which the meaning and relationships among codes were determined by reviewing each code against the corresponding transcript excerpt for each data point.

Overlapping conceptual codes were collapsed, renamed, and redefined to enhance

clarity and analytic specificity. This was the transition point to second-cycle coding and the initial formation of themes. The deeper patterns emerged when codes were repeatedly compared between and within the transcribed interviews, leading to the formation of more general conceptual categories. These categories were reviewed and re-examined to ensure they accurately reflected the participants' opinions. As a result of this iterative approach, seven overarching themes, each supported by 47 codes, were created reflecting how participants perceived the ways FASD-related neurocognitive deficiencies might contribute to the risk of criminal conduct and incarceration among FSIW.

One code cluster ("Unique Insights") had cross-cutting relational insights that aided interpretation, but as it did not create a single topic, it was not included. Interpretive synthesis was used to develop the final themes, in line with reflective thematic analysis rather than mechanical aggregation. The coding, categorizing, and theme development processes provided a thorough basis for answering the research question and ensured that the findings were grounded in the data.

Table 1*Taguette List of Codes and Themes*

Themes and Codes	Count
Gendered and Vulnerable Populations: Female Offenders	7
Gendered and Vulnerable Populations: Prostitution; Trafficking; Sexual Exploitation	4
Gendered and Vulnerable Populations: Resilience	2
Gendered and Vulnerable Populations: Victimization – Offending	6
Gendered and Vulnerable Populations: Domestic Violence	10
Neurobiological and Clinical Dimensions: False Confession	4
Neurobiological and Clinical Dimensions: Impulse Control and Executive Functioning	50
Neurobiological and Clinical Dimensions: NCR	8
Neurobiological and Clinical Dimensions: Neurobiological impact of alcohol	38
Neurobiological and Clinical Dimensions: PAE Confirmation	23
Neurobiological and Clinical Dimensions: Diagnosis	49
Professional Barriers: Assessment	58
Professional Barriers: Assessment Tools	7
Professional Barriers: Barriers for psychologists; Lack of funding, lack of support	44
Professional Barriers: Lack of knowledge; Lack of research	19
Professional Barriers: Knowledge	7
Social and Environmental Influences: Education System	8
Social and Environmental Influences: High Risk	9
Social and Environmental Influences: Lack of employment	4
Social and Environmental Influences: Lack of housing, services, and support; funding	58
Social and Environmental Influences: Pathways to Criminal Justice Involvement	27
Social and Environmental Influences: Postnatal Environment / Social Stressors	4
Strengths, Growth, and Transformation: Acknowledgment and Respect	21
Strengths, Growth, and Transformation: ERC	2
Strengths, Growth, and Transformation: Resilience	2
Strengths, Growth, and Transformation: Transformative	13
Strengths, Growth, and Transformation: WillowWinds	4
Strengths, Growth, and Transformation: Breaking the Cycle	19
Structural and Systemic Factors: Education	5
Structural and Systemic Factors: <i>Gladue</i>	5
Structural and Systemic Factors: Lack of diagnosis pathways, Information-sharing restrictions, Fragmented correctional systems	24
Structural and Systemic Factors: Lack of Services	12
Structural and Systemic Factors: NCR, Fit to Trial	2
Structural and Systemic Factors: Policy	9
Structural and Systemic Factors: Pre-Release; Post-Release; Recidivism; Rehabilitation	55
Structural and Systemic Factors: Prisons	32
Structural and Systemic Factors: Racism; Sexism	19
Structural and Systemic Factors: Stigma	6
Structural and Systemic Factors: Systemic Biases	23
Structural and Systemic Factors: Criminal Justice System (Sentencing)	46
Structural and Systemic Factors: Criminal Offenses	17
Trauma and Coping: Attachment and HTT	48
Trauma and Coping: Family; Life Experiences	23
Trauma and Coping: Substance Abuse	14
Trauma and Coping: Trauma	26
Trauma and Coping: Triggers	7
Unique Insights: Forming Relationships	12
Grand Total	892

Issues of Trustworthiness

Trustworthiness was proposed by Lincoln and Guba (1985) as a qualitative complement to the ideas of validity and reliability in quantitative research.

Trustworthiness refers to the degree to which a study's epistemological and ontological assumptions align with its methodological design and execution. Rigor is crucial in qualitative research owing to its interpretive and context-dependent design (Lincoln & Guba, 1985). Credibility, transferability, dependability, and confirmability are the four important criteria within the trustworthiness framework. All criteria help researchers produce transparent, rigorous, and ethically sound work. These four criteria were used throughout the study to improve the quality and integrity of the research process.

Credibility

Credibility is a concept that refers to the belief in the truth and accuracy of the findings (Lincoln & Guba, 1985). To increase credibility, I used a strict interview protocol, applied member checks, engaged in reflexivity, and applied triangulation (Creswell & Creswell, 2018; Ravitch & Carl, 2021). The interview protocol was also valuable because each question was anchored in the core research question and the literature, thereby facilitating the collection of rich, meaningful data. The protocol was consistently used across all interviews, reducing variation unrelated to the study's purpose. I also provided the participants with an opportunity to revise their transcripts and ensure the accuracy of their words, a process known as member checking (Korstjens & Moser, 2018).

I conducted triangulation by comparing information from the first and second

cycle coding, as well as by reviewing the data through various analytic lenses to strengthen interpretation. I kept a reflexive journal, which further enhanced my credibility by enabling me to monitor potential bias in the data collection and analysis processes. All these strategies were employed, ensuring the precision of the findings describing the participants' views and the precise, direct formulation of the results.

Confirmability

Confirmability is the extent to which the findings of the study are based on the data and not on researcher bias or assumptions (Creswell & Creswell, 2018; Ravitch & Carl, 2021). To improve the confirmability, I kept a reflexive journal that recorded my assumptions, reactions, and decisions during the research process. This self-reflective practice prompted constant mindfulness, especially in coding and theme development. As more interviews were conducted, I would consciously re-examine previously made decisions in the analysis to avoid influencing future participants with the patterns that were emerging. Preserving a research trail, coding records, and memos ensured that the data itself supported interpretations.

Transferability

Transferability is the degree to which results can be generalized to other situations, groups, or environments (Creswell & Creswell, 2018; Ravitch & Carl, 2021). Purposeful sampling was employed in this study to select nine psychologists and one psychiatrist who had vast experience in working with Indigenous female offenders and people with FASD. There was variation in gender, age, and professional background to improve sample representativeness. To enhance transferability, I employed a strict

interview protocol aligned with my research question and grounded in the available literature. I maintained transparent records of sampling plans, data-gathering practices, and analytical techniques, which other researchers can use to provide adequate context for applying the findings.

Dependability

Dependability in qualitative research is similar to that of reliability in quantitative studies, which focus on stability, consistency, and methodological rigor (Yan & Fan, 2021). To ensure reliability, I maintained an audit trail that documented important research decisions, data collection, and analytical procedures, allowing others to review and verify it (Korstjens & Moser, 2018). I maintained field notes and interview logs to document new themes and methodological changes. Through these measures, I developed a methodical, transparent research procedure that could enhance the study's credibility.

Results

The results of this qualitative study were derived from interviews with nine psychologists and one psychiatrist. Seven themes emerged from the interviews, which correspond to the research question: What are psychologists' and psychiatrists' views, perspectives, and opinions on the role that FASD-related cognitive deficits may play in the risk for criminal behavior resulting in the overincarceration and reincarceration of FSIW in Western Canada (the Prairie Region and British Columbia)?

Table 2*Themes and Codes Related to the Research Question*

Themes	Codes
Neurobiological and Clinical Dimensions	Diagnosis PAE confirmation Clinical presentation Executive functioning, including impulsivity False confession and suggestibility Differential diagnosis Access to services Costs Stigma Systemic bias
Gendered and Vulnerable Populations	Victimization–Offending continuum Domestic violence Sexual exploitation Relational trauma Emotional expression Coping styles Substance abuse
Trauma and Coping	Intergenerational trauma Multifaceted trauma Disrupted attachments Compounding risk factors, including family history, life experiences, and triggers Gendered coping Self-harm
Structural and Systemic Factors	Criminal justice bias Sentencing <i>Gladio</i> principles Criminal charges/justice involvement Sexism, racism Stigma, systemic bias Legal recognition Not Criminally Responsible (NCR)/fit to trial Limitations Indigenous women’s incarceration Lack of services (support, funding, employment) Pre-release, post-release, and recidivism Rehabilitation Prison system prison security levels Lack of diagnosis pathways Information-sharing restrictions Fragmented correctional systems
Social and Environmental Influences	Stress in pregnancy (in utero environment) Early life stressors (poverty, education barriers, housing) Pathways to justice Prevention and early intervention Colonial legacy Cultural disconnection
Professional Barriers	Assessment barriers Assessment tools Cultural competence Lack of knowledge Indigenous risk tools Professional limitations Sexism and racism
Strengths, Growth, and Transformation	Resilience Cultural continuity Policy reform Breaking the cycle Trust building Cultural respect

Codes Related to Themes

Theme 1: Neurobiological and Clinical Dimensions discussed the neurological and clinical features of FASD, including its diagnosis, PAE, and neurocognitive impairments (e.g., impulsivity, executive functioning). Codes that emerged included false confession risk, suggestibility, differential diagnosis, and access to services. These codes characterized this theme, demonstrating the overlapping of clinical symptomatology with legal vulnerability and institutional barriers to receiving proper care.

Theme 2: Gendered and Vulnerable Populations emphasized how gendered experiences shape criminalization pathways. Participants highlighted the victimization-offending continuum, domestic and sexual violence, as well as relational trauma, as key contributors to the justice involvement of indigenous females. Emotional expression, coping styles, and substance use were raised to illustrate how multifaceted trauma in Indigenous women often manifests behaviorally, thus influencing their risk profiles and system responses.

Theme 3: Trauma and Coping suggested the dominance of multifaceted trauma, intergenerational, childhood, relational, and situational in the lives of Indigenous women, especially those with FASD. Disrupted attachments, compounding risk factors, and self-harm were examples of some of the codes that were identified. These codes provide insight into the intricate effects that trauma has on coping patterns, triggers, and system interactions.

Theme 4: Structural and Systemic Factors highlighted the problems at the system level that lead to overincarceration, such as sentencing practices, criminal justice bias,

systemic racism, and sexism, and limited *Gladue* application. The *Gladue* principle plays a critical role in various stages of the criminal justice process, advocating for culturally appropriate sentences and alternatives to incarceration (Dickson & Stewart, 2021; Ewing & Kerr, 2023; Marchetti et al., 2023; McConnell, 2020; Mullally et al., 2023). The structural barriers that sustain suboptimal outcomes before and after release throughout the correctional continuum are characterized by prison systems, risk assessment tools, fragmented services, and no diagnosis pathways.

Theme 5: Social and Environmental Influences included codes for early-life stressors, prenatal risks, and social determinants. The social determinants included poverty, housing instability, educational barriers, and cultural disconnection. Codes under this theme reflect pathways to justice involvement and emphasize the importance of prevention, timely intervention, and culturally grounded supports.

Theme 6 related to professional barriers. Participants' reflections on their own professional limitations and systemic constraints were highlighted in this theme. Codes included assessment barriers, lack of ethnic competence, limitations in Indigenous specific risk tools, and the influence of sexism and racism. These codes illustrate the challenges psychologists face in adequately assessing and supporting Indigenous female offenders with suspected and/or diagnosed FASD.

Theme 7 was strengths, growth, and transformation. Resilience, cultural continuity, and the potential for healing and transformation are reflected in this final theme. Strengths-based insights shared by participants included building trust, promoting

cultural respect, reforming policies, and breaking cycles. Participants also shared ideas and opinions on opportunities for system improvement.

Rather than implying the relative importance of themes, code frequency counts are presented to demonstrate the breadth of data engagement. Themes were developed based on patterns of meaning across participants rather than on frequency alone, recognizing that less frequently coded experiences (e.g., resilience, transformation) may be of significant analytic and theoretical importance. This development of themes is consistent with qualitative inquiry,

Theme 1: Neurobiological and Clinical Dimensions

All participants described the neurobiological and clinical features of FASD as central to understanding the justice involvement of Indigenous women with FASD. Participants emphasized diagnostic uncertainty, cognitive and behavioral impairments, and the stigma attached to FASD. All of these shape how these Indigenous female offenders are perceived and treated within the criminal justice system.

Diagnostic Uncertainty and Barriers to Support

One of the most significant diagnostic challenges consistently emphasized by participants is confirming Prenatal Alcohol Exposure (PAE). Without a PAE confirmation, individuals often cannot obtain a formal FASD diagnosis and, therefore, are unable to access relevant supports. As P8 explained, even when a woman discloses maternal drinking, “there’s nothing that can be done” to confirm exposure. P3 noted that the system “took quite a while” to allow diagnostic assessments in federal institutions, and then later stopped the practice, creating further gaps in care. Described as both a

clinical and systemic barrier, diagnostic uncertainty was described as being entrenched in stigma surrounding maternal alcohol use and incomplete developmental histories.

Participants explained that this lack of formal identification results in adults entering justice contexts without appropriate accommodations, increasing the likelihood of misunderstanding expectations or supervision conditions. P5 also explained,

there aren't a lot of clinics or professionals who actually provide diagnosis to adults, let alone adults within forensic settings. So I think just access to diagnostic services is a huge barrier, and that has just been the very, very slow uptake of clinical and research work associated with adults and what that means to identify and respond to adult needs.

Cognitive and Behavioral Features Affecting Justice Outcomes

All 10 participants described consistent patterns of cognitive impairment—including impulsivity, difficulty with comprehension, confabulation, and impaired executive functioning that influence justice involvement. P2 noted that individuals with FASD may seem to understand directions but “have no idea what you just said to [them]... he's confabulating... they need to understand his level of functioning.” P6 similarly explained that during parole meetings, perceived understanding can mask significant difficulties with retaining and implementing information, which can result in technical violations that are misinterpreted as defiance. Consequential thinking was also highlighted as a challenge. As P8 described, individuals might not link their actions to future punishment, not out of intentional impulsivity but because they “can't put the two together at the time.” Participants emphasized this distinction to counter common

assumptions about willful misconduct.

Participants frequently described deficits as resulting in unintentional breaches of conditions, institutional misconduct, or behaviors misinterpreted as purposeful noncompliance, thereby contributing to cycles of disciplinary action and reincarceration. Reflecting what most participants had said, P6 explained these deficits succinctly, stating,

And then they get released at two thirds of their sentence because we legally have to. So at that time, they have built no new skills. They have not self-reflected. They haven't looked at any of their risk factors that contributes to engaging in high-risk behaviors that lead to criminality. And so within that, when we release them at two-thirds of their sentence, they're still engaging in the same patterns of behaviors that led them into criminal behavior. And so within that last third of their sentence when they're in the community, they often breach a condition and they are what we call suspended, and then they get brought back to the federal institution until that next two thirds release gets recalculated, hope that they engage in some kind of rehabilitative behavior, and then we release them again to try and have some community engagement, pro-social engagement prior to that warrant expiry date.

Peer Influence and Social Vulnerability

The other pattern that was repeated was the increased susceptibility to peer pressure. Every participant stressed that FASD persons might follow others, especially those who are involved in crime, due to the inability to predict the consequences or to become pressured. P8 reported that women in custody may be pressured by pod mates

“go assault that person,” and will comply “because of that easily influenced thing.” All participants explained this vulnerability not as volitional misbehavior but as a neurodevelopmental vulnerability that heightens the risk of engaging in crime, especially in institutional settings where peer pressure is rife. P6 explained this, saying,

So when you take the impulsivity, perhaps some cognitive impairment, the mimicking behaviors, you’re really creating a social environment where they’re learning criminal or antisocial behaviors from a young age. And so within that, it has a huge influence on criminal engagement. For the sense that they are easily influenced by others of saying, Hey, join this gang, why don’t you do this behavior?

Participants noted increased susceptibility to peer pressure to follow or mimic others as a pattern of recurring behavior. A psychological phenomenon in which an individual is more likely to imitate a peer’s behavior due to susceptibility to peer pressure is known as mimicry (Chartrand & Lakin, 2013). Mimicry refers to the automatic imitation of another’s behavior, which is widely documented in the social psychology literature as a component of social cognition (Chartrand & Lakin, 2013). While the link between FASD and mimicry has not been established, individuals with FASD exhibit impairments in social cognition and executive functioning (Gilbert et al., 2025), which make them vulnerable to mimicry in high-stress situations, even when they lack conscious intent to deceive.

Stigma and Systemic Misinterpretation

According to the participants, stigma about FASD informs clinical interpretation

and justice responses. P3 remembered a situation where such a woman was assumed to be unable to learn because of her diagnosis, and this showed that labels can cause discriminatory assumptions. Other participants invariably explained that symptoms such as slow processing, low memory, or sporadic comprehension are often misunderstood as defiance. P1 and P2 highlighted that such stigma overlaps with systemic racism, which results in unfair judicial treatment of Indigenous women with FASD. Additionally, participants described how PAE-related screening processes might themselves reinforce stigma and inhibit disclosure.

P1 stated that “But in any event, that PAE can be fraught with many potential positives, but it can also be fraught with many layers of stigma or political or legal consequences, as I’m just sort of telling through that story. P3 added,

The other challenge is the stigma of the screening. when you think about FASD and the things that you would use to screen them out, they create quite a stigma on its own so that people are not ready to disclose the other factors that lead to FASD such as, you know, do you have a sibling that has FASD.

Theme 2: Gendered and Vulnerable Populations

Gendered experiences and vulnerability were described by participants, which emphasize the pathways through which Indigenous women with FASD enter and remain in the criminal justice system. Across interviews, patterns of coercion, emotional internalization, relational trauma, and substance use that interact with neurodevelopmental impairments were described. Long before their first justice involvement, it is these intersecting vulnerabilities that often place Indigenous women

within cycles of violence, exploitation, and criminalization.

Victimization and the Pathway to Offending

All the participants reported a great connection between early and continued victimization, specifically domestic violence, sexual abuse, and coercive intimate relationships, and subsequent criminal activity. They underlined that women tend to maneuver through chronic relational damage that conditions decision-making, autonomy, and coping. Through these experiences, survival-based behaviors often arise, which the justice system misunderstands as conscious offending. P1 explained that repeated abuse can draw women into high-risk situations where violence becomes a survival response: “Then we see women being repeatedly exposed to abuse and getting trapped in high-risk roles, and then often assaulting or murdering their abuser.”

Participants also observed that Indigenous women with FASD are particularly susceptible to abusive or coercive partners due to neurocognitive issues like suggestibility, poor judgment, and the inability to recognize types of indecency. P6 went on to note that intergenerational grief that is not resolved due to the death of family members, gang affiliation, substance-related losses, and suicide leads to cyclic vulnerability. P4 described these dynamics as complex, stating that individuals with FASD carry “their history of trauma and abuse and what, there’s so many factors that also, so it’s very complicated.” The cumulative nature of trauma was repeatedly emphasized. P2 described the profound lack of early safety and supports,

But it’s it’s it’s a sad, sad situation for some of them. I just I look at them and that you have you had no you had no hope from day one, you know, you had no

chance. You know, not, not, not just because of the FASD, but also where you were born, who you were, what the family you were born into, or the situation you were born into. Yeah. And, you know, the physical and the sexual abuse that occurs. And it's just, it's just, it is tragic.

Participants also discussed trauma responses after violent offenses. P6 observed that many women experience post-traumatic stress not only from victimization but also from the harm they caused. P6 explained,

So they're not these cold-hearted individuals that are like, yeah, they deserved it. A lot of it, they have their own traumatic reaction to the behavior that they did that created harm for someone. So within that victimization cycle, most of them have had family members either in gangs, have been killed, killed by gangs, or have died by substance use or suicide. So there is, I would say, specifically for the Indigenous community, an underlying theme of grief, unresolved grief that has occurred, and then either engaging in similar or like-minded behaviors that have been socially demonstrated for them by their communities.

According to P6, cyclical patterns of vulnerability can be created by unresolved intergenerational grief stemming from family deaths, gang involvement, substance-related losses, and suicide.

Emotional Expression and Coping Styles

Many Indigenous women were noted as tending to internalize distress, which participants described as gendered differences in emotional processing. Reflecting on work with male and female youth with FASD, P2 explained that girls often “turn their

feelings inward. So there's a lot of a lot of self-harming, a lot of suicide attempts, a lot of that kind of behavior. There was some fighting and some aggression, but not nearly as much." This internalization, in turn, increased vulnerability in both community and custodial environments. Coping strategies were described as frequently shaped by trauma.

Substance use, and in particular alcohol and methamphetamine, was noted by participants as being abused not as an intention to offend but to manage overwhelming emotions. P2 highlighted the negativity of arresting addiction and said that prison would only do minimal containment over the long term and might lead to worse behavioral consequences. P2 also stated that they are just "learning other skills, I'll put it that way, and learning, becoming more aggressive and becoming more violent and becoming more antisocial when they're in jail." P2 further reiterated the tragic convergence of trauma and structural exclusion, remarking, "You had no chance... because of the FASD, but also the situation you were born into... it is tragic."

Substance Use and Criminalization

The use of substances has become a significant cause of involvement in the justice system. According to the participants, substance use usually works together with the cognitive impairments of FASD, making it harder to control impulses and to predict the effects. Notably, they emphasized that substance use is usually an indication of efforts to cope with trauma and not intentional criminality. The participants cited alcohol-related crimes, violation of conditions, and violent acts, including murder, when under the influence of alcohol as frequent patterns among Indigenous women with FASD. These

actions were explained by the effects of trauma and social vulnerability and structural inequity, rather than criminal tendencies.

P6 described how intergenerational trauma shapes behavioral modeling:

if you take an indigenous population who come from a very traumatic intergenerational upbringing where there's violence, substance use, weapon use, abuse in the home, a lot of fragmented family, whether through the 60s scoops or where children's services is involved. You see that being the basis of where they're learning their environment. And so when they adolescence or adulthood, they're engaging in a lot of mimicking behaviors and the social environment around them isn't conducive for pro-social behavior.

Likewise, P10 also raised such issues as addiction, social disconnection, and the inability to get into a new criminalized environment. P6 added that the use of substances serves as a central disinhibiting criminogenic factor in offending and makes it difficult to plan release.

Gendered Vulnerability Within Justice Settings

According to the participants, gendered vulnerability persists within the correctional institutions. Indigenous female offenders with FASD might become targets of peer pressure, manipulation, or coercion, especially when they have issues with social reasoning or when they have difficulties with comprehension. P6 described this as a core pathway to criminalized behavior "being easily influenced by peers... they're going along, they're going with the flow, they're being influenced by their peers." P8 provided an example of this dynamic within custody, "they're being pressured by peers to engage

in what would otherwise be criminal behavior, like assaultive behavior. And so, you know, they're being asked by their pod mates, can you go assault that person? And they'll just go ahead and do that because of that easily influenced thing.”

Participants stressed the fact that the combination of gender and Indigeneity with disability frequently magnifies discrimination. The history of traumas and cognitive impairments could be overlooked, leading to punitive measures rather than support. P5 described systemic failures to use trauma-informed or attachment-informed approaches, noting,

The failure of our systems of support to interpret these things through a trauma and attachment lens means that we tend to take a blame and shame approach to saying, we are going to address parenting breakdown in a punitive fashion as opposed to a supportive fashion. And rather than saying, how do we come alongside and promote positive attachment experiences, we contribute to further disruption by removing kids and disrupting families. And so I think our systems and our failure to think creatively and responsibly to the root of these needs has us perpetuating problems systemically that reflect these, you know, cyclical trauma experiences that are perpetuated. And I think that's a huge contributor to the alienation and persistent marginalization of women in our communities, and particularly indigenous women, and will increasingly and continues to contribute to their alignment with individuals and communities and groups that are engaged in criminal activity and land them into forensic settings.

P5 further maintained that such failures in the system reinforce alienation and

marginalization, which enhance the probability of joining criminalized partners or finding themselves in forensic environments.

Theme 3: Trauma and Coping

Attachment, Historical Trauma, and Compounding Risk Factors

The participants all highlighted that cumulative trauma serves as a compounding risk element that determines coping, vulnerability, and offending. They explained that colonial disruption, disrupted attachment, and cultural dislocation are some of the factors that lead to maladaptive coping mechanisms and are prone to criminalized behaviors. P5 explained that contextual and intergenerational factors, including children's services involvement, adverse childhood experiences (ACEs), and high trauma exposure, create "increased vulnerability and susceptibility to influence and alignment with other structurally marginalized populations." PAE was also linked to broader historical and attachment-related harms by participants. As P3 summarized, "combine historical trauma and intergenerational trauma, the role of prenatal alcohol exposure and the role of attachment in contributing to offending or criminal behavior among women, I can say that there is logical sense in each one of these singly or jointly leading to that over-incarceration."

Analysis of the interviews revealed a cumulative and interwoven nature of trauma as a pattern. Some of the participants also explained that unresolved grief and post-traumatic stress symptoms are reasons why they engage in criminalized acts. P6 highlighted that losses were central to women's trauma histories, which often involve violence, substance use, suicide, and intergenerational harm, and stated that unresolved

historical trauma still influences emotional responses and offending patterns. All participants concurred that historical trauma, as well as attachment disruptions, are among the focal points of the women served. Sheahan and Wardrop (2023) found that the prevalence of adverse childhood experiences was high in the demographic of federal offenders, with a distinct association of such experiences with a range of negative outcomes. Among Indigenous female offenders, Sheahan and Wardrop (2023) found that the childhood experience of substance misuse in the household was the most common ACE among Indigenous female offenders.

Gendered Coping and Internalized Distress

Respondents identified gendered patterns of coping, whereby Indigenous women with potential FASD tended to internalize distress, reflecting the enduring effects of cumulative relational trauma on emotional regulation. This self-inflicted manifestation supports the applicability of Attachment Theory in explaining self-harm and emotional dysregulation in this population (Mukherjee et al., 2019; Parolin & Simonelli, 2016; Tan et al., 2025). P2 described working with older residential school survivors and recalled one woman's experience of sexual exploitation by caregivers, explaining,

you're growing up with that as sort of a normal way of life because they didn't, that's just the way it was for them. For some of them, they didn't really understand that was any, that was wrong. I wouldn't say they didn't understand it was wrong, but that it was not normal. you know, because that's what they knew.

This account illustrates how trauma can become normalized and, in turn, shape coping strategies and relational patterns across the lifespan.

All participants highlighted the reinforcing impact of the effects of trauma and colonialism on emotional functioning. P1 explained the issues of working with the population with FASD in the context of cultural and historical trauma, stating the complexity of the interactions between these factors. P5 repeated the information that intergenerational trauma and negative childhood experiences increase vulnerability to negative influences and maladaptive coping. P9 also talked about the effects of intergenerational trauma in terms of parenting and attachment problems, especially in substance-abuse families. P9 has described the relationship between alcohol abuse and FASD with poverty, opportunity, and a genetic tendency to addiction.

P9 also pointed out addiction and guardianship cycles, indicating that grandparents who have conquered alcohol abuse might still have grandchildren with FASD and substance use. She remarked that women tend to develop in settings characterized by poverty, drug use, systematic neglect, such as poor housing and infrastructure on certain reserves, which add more obstacles to a healthy development and coping. P6 further explained that many caregivers of the women had themselves endured “horrendous traumatic events such as residential schools, day schools, family fragmentation,” and therefore parented without stable attachment models. She noted that women often grow up in environments marked by poverty, substance use, and systemic neglect, including inadequate housing and infrastructure on some reserves, which create additional barriers to healthy development and coping.

P3 also talked about the multifaceted causes of Indigenous women being over-incarcerated, which also included historical and intergenerational trauma, PAE, and

disrupted attachments. P3 was able to discuss how each of these reasons and combinations can result in criminalized actions and impaired caregiving, which are disproportionately common to women.

Relationship-Driven Coping and Repetition of Harm

Participants emphasized that attachment disruptions often manifest within relationship dynamics, both in the community and within custodial settings. P8 observed that many women are incarcerated due to relationship-related issues, explaining that “they form attachments quickly...with very little vetting... they’re oftentimes volatile...some of the patterns that they might have experienced in the community just repeat themselves while they’re incarcerated.” Such rapid and volatile attachments are indicative of underlying insecurity of attachment, histories of trauma, and inadequate exposure to positive relational boundaries. The participants were also able to observe that gangs can be used as a way of belonging or pseudo-attachment to the chronically disconnected women.

P10 underlined that the concept of belonging is focused on the Historical Trauma Theory (HTT) because the initial needs in terms of attachment might be unfulfilled. P6 also described how intergenerational trauma has a devastating effect on families due to residential schooling and day schooling, as well as family disintegration. These historical interruptions disrupt the family system and shape how generations parent. Consequently, dysfunctional coping mechanisms tend to develop, such as drug use, aggression, and abject poverty.

Theme 4: Structural and Systemic Factors

Those interviewed continuously recounted structural and systemic circumstances that influence Indigenous women into, within, and out of the criminal justice system. The following conditions, such as restricted access to assessment, lack of legal acknowledgement of FASD, and restrictions to services based on security classification, and culturally unsafe practices, were perceived as interdependent factors that weaken rehabilitation, economic reintegration, and over-incarceration.

Legal Recognition, Sentencing, and Gladue Limitations

The participants noted a high level of inconsistency in the recognition and use of FASD in sentencing decisions. P5 noted that systemic biases and institutionalized racism continue to shape justice outcomes for individuals with FASD. Although P3 indicated that some judges are beginning to move away from punitive approaches toward models emphasizing care rather than cure and support rather than treatment, participants emphasized that Canadian legal frameworks remain limited in their ability to account for neurodevelopmental impairment meaningfully.

Participants also stressed that undiagnosed people are particularly susceptible during plea bargaining. P6 explained that social mimicry of understanding may lead individuals with FASD to appear compliant while failing to fully comprehend legal advice, increasing the likelihood of inappropriate guilty pleas and harsher justice outcomes. Research on automatic imitation or mimicry has shown that it often occurs unconsciously and significantly influences social interaction (Chartrand & Lakin, 2013). Mimicry as a phenomenon is not a primary neurocognitive deficit; however, it can be a

behavioral manifestation of neurocognitive vulnerabilities commonly witnessed in patients with FASD. The interplay between mimicry and FASD, however, has not been sufficiently studied. On the other hand, various other neurocognitive disorders related to FASD, e.g., suggestibility and confabulation, have been highly reported. These shortcomings are attributed to increased vulnerability to false confessions, inaccurate testimony, and memory distortion, which heighten concerns about potential miscarriages of justice (Gilbert et al., 2025).

Racism, Sexism, and Stigma Across Systems

Among the participants, racism, sexism, and stigma were used as a universal force that influenced the experiences of Indigenous women in the domains of justice and mental health. P1 observed that “our culture can be quite racist,” noting that physicians and psychologists often lack understanding of the contextual and historical factors affecting Indigenous women and mothers. Structural racism was also described as embedded within resource allocation; as P3 stated that if the only kind of psychiatrist you can provide is old white males, then there’s a problem. Relational barriers further enhanced these inequities. According to the participants, a high number of Indigenous women experienced serious trauma by males in their past, which contributes to the fact that it is difficult to interact with male clinicians. Frequently, stigma concerning FASD was also described. P2 emphasized that FASD is often misunderstood, stating that “people just assume, well, you’ve got FASD and you can’t do anything... but it’s a spectrum.” Such assumptions were seen as reinforcing exclusion and limiting access to meaningful supports.

Service Gaps, Assessment Barriers, and Funding Loss

The participants identified chronic service gaps that were experienced by Indigenous women with FASD, especially in assessment, treatment, and post-release services. Some of them mentioned the loss of access to psychologists and psychiatrists in correctional institutions such as Edmonton Prison and Buffalo Sage (P2). P8 explained that while the Edmonton FASD Network previously conducted in-prison assessments, “the funding’s dried up and so we don’t do those anymore.” Participants emphasized that the absence of assessment and continuity of care significantly undermines the reintegration process. P1 questioned how rehabilitation is possible without coordinated supports, asking, “how do we provide the layers of support, the wraparound supports upon discharge, to allow them to have a better life?” P6 stated that while specialized programs exist, capacity remains limited. P6 explained that an example is the Structured Living Environment for women in medium security, which, despite widespread need, only has six spaces.

The Edmonton FASD Network refers to the Northwest Central Alberta FASD Network (NWC FASD Network), also known as Willow Winds Support Network. The NWC FASD Network runs the In Reach Project, which provides in-facility FASD assessment and diagnostics for inmates, FASD-informed training for correctional and justice facility staff, FASD sessions and resources for inmates, and FASD-informed release plans for offenders suspected and diagnosed with FASD in Alberta correctional facilities (CanFASD, 2025). Pilon et al. (2015) described the Buffalo Sage Wellness House (BSWH) as a 16-bed, minimum- to medium-security facility for federally

sentenced women offenders located in Edmonton, Alberta. It also functions as a community residential facility for women on conditional release. Several participants in this study noted that, due to funding issues, the NWC FASD Network no longer conducts in-prison FASD assessments, suggesting that no FASD diagnostic assessments are being conducted at any of the prisons in Alberta, including the Edmonton Institution for Women. The network is also believed to have lost access to the BSWH.

Institutional Practices, Misinterpretation, and Surveillance

Participants reported institutional practices that often misinterpret neurocognitive limitations as noncompliance or misconduct. P10 observed that employees tend to believe a woman knows about protracted correctional strategies, and others feign understanding. P6 stated that the situation in which women repeat orders without comprehending them is usually interpreted as defiance and willfulness, adding weight to punitive responses rather than accommodation. Inadequate staff training was also found to be a significant cause of misinterpretation among the participants.

P3 has observed that although racism and systemic inequities demand complex and multifaceted responses, low education and skills-based training about FASD increase the difficulties. Because of this, P4 stated that mental health personnel can take an advocacy position and, in many instances, interpret correctional plans, explain expectations to parole officers, and address misunderstandings. Resource constraints increased these dynamics. P10 explained that discharge planning is reserved for only the highest-need cases, asking, “everybody else who doesn’t have that high need, then where do they fall through the cracks?” The participants also expressed concerns regarding non-

trauma-informed programming that involves revealing traumatic experiences to non-clinicians and the barriers to confidentiality that inhibit the sharing of the relevant diagnostic information. This was perceived to be perpetuating misinterpretation, stigma, and surveillance, especially on Indigenous women with FASD.

Theme 5: Social and Environmental Influences

The participants have repeatedly emphasized how social and environmental circumstances are at the core of the development of criminalization pathways of Indigenous women with FASD. The involvement of women in justice was explained as the result of initial and continued exposure to poverty, housing insecurity, violence, interrupted education, and colonial marginalization, as opposed to the calculated and intentional criminal intent. These contextual weaknesses overlap with FASD-related impairments, which add to the risk and create additional susceptibility to exploitation, substance use, and life-course criminalization.

Early Life Stressors and Pathways to Criminalization

Pervasive early adversity, such as poverty, unstable housing, disrupted schooling, and violence exposure, was mentioned by participants as precursors of subsequent justice involvement. These environmental stressors were conceptualized as being painfully generated and habitually maintained, and appeared constrained by avenues to protective elements and adaptive coping methods. P6 emphasized how community-level deprivation constrains opportunities for stability and well-being, particularly on some reserves, noting that women are “systemically barred to create some of those healthy living environments for themselves.” P6 described how unmet basic needs contribute to

unhealthy coping strategies, including substance use and violence:

There's a lot of coping in unhealthy ways, substance use, violence, poverty... if we look at the reserves in which they live on, some don't have running water, they can't put permanent window coverings on their windows... where they're systemically barred to create some of those healthy living environments for themselves.

The participants also criticized the way in which risk assessment structures tend to pathologize the effects of social disadvantage without examining the structural causes of those effects. P3 explained that commonly used risk factors, such as low educational attainment, are tightly linked to socioeconomic marginalization, creating circular logic that reinforces criminalization:

You get into this circular argument... you fall into the group of people who are more likely to be lower educated, and then more likely to commit offenses... those risk factors now seem to be those that are more likely to occur because of just social vulnerability and social disadvantage.

P9 also stated that victimization to violence and loss is almost universal among the people she evaluates, and outlines the trauma accrual during childhood and adulthood. She observed that violent death or suicide has been experienced by many people, leading to deep-rooted trauma. Framing the issue as systemic rather than individual, P9 stated, "In Canada, we don't treat the problem of poverty. We treat the afflictions of poverty... maybe we need to be giving living wages and incomes that people can live on". Together, participants described justice involvement as the downstream consequence of sustained

social and environmental deprivation rather than a reflection of inherent criminality.

Colonial Legacy and Cultural Disconnection

The participants stressed that it is the historical context of colonization and the existing racism that creates the larger framework within which social disadvantage, trauma, and involvement in justice are realized. As lasting imprints on behavior, service utilization, and contact with the justice system, cultural dislocation, intergenerational trauma, and distrust of institutions were characterized. Colonial trauma continues to affect Indigenous women across generations, including during pregnancy. P1 highlighted that many mothers are themselves survivors or descendants of residential school survivors: “Many Indigenous moms... have that legacy of colonialism and residential schools... that can produce a pretty stressful pregnancy.” (P1)

Participants also talked about the role of historical and continued racism in developing mistrust towards predominantly non-Indigenous service providers. P8 acknowledged this mistrust and described efforts to mitigate it through culturally grounded collaboration: “There is a lot of mistrust for Caucasian folks... so when it’s appropriate, have the elder come in with me... taking a spiritual, cultural perspective was much better than what I had to offer.” Collaboration with Elders and the integration of cultural and spiritual ways of living were described as necessary measures for establishing trust, reducing harm, and promoting engagement, especially when working with women, whose engagement with institutions has been influenced by colonial violence.

Prevention and Early Intervention

Participants strongly supported prevention-based strategies that would address underlying social factors, rather than punitive measures that respond only after damage has been done. They highlighted the need to implement early intervention, culturally based programming, and community-based supports as essential in breaking down the roadways to criminalization. P9 described how assessments increasingly consider cultural context, adverse childhood experiences (ACEs), and FASD-related impairments when determining appropriate interventions, emphasizing that accountability does not require incarceration: “The interventions. might look different... how are they going to get a high degree of supervision if they need it, outside of being incarcerated... they’re supported in a way that’s more in line with what their needs are.”

Participants also highlighted structured supervision and safe living conditions as part of the prevention. P9 had elaborated that FASD is an externalizing disorder with impairments in executive functioning, and supervision is usually the only effective intervention. P9 expressed concern that individuals are frequently released back into unsafe environments without structure or support:

And I don’t know how many times I’ve, you know, assessed an individual FASD indigenous and they let them out and they put them right back in the same circumstance. No supervision, no structure in their life, no safe place to live, right? They don’t even look after the fit first, their basic needs of a safe place to live. They put them right back into that unsafe living situation, right? So that, I mean, that’s the one thing I’m hoping that I see some change is when we, when

we can make a case. that they have FASD, that when they get released, if they're low, that they get put into a sheltered, like into a residential program where they've got staff and support and people to supervise them and keep them safe because they are so vulnerable to victimization, living on the streets, living in unsafe situations. And then, you know, they end up, as I said, usually under the influence somebody.

P8 echoed the need for prevention-focused programming, noting that while mental health services no longer address criminogenic needs in the federal system, intervention programming represents a critical next step: "it is the next logical step. Yep. That we have something that can actually do some prevention. I mean, as far as criminogenic need goes, Mental health doesn't deal with criminogenic need in the federal system anymore. That's interventions programming."

The participants associated these recommendations with holistic, culturally sensitive practices that align with the MIDF and focus on honest prevention by addressing safety, housing, supervision, cultural connectivity, and neurodevelopmental needs. The MIDF, a novel model, extends HTT and AT by highlighting Indigenous worldviews and by acknowledging development as an integrated, interrelated process across spiritual, emotional, mental, and physical realms. Cumulatively, these frameworks presume that the overincarceration of FSIW with FASD is inexplicable beyond colonial histories, disrupted caregiving, and culturally misaligned systems.

Theme 6: Professional Barriers

The participants reported that there are serious professional and structural

obstacles to effective assessment, support, and rehabilitation of Indigenous women with FASD. Such obstacles are the lack of proper training on FASD, the use of culturally invalid risk measures, structural limitations in correctional facilities, difficulties in seeking the correct diagnosis, and the protracted effects of racism and sexism in the clinical and institutional worlds.

Assessment Barriers, Risk Tools, and Limited FASD Knowledge

The participants highlighted that the existing correctional assessment methods are ill-equipped to address the needs of people with FASD, especially indigenous women. A number of them observed that the risk assessment instruments used in corrections do not meet cultural validity standards and do not account for neurodevelopmental differences. P5 emphasized the need to critically examine the tools used to assess risk, highlighting broader concerns about their appropriateness and downstream consequences: “Frameworks... that press towards a little bit more inquiry into the appropriateness of these tools... might contribute to the ripple that’s out there... clinicians... are called to really look at the ways in which our tools... are reconciliatory in its nature.”

Participants also described widespread gaps in professional knowledge. P1 noted that many service providers decline to work with adults with FASD, despite often doing so unknowingly: “One of the barriers we sometimes find is mental health organizations or therapists saying, Oh, I don’t work with adults with FASD. The reality is probably most of these therapists have been working with adults with FASD, they just weren’t diagnosed.” Correctional staff training was identified as a critical limitation. P6 explained that insufficient FASD education among correctional officers undermines rehabilitation

efforts and exacerbates behavioral misinterpretation: “They don’t receive a lot of FASD training... their lack of knowledge... reinforces... poor impulsive responses with aggression to the circumstance that they’re met with... it’s hard to help them change... when they’re being met with uninformed approaches by officers.”

P6 also gave a more specific explanation of the limitations of systemic assessment in Canadian corrections, stating that the current practices are culturally invalid, exaggerate risk scores, and that disproportionate implications of maximum-security placements are made against Indigenous women. P6 observed that the assessment measures are mostly normed on U.S. populations, there are no actuarial tools for predicting female recidivism, and considerations related to FASD are not consistently applied. Critical neurodevelopmental factors have not been diagnosed, and so the expectations of the system are not realistic and can result in systemic inequity in parole decisions, the program, and institutional placement (P6).

Participants also identified diagnostic barriers in the institutional setting. P8 described how FASD diagnoses are often absent from correctional health records and historically deprioritized:

there was never a push for diagnosis of any mental health conditions in corrections. And so even if you looked at the healthcare file, you wouldn’t see any diagnosis there. And so you wouldn’t see depression, you wouldn’t see schizophrenia. So you’re certainly not going to see FASD, which is something that’s even harder to diagnose. And so only in the recent few years, several years, maybe that there’s a push to have their health care file reflect accurate diagnosis.

And so I'm not. That's heartbreaking.

Structural constraints further limit diagnostic clarity. P8 explained that institutions lack in-house FASD assessment capacity: "We don't actually do any in-house FASD assessments... we've done diagnostic assessments... but we don't do any FASD assessments here."

Another issue raised by participants was the presence of false or incorrect diagnoses in community settings. P8 noted that individuals often enter custody with multiple psychiatric diagnoses made under conditions of substance intoxication, calling their validity into question: "A lot of folks come in with multiple diagnosis... diagnosed when... high on meth... or... history of meth use... diagnosed with schizophrenia... you got to wonder about the usefulness of these diagnoses as being accurate." P7 further emphasized the difficulty of confirming PAE for Indigenous clients, which complicates diagnostic assessment and service planning.

Professional Limitations and Structural Constraints

According to participants, despite awareness that FASD assessment is required, professional and policy constraints limit what psychologists can do. P8 explained that mandated risk assessments for parole boards consistently take precedence over FASD evaluations: "If I have to pick an FASD assessment over... risk assessments for the parole board... I can't not do those... nowhere in policy does it say that I have to do an FASD assessment... the other ones will always be back burnered." P3 observed that new studies are underway to test the predictive validity of the current assessment instruments used with particular groups. However, according to participants, these attempts have not

led to any significant systemic transformation. These professional restrictions together are a part of the reasons for misclassification, inappropriate programming, and poor programming of rehabilitation supports of Indigenous women with FASD.

Sexism, Racism, and Therapeutic Relationships

The participants acknowledged that gender and racial dynamics are significant factors influencing therapeutic relationships and assessment outcomes. Indigenous women were described as often preferring female clinicians, particularly considering extensive histories of male-perpetrated trauma. P1 explained: “A lot of them have said, ‘I’d rather work with a female psychologist... you can’t take any professional offense to that.’” Participants also reflected on how clinician identity influences rapport. P1 noted that professional authority can sometimes facilitate engagement, while P8 described how racial dynamics can generate mistrust during assessments: “The fact that I am a Caucasian psychologist sometimes... there’s some concern there.” P8 recounted a direct disclosure from a participant: “I don’t trust you because you’re doing this assessment and you’re a white person.” P8 added that mistrust is often present but unspoken, describing how “in the courtyard gossip... there is a lot of mistrust for Caucasian folks.” These narratives show how colonial backgrounds, racism, and power structures still inform clinical exchanges, which affect disclosure, accuracy of assessment, and access to psychological services.

Theme 7: Strengths, Growth, and Transformation

The participants pointed out that even with such deep-rooted systemic and structural obstacles, numerous Indigenous women express a lot of resilience and

willingness to change. Practitioners identified policy change, culturally based programming, and community-based supports as key directions for healing, empowerment, and lower recidivism. Shah et al. (2026) have stated that, as a result of the recurring co-occurrence of PAE and complex trauma, which not only affects the individual but the entire family system, a trauma-informed, family-centered approach is essential to mitigate not only secondary morbidities but also to optimize future outcomes. This theme highlights the prospect of expansion and change as systems shift from punitive reactions to trauma-informed and culturally responsive approaches.

Resilience, Survival, and Cultural Continuity

Participants consistently highlighted Indigenous women's ability to persevere despite adversity and to hold onto hope for change. P1 described Indigenous women in custody as "so resilient," while also stressing the need for systemic follow-through to interrupt cycles of harm, noting the importance to, "build the follow-up pieces so that we can slow the cycle of recidivism down, slow the cycle of desperation down for a lot of these women who are just so resilient." P8 similarly emphasized women's perseverance, explaining that even when they appear emotionally overwhelmed, "crying somewhere in a corner"—many still "want their life to be different... that they've not given up that desire for something different." She described this as a profound strength emerging from "tragic lifestyles," underscoring that resilience exists alongside, not despite, ongoing hardship.

P10 offered a more critical reflection on resilience, highlighting the systemic conditions that necessitate it. She described women who "have done horrible things" but

also survived extreme trauma, including being “stabbed when she was eight” and witnessing “her dad hang himself.” P10 stated, “I love that they’re resilient... and I hate that they have to be resilient,” capturing the tension between admiration for survival and critique of systems that normalize suffering.

Reform, Accountability, and Breaking Intergenerational Cycles

Participants underscored the need for systemic reform to translate individual resilience into meaningful, sustained change. P5 emphasized the importance of strengthening policy frameworks to support culturally informed and trauma-responsive practice. P1 similarly noted that “with the proper supports, with treatment for the trauma, with medications to support them, their lives get better... They have less risk of recidivism,” reinforcing the link between structural investment and positive outcomes. Several participants highlighted the importance of centering Indigenous voices in reform efforts. P3 emphasized the need to “hear from the people who are in the system... give them voice,” and described restorative approaches that “bring in the cultural component... what has worked for centuries.” In contrast, P6 noted the scarcity of restorative justice within correctional environments, stating, “I haven’t seen that happen, not within our environment.”

P9 highlighted the value of culturally appropriate assessment and intervention, referencing her rare experience collaborating with an FASD clinic on reserve. P10 similarly suggested that restorative justice could be a solution, while stressing that success depends on community capacity, safe and non-toxic environments, and broader efforts to humanize individuals with complex trauma histories. This supports the MIDF,

which integrates HTT and AT to provide a culturally grounded, holistic framework addressing FASD, multifaceted trauma, attachment issues, criminality, and systemic inequities.

Summary

Nine psychologists and one psychiatrist were interviewed, and the interviews were transcribed and analyzed using Taguette. 47 codes supported the seven themes that emerged from the analysis. There was one other code cluster, 'Unique Insights', that included cross-cutting relational observations with information that needed interpretation, but it was not a standalone theme. These seven themes encompassed neurobiological and clinical dimensions, gendered and vulnerable populations, trauma and coping, structural and systemic factors, social and environmental factors, professional barriers and strengths, growth, and transformation. Each of the themes has contributed to the understanding that would respond to my study about the possible role of FASD-related cognitive impairments in the criminal behavior risk that leads to the overincarceration and recidivism of FSIW in Western Canada (the Prairie region and British Columbia). Chapter 5 examines the study's findings and their potential implications for social change. The recommendations and areas of future research will also be incorporated in Chapter 5 and the conclusion.

Chapter 5: Discussion, Conclusion, and Recommendations

The purpose of this qualitative study was to examine psychologists' and psychiatrists' perspectives on how FASD related neurocognitive deficits may influence the risk of criminal behavior among FSIW. Although Indigenous women comprise only 5% of the Canadian adult female population, they are significantly overrepresented in the federal correctional system (Statistics Canada, 2023b). According to the OCI (2024), FSIW now account for nearly half of all federally incarcerated women, with 75% classified as maximum-security inmates and 96% experiencing SIU placements (OCI, 2024; Wanamaker & Chadwick, 2023). This research addresses a significant gap in the academic literature regarding the impact on the likelihood of criminal behavior among FSIW in Western Canada and their overincarceration. The research question central to this study was "What are psychologists' and psychiatrists' views, perspectives, and opinions on the role that FASD-related cognitive deficits may play in the risk for criminal behavior resulting in the overincarceration and reincarceration of FSIW in Western Canada (the Prairie Region and British Columbia)?"

Using a semi-structured interview protocol, I collected data by interviewing nine psychologists and one psychiatrist who have extensive knowledge of FASD and experience working with Indigenous female offenders. All individual interviews were transcribed, and the data obtained were analyzed and hand-coded using Taguette. The emerging seven themes formed the basis for the findings and illustrate neurobiological and clinical dimensions, gendered and vulnerable populations, trauma and coping, structural and systemic factors, social and environmental influences, professional barriers

and strengths, growth and transformation. In this chapter, these themes are interpreted through the MIDF to explain how cumulative neurodevelopmental, relational, and systemic factors shape justice involvement. In this chapter, I describe the interpretation of the findings, outline the study's limitations, provide recommendations for future research, and discuss the implications for promoting positive social change.

Interpretation of the Findings

The MIDF, a novel conceptual framework that integrates HTT and AT, served as the conceptual framework for this study, providing a reference for interpreting the findings. The MIDF underscores using culturally grounded approaches to understanding the intersecting impacts of criminality and FASD, along with historical, intergenerational, and transgenerational trauma and systemic inequities. In this study, these traumas are collectively referred to as multifaceted trauma, which serves two purposes: (a) explaining the core causes of criminal behavior among FSIW who may have FASD and (b) emphasizing the significance of culturally sensitive, trauma-informed interventions concentrated on healing and reintegration. By integrating psychologists' and psychiatrists' views on how FASD-related cognitive deficits influence criminal risk, using the MIDF lens, this study addressed a critical gap in understanding the pathways to the overincarceration and reincarceration of Indigenous women in the Prairie Region and British Columbia. This study's findings align with and extend the needs identified across seven themes outlined in the literature review.

Theme 1: Neurobiological and Clinical Dimensions

Results of this research indicated that neurobiological and clinical characteristics

of FASD are significant to comprehend the role of justice in Indigenous women, especially in assessment, interpretation of behavior, and response of the system. Interviewees uniformly explained how diagnostic uncertainty, behavioral and cognitive problems, persecution, and stigma interact to define justice paths, in most instances, in ways that expose them to escalated criminalization and re-incarceration. Diagnostic uncertainty was identified as a structural obstacle, with the participants noting that the difficulty in establishing PAE often precludes adults from getting a formal FASD diagnosis and receiving the relevant supports. These results have validated the earlier studies that underscore the lack of diagnostic services and stigma on maternal alcohol consumption as a persistent systemic burden (Flannigan et al., 2018b, 2018c). Nevertheless, discrepancies in diagnostic care and stigma surrounding PAE continue to be barriers to early identification and treatment (Aspler et al., 2021; Chow et al., 2022; Dugas et al., 2022).

The narratives of the participants show that in the context of justice, individuals come without identification or accommodation. Thus, the probability of misperceiving neurocognitive impairment is high as an indication of noncompliance instead of disability-related constraints. Without diagnosis and accommodations, participants explained how cognitive and behavioral characteristics associated with FASD, including impaired executive functioning, confabulation, and difficulty thinking, directly influence justice outcomes. Such impairments were often reported to lead to inadvertent violations of conditions or to institutional misconduct, especially in community supervision situations where expectations exceed one's cognitive capacity. Such an explanation

corresponds to the studies showing that justice-involved people with FASD are disproportionately sentenced on technical offences as compared to new crimes (Flannigan et al., 2019; Flannigan et al., 2023). Respondents also added that neurodevelopmental vulnerabilities make one more susceptible to peer influence, especially when in a custodial and community setting where antisocial behavior is accepted. Instead of being a manifestation of volitional criminality, this social vulnerability was interpreted as a process of inter-relationship between cognitive impairment and the exposure of the environment, which supported the pathways into the criminal world.

Biological, genetic, environmental, and social factors also influence the development of FASD, which leads to health disparities, social injustices, and cumulative disadvantage throughout the lifespan (DeAngelis, 2019, 2023; Flannigan et al., 2022a; McQuire et al., 2020; McQuire et al., 2024). In this scenario, participants' narratives suggested that peer-influenced criminal engagement should be viewed as a neurodevelopmental vulnerability rather than a matter of agency, and that justice responses are necessary that are not reliant on blame-based paradigms. The cross-cutting factor was determined as stigma, which exacerbates diagnostic and interpretive difficulties. The participants explained that in many instances, FASD-related behaviors are often misconstrued as defiance or demotivation, especially in the case of Indigenous women who are already subjected to systemic racism in the justice system. In line with previous studies (Brown & Greenspan, 2021; McLachlan, 2021), stigmatization was also mentioned as a factor that hinders disclosure in screening and assessment procedures, thereby creating diagnostic uncertainty and inappropriate justice reactions. Put

collectively, these results indicated that one cannot comprehend the concept of justice participation among Indigenous women with FASD without considering the neurobiological and clinical aspects of the condition, along with the structural environments under which these disabilities are explained.

The results indicated the need to broaden adult diagnostic tools, develop culturally sensitive modes of assessment, and implement forms of justice accommodation that are not based solely on the confirmed PAE. Chudley et al. (2007) noted that FAS is the only diagnosis that can be made without prenatal alcohol exposure. A diagnosis of FASD cannot be easily achieved in persons with cognitive and behavioral challenges, but who do not have the characteristic facial appearance, and in the absence of established fetal alcohol exposure (Hoyme et al., 2026). This issue gets particularly acute in adult testing, as facial dysmorphism can remit with age (Streissguth et al., 1997; Streissguth et al., 2004), and the family history of alcohol use in pregnancy might be unavailable (Chudley et al., 2007). Informative birth records that would provide information on the degree of alcohol consumption during gestation are often missing or absent (Chudley et al., 2007). Gomez and Abdul-Rahman (2026) further argued that machine learning and facial imaging, including 3D facial imaging and 2D image analysis technologies, offer potential to standardize assessments, expand diagnostic access, and facilitate earlier identification of FASD, including subclinical presentations. Therefore, strong information-collection models can be invaluable for proper diagnosis.

Theme 2: Gendered and Vulnerable Populations

The theme explored the role of cumulative trauma, disrupted attachment, and

historical harm on coping mechanisms, emotional regulation, and relational behaviors among Indigenous women living with FASD throughout their lives. The participants underscored that initial and continued victimization, coercive relationships, and social marginalization, compounded with neurocognitive impairments, lead women on courses to justice engagement. Patterns of relational trauma, emotional internalization, and substance use were discussed across interviews as interacting with these vulnerabilities that regularly resulted in cycles of violence, exploitation, and criminalization long before making contact with a system. It was found that gendered differences (including internalized distress and vulnerability to coercion) enhanced risk, especially in a correctional or community justice context.

Victimization and the Road to Offending

The overwhelming majority of the participants explained a close relationship between early and continued victimization, especially domestic violence, sexual abuse, and coercive intimate relationships, and further criminal behavior. They highlighted that many Indigenous women tend to experience continuous relational damage that influences decision-making, independence, and coping (Grekul, 2020; Spillane et al., 2023). The result of these experiences is usually survival-based behavior that the justice system misinterprets as intentional crime. Participants also observed that Indigenous women with FASD might be particularly susceptible to coercive or abusive partners due to neurocognitive issues like suggestibility, poor judgment, and inability to recognize unsafe situations. The repetitive aspect of the cumulative nature of trauma was stressed.

Another issue that the participants talked about was the trauma reactions

following violent crimes. According to the research by Motiuk and Keown (2022b), FSIW are not only disproportionately criminalized but also experience a high level of victimization; 78.6% reported being victims of intimate partner violence (IPV), which is also intertwined with other systemic factors. Dual criminalization of Indigenous women, as victims and perpetrators, in the context of substance abuse, criminal records, and bias in the justice system contribute to the cycles of incarceration and victimization (McGuire & Murdoch, 2022; Miller, 2017; National Inquiry into Missing and Murdered Indigenous Women and Girls (MMIWG), 2019a; TRC, 2015a, 2015b).

Emotional Expression and Coping Styles

Many participants explained that emotional processing can be affected in that distress is internalized by many Indigenous females, making them vulnerable in the community as well as in custodial settings. This internalization is a gendered difference and a coping mechanism that is often influenced by trauma. According to the participants, substance use, in particular, alcohol and methamphetamine, was frequently a means of dealing with overwhelming emotions as opposed to the desire to offend. Neurocognitive impairment has been identified as disruptive to the formation of secure attachment, as its effects on PAE lead to multifaceted cycles of attachment difficulties and maladaptive coping skills (Mukherjee et al., 2019; Pei & Burke, 2018). The trauma-associated effects often appear in the form of the inability to manage feelings, attachment, and coping (Isobel et al., 2019; Isobel et al., 2021; Spillane et al., 2023). Aranda-Hughes et al. (2025) state that negative social reactions to disclosures of intimate partner violence (IPV) negatively influence PTSD, depression, and emotional processing

difficulties (e.g., alexithymia) among Indigenous women. Findings show that unsupportive responses correlate with worse mental health outcomes and emotional processing challenges, highlighting the importance of culturally grounded support for trauma recovery (Aranda-Hughes et al., 2025).

Substance Use and Criminalization

The use of substances was identified as one of the significant triggers of involvement in the justice system. According to the participants, substance use frequently comorbidly contributes to the cognitive impairments of FASD, impairing impulse control and pre-empting the consequences. Notably, they emphasized that drug use is generally an attempt to cope with trauma and not criminal intentionality. The alcohol-related crimes, violations of conditions, and violent acts, including murder, were observed by the participants as typical patterns among the Indigenous women affected by FASD when intoxicated. Such actions were put within the context of trauma and social vulnerability and structural inequities, and not innate criminal dispositions.

According to research, the validity of Historical Trauma Theory (HTT) has been confirmed, as historical trauma was found to be related to poor mental health conditions (depression, substance misuse, and emotional distress) (Bombay et al., 2014; Brave Heart, 2011; Wilk et al., 2017). Although the correlation between historical trauma, criminal behavior, and the deficits associated with FASD has not been conclusively determined, the emotional distress of historical/intergenerational trauma survivors could result in alcohol consumption to cope with the experience, which could further predispose to PAE and involvement in the justice system (Bombay et al., 2014; Brave

Heart, 2003; Reid et al., 2023).

Gendered Vulnerability in Legal Contexts

Participants pointed out that gendered vulnerability, especially to women with FASD, continues to exist and, in many cases, it increases in correctional and community justice contexts. Such a group was characterized as particularly vulnerable to peer pressure and coercion because of the difficulties with social reasoning and boundary recognition, which could result in criminalized behaviors. The participants stressed that this vulnerability is aggravated by systemic factors, including reliance on punitive reactions, as opposed to supportive ones, which particularly affect Indigenous women who undergo marginalization and repetitive family separation or child removal. The results are backed by attachment-oriented and trauma-informed models showing how childhood traumas and inconsistencies in caregiving, such as prenatal alcohol exposure, may interfere with attachment and cause problems with emotional regulation and coping strategies.

The phenomenon of disorganized attachment, as conceptualized by Main and Solomon (1986, 1990), is usually linked to early trauma and inconsistent caregiving. Children born into Indigenous families experience multiplied injustices due to a lack of cultural integration and structural unfairness, which worsens their emotional and cognitive growth (Narayan et al., 2021). Cognitive impairments, deficits of executive functioning, and poor emotional regulation have been associated with intergenerational trauma and ACEs transmission, especially among Indigenous populations with PAE (Cooke et al., 2018; Flannigan et al., 2018b; Khalifa et al., 2021; Mela et al., 2018). The

descriptions of the participants indicated that, in the context of justice, the vulnerabilities increase the tendency to comply with coercive peer relationships rather than engage in deliberate criminality. Gendered vulnerability as perceived by the MIDF paradigm is the overlap of neurodevelopmental impairment, violated attachment, and past trauma, which increases vulnerability to be coerced and criminalized instead of intentionally offending. In general, the results emphasized the necessity of justice reactions that acknowledge gendered, neurodevelopmental, and attachment-related vulnerabilities and instead support cycles of punishment that would further increase harm.

Theme 3: Trauma and Coping

This theme explores how cumulative trauma, broken attachment, and historical harm influence coping mechanisms, emotional regulation, and relational behaviors in Indigenous women with FASD over an extended period. The participants detailed how neurodevelopmental impairments engage with relational and intergenerational trauma in generating maladaptive coping, such as internalized distress, substance use, and identification with criminalized peer groups. Instead of being interpreted as purposeful decisions, the patterns were perceived as reactions to chronic disconnection, attachment disruption, and historical trauma, which were frequently reiterated throughout the lifespan. Distinctions in coping were also highlighted as gendered, as women tend to internalize distress and establish quick and even destructive attachment. This theme focuses on internal processes and mechanisms that describe the effects of trauma on behavior, complementing the external routes to justice discussed in Theme 2.

Attachment, Historical Trauma, and Compounding Risk Factors

Participants highlighted cumulative trauma as a significant influence that would shape coping mechanisms, vulnerability, and justice intervention. In interviews, the interplay of colonial disruption, disrupted attachment, and cultural dislocation was reported to enhance vulnerability to criminalized behavior in response to prenatal alcohol exposure. These aspects were perceived as interdependent and not independent, which develop pathways towards justice involvement that run throughout the lifespan. Exposure to adverse childhood experiences (ACEs), child welfare involvement, and intergenerational trauma were reported to make them more vulnerable to being influenced and aligned with other marginalized groups. These histories of trauma and disrupted attachment were related to pathways of offending by the participants, which exemplifies the intersection point of neurodevelopmental, historical, and relational aspects of the MIDF framework. Such results align with the Historical Trauma Theory, which suggests that trauma is cumulative, transgenerational, and unresolved (Brave Heart, 2003; Brave Heart, 2011; Wilk et al., 2017), and Attachment Theory, which states that early disruptions in caregiving can disrupt emotional control and adaptive coping (Main & Solomon, 1986, 1990).

Gendered Coping and Internalized Distress

The participants also emphasized gender-based patterns of coping in that Indigenous women with FASD prefer to internalize distress within themselves instead of directing it outside. This internalization culminates because of a chronic relational trauma, disrupted attachment, and accepted exposure to harm. Childhood trauma,

especially in relationships with caregivers, was said to influence emotional regulation and lifespan coping. Attachment Theory can help interpret these patterns, and insecure early bonds lead to insecure internal working models, which in turn influence self-concept and emotion regulation (Flykt et al., 2021; Mukherjee et al., 2019; Parolin & Simonelli, 2016; Zephier Olson & Dombrowski, 2020). Respondents explained how intergenerational trauma, substance use, and caregiving instability reinforce emotional regulation cycles, self-harm, and susceptibility to abusive relationships.

Systemic and structural stressors are deeply rooted in the social fabric and can occur throughout the life course, with intergenerational trauma influencing the range of responses (Aranda-Hughes et al., 2025; Brave Heart, 2011). Gendered and Indigenous coping mechanisms to life stressors and trauma are considered survival strategies, such as avoidance and self-medication (Simon et al., 2025) or, in some cases, self-injurious behaviors (SAMHSA, 2014). Such gendered coping strategies have been misunderstood in the justice systems as signs of noncompliance or even danger. This, unfortunately, further strengthens punitive reactions at the cost of trauma-informed care.

Relationship-Driven Coping and Repetition of Harm

Participants explained that relationship-based coping was a repetitive phenomenon in which attachment disturbances were recreated in the community and custodial settings. The attachment was also insecure, and as a result, rapid attachment formation, volatility, and the repetition of harmful relational patterns were often observed. Such patterns were not perceived as a relational choice but trauma-dependent reactions based on chronic disconnection. Respondents also added that gangs and

criminalized peer groups also serve as pseudo-attachments, offering a sense of belonging when one failed to have the primary attachment. Individuals with FASD who have suffered insecure or disorganised attachment relationships, high rates of maltreatment, not limited to abuse, trauma, and neglect, and adverse experiences may, as a result, develop unhealthy attachment styles (Gilbert et al., 2025).

Integration within the MIDF Framework

In the context of MIDF, these trauma-oriented coping processes provide a visualization of the interplay between internal vulnerabilities. These neurodevelopmental, relational, and historical factors determine the patterns of involvement in the justice system. Maladaptive coping, gendered internalization, and recurrent relational harm illustrate means outside of, yet complementary to, the external vulnerabilities of justice described in Theme 2. The identification of these internal processes highlights the significance of trauma-sensitive, developmentally sensitive, and culturally based interventions in the name of resilience, harm reduction, and overincarceration.

Theme 4: Structural and Systemic Factors

Systemic Misrecognition and Legal Invisibility

Legal systems were repeatedly characterized as structurally incompetent to effectively acknowledge FASD-related neurodevelopmental impairment, leading to what might be termed legal invisibility. Even though some judicial actors are starting to move towards more support-oriented models, participants highlighted that persons with FASD are constantly considered criminally accountable through a limited understanding of legal capacity when impulse control, foresight, and understanding are impaired. The

participants also identified specific weaknesses in the plea negotiations process, in which participants with FASD can disguise confusion through social mimicry, leading to the illusion that they comprehend what they are doing when, in fact, they do not fully understand the ramifications of the law. Such misidentification increases the likelihood that a person will falsely plead guilty and receive a severe sentence. The studies show that the number of Indigenous clients and non-Indigenous lawyers miscommunicate because of systemic racism, multifaceted trauma, and distrust of the justice system, which can further lead to false convictions, primarily by way of false confessions or guilty pleas (Montana, 2023; Vijaykumar, 2018).

Communication gaps can also be caused by the differences between Standard English and Aboriginal English dialects (Montana, 2023). Linguistic issues can contribute to a lack of understanding of certain emotional signs, including regret, further marginalizing these women in the justice system (Brown, 2022; Temple et al., 2019). Culture-driven pressures to be responsible can also make the Indigenous peoples more prone to false guilty pleas since responsibility tends to be misunderstood with legal guilt (Vijaykumar, 2018). Together with low literacy rates, such problems as dysthymic disorder, failure to manage affect such as alexithymia, these obstacles indicate the institutional injustices that increase the number of wrongful convictions (Carling, 2017; Montana, 2023). Although courts in Canada and other countries have begun to consider FASD as a mitigating factor, respondents noted that the lack of uniformity in the law means it is not consistently applied. Instead of serving as a countermeasure, the legal discretion was characterized as arbitrary and based on personal judgment, reinforcing

structural inequalities rather than alleviating them.

Structural Racism, Gendered Stigma, and Institutional Response

Many participants explained racism, sexism, and stigma as deep-rooted in the justice and health systems and influencing the perception, evaluation, and treatment of Indigenous women with FASD. It was perceived that these overlapping forms of bias affected access to culturally safe services, the therapeutic relationships, and diagnostic recognition. Several respondents observed that institutional norms favor Eurocentric clinical paradigms and mainly male clinicians and providers, which results in the development of relational barriers in women with a long-term history of trauma. The additional barriers to these challenges were stigma about FASD, where participants reported being seen as incapacitated or dangerous, restricting support opportunities, and perpetuating the exclusion. Studies indicate how HTT also brings to the fore the long-term effects of the colonial policies such as systemic racism, the Sixties Scoop, forced sterilization, and residential school system that still have effects on the Indigenous communities (Avalos, 2021; Brave Heart & DeBruyn, 1998; Brave Heart, 2003; Stote, 2012, 2015; Zephier Olson & Dombrowski, 2020).

Moreover, the presence of stigma and negative stereotypes (both in and outside of the criminal justice system) may consolidate the erroneous beliefs about Indigenous communities and alcohol consumption (Aspler et al., 2021; McLachlan et al., 2020b; Milward, 2014a). Analytically, these results imply that structural bias is not only a contextual factor but also an active process that drives the course of justice. With the racialized and gendered assumptions of neurodevelopmental impairment, responses are

changed to surveillance and control instead of accommodation and care.

Service Exclusion, Surveillance, and Reinforced Criminalization

The participants stressed that a lack of services, disengagement, and limiting eligibility criteria cause Indigenous women with FASD to be systematically screened out of the assessment, treatment, and continuity of care. The displacement of both diagnostic and therapeutic services in custodial facilities was deemed especially detrimental, as it contradicted rehabilitation and reintegration initiatives. Institutional practices were also explained to increase surveillance, rather than support. Participants reported that neurocognitive limitations are often misinterpreted as intentional nonadherence, resulting in disciplinary measures rather than accommodations. The fact that the staff was not well-trained and that there was a lack of confidentiality also reinforced these relationships by placing mental health professionals as informal crusaders who tried to reduce systemic misunderstanding.

Passmore et al. (2018) observed that correctional employees often lack the training to identify FASD and its symptoms, leading them to misinterpret the behavior as defiant or a sign of danger. Other participants observed that recidivism might be explained by several factors, such as the restriction of confidentiality in providing mental health information to the parole officers. Other observations included the fact that the information disclosed under the rules of confidentiality could lead to frontline staff dealing with behaviors without knowledge of the neurodevelopmental disability. Interestingly, although not identified as a discrete theme, participants conceptualized confidentiality barriers as a pervasive structural constraint. The fact that confidentiality

barriers have been repeatedly cited in participants' responses indicates their intersecting nature across assessment processes, continuity of care, and justice outcomes.

All these practices were interpreted to foster reincarceration cycles where unmet needs are restructured as risk and vulnerability as being controlled instead of being taken care of. Structurally, this is a failure of the system to integrate neurodevelopmental and trauma-informed practices in corrections. Under the MIDF framework, such structural and systemic conditions do not act in isolation but interplay with neurodevelopmental impairments, past trauma, and attachment disruption to exacerbate justice engagement among the Indigenous women with FASD. The misrecognition of structure, exclusion from service, and surveillance-inflicted practices are external forces that transform vulnerability into criminalization. Instead of reducing risk, these systems tend to increase it, perpetuating the incarceration/reincarceration cycles.

Theme 5: Social and Environmental Influences

Building upon the structural and institutional limitations of Theme 4, this theme examines the social and environmental factors that precede involvement in the justice system. Participants highlighted the fact that living in poverty, housing instability, violence, disrupted education, and colonial marginalization throughout the life course are the pathways that criminalize Indigenous women with FASD. The combination of the multifaceted trauma, PAE, disrupted attachments, and FASD-associated impairments contributes to the understanding of the ways to criminal actions and overincarceration (Flykt et al., 2021; Mukherjee et al., 2023; Sessa et al., 2022). On the same note, the Calls for Justice (CFJ) of the National Inquiry into Missing and Murdered Indigenous Women

and Girls (MMIWG) highlight the long-term effects of colonial violence, structural discrimination, and intergenerational trauma that increase the vulnerability of Indigenous women to criminalization (MMIWG, 2019a, 2019b). In the context of the MIDF, these conditions are considered environmental risk amplifiers that combine with neurodevelopmental vulnerabilities to elevate the likelihood of exploitation, substance use, and justice system contact as an adult. In combination, these results demonstrate how social and environmental deprivation accumulates throughout development and combines with FASD-related impairments to influence justice participation even before the systems are engaged.

Theme 6: Professional Barriers

Whereas theme 5 emphasizes the accumulation of environmental adversity before the intervention of justice, theme 6 focuses on what happens when Indigenous women with FASD find themselves in clinical, correctional, and legal systems. Participants consistently reported professional knowledge gaps, culturally invalid assessment tools, and policy restrictions as hindering the effective identification, accommodation, and support of individuals. Security classifications and parole decisions rely on the critical role of risk assessment tools, such as the Custody Rating Scale, the Security Reclassification Scale with Women, and the Risk-Need-Responsivity (RNR) model (Brown et al., 2023; McKendy et al., 2023). Nonetheless, these mechanisms have a high rate of bias concerning females with special needs, including those with FASD, producing a systemic disparity and contributing to overincarceration (Barmaki, 2023; Gutierrez & Wanamaker, 2022; Montford & Hannah-Moffat, 2020). The absence of

awareness of FASD and a gap in knowledge and myths about the disorder are also additional causes of this stigma (Choate & Badry, 2019; Chu et al., 2024). The poor identification, management, and treatment of individuals with FASD continue to stigmatize vulnerable populations and lead to the cycle of injustice, systemic inefficiency, and stigmatization of vulnerable populations (Brown et al., 2024).

These institutional and professional obstacles constitute systemic failure points within the MIDF framework. Neurodevelopmental vulnerability and environmental risk are incorrectly understood as a lack of compliance, resulting in increased surveillance, punitive actions, and entrenched disadvantages. The MIDF encompasses four dimensions, including neurodevelopmental, trauma, structural, and cultural, emphasizing the interconnectedness of relational, cognitive, and systemic factors. It therefore provides professionals with a culturally grounded, holistic lens through which to understand and address neurocognitive, relational, and systemic factors. In contrast, these institutional and professional barriers illustrate how justice systems that are not MIDF-informed may reinforce risk by responding punitively to behaviors rooted in neurocognitive differences.

Theme 7: Strengths, Growth, and Transformation

Unlike the previous themes, which demonstrate the buildup of risk and institutional failure, this theme shows how participants acknowledge the resilience of Indigenous women and the circumstances in which they can be transformed. Practitioners underlined that the development of harm pathways can be disrupted through the implementation of culturally grounded, trauma-informed, and developmentally responsive supports. Indigenous women represent a paradox of power and strength

(Gilbert et al., 2023b; Ogden & Tutty, 2024), as well as vulnerability stemming from their social background and the victimization-criminalization-incarceration continuum (Flannigan et al., 2018a; Flannigan et al., 2018d; Grekul, 2020). Trauma, institutional inequities, and FASD collectively form a paradigm of failure; however, within this paradigm, there is an opportunity to effect change (Spillane et al., 2023; Toombs et al., 2023). It is essential to identify and acknowledge these paradoxes and paradigms to combat systemic injustices and eliminate harmful stereotypes that only perpetuate inequities, including the unjustified assumption that FASD is disproportionately high among Indigenous communities (Milward, 2014a, 2014b; Tait et al., 2017; Wolfson et al., 2019).

Such complex problems require a delicate approach that would recognize both the systemic injustices and historical injustices experienced by Indigenous women, and the fact that they also possess agency, strengths, and can make important transformative change. By uncovering the hidden assumptions behind these paradigms as well as providing a remedy to the existing misconceptions, this study sought to play a role in developing more equitable and culturally sensitive practices that facilitate resilience and reduce the overincarceration of Indigenous women with FASD. These results, in the context of MIDF, indicate protective and repair mechanisms that would alleviate neurodevelopmental vulnerability, decrease justice participation, and facilitate a long-term healing process. In addition, Shah et al. (2026) have pointed out that the recurring co-occurrence of PAE and complex trauma affects not only the individual but the entire family system, and therefore, a trauma-informed, family-centered approach is essential to

mitigate not only secondary morbidities but also to optimize future outcomes. These lessons highlight how MIDF-educated interventions can transform justice reactions from punitive-based to ones focused on prevention, repair, and relational accountability.

Limitations of the Study

The purpose of this study was to examine the views of psychologists and psychiatrists on how neurocognitive deficits caused by FASD could create the risk of criminal behavior in Indigenous women who had been federally sentenced. Since this research focused on FSIW in Western Canada, it is inherently limited in generalizability due to its qualitative design. Although the findings may not be generalized to all populations, they offer a detailed insight into FASD and the experiences of FSIW from the perspectives of psychologists and a psychiatrist. Qualitative research has no intention to generate results that are generally generalizable; rather, it affirms the creation of deep, descriptive knowledge.

Another limitation of the study is the underrepresentation of psychiatrists in the sample. Even though the research initially sought the opinions of both psychologists and psychiatrists, only one psychiatrist participated. This underrepresentation can limit the extent to which psychiatric-specific views can be represented in the results. Factors that could hinder hiring psychiatrists include structural and professional factors, such as workload, availability, and organizational policies. Future research should consider the increased involvement of psychiatrists in institutional affiliations or professional associations to ensure more comprehensive representation of the profession and to expand the psychological insights presented in this study. Given these limitations, I have

made the study transparent to enhance its contribution to the field.

Recommendations

Based on the results of this paper and the available literature, several recommendations are suggested to enhance justice responses and improve the conditions of Indigenous female offenders with FASD. To achieve meaningful prevention and intervention, holistic approaches grounded in culture are necessary and align with the MIDF framework. Instead of focusing on individual behavior change or short-term interventions, sustainable change relies on meeting neurodevelopmental needs along with safety, stable housing, structured supervision, cultural connection, and relational support. The challenge of obtaining special programming, along with the absence of proper screening and diagnosis of FASD, is a significant hindrance in providing appropriate accommodations, along with proper interventions within the correctional framework.

One recommendation for this research is the revision of the current correctional, as well as community-based programs, to meet the special needs of female Indigenous offenders with FASD. It is worth noting that the curricula of Aboriginal Women's Correctional Programs (AWOCP) and Healing Lodge programs should be adjusted to provide neurodevelopmental support, relationship learning, and skill-building strategies tailored to varying cognitive abilities. Early screening of FASD is also crucial at the early stages of reception, prior to planning well-coordinated programs. Protective factors also require structural investment to realize long-term change that extends beyond the reach of program-based interventions. Even though practices and counseling that utilize restorative justice have proven to be worth considering, they cannot be sufficient when

victims of abuse are put back into settings of housing inaccessibility, social exclusion, and unemployment.

In the absence of tangible assets, including housing, educational, or job opportunities, and sponsoring support, the practice of justice will tend to produce initial contact rather than permanent, positive transformations in individuals' lives. Regarding this aspect, as seen by one of the researchers-practitioners in this area, when such resources are lacking, people tend to retreat and return to the same issue they had earlier, with no change in their lives. Proactive, relational investment offers the greatest potential for long-term impact, but not in response to a crisis. Protective variables such as housing, mentorship, community connection, and supported employment or volunteer opportunities are essential to justice-involved Indigenous women with FASD but are not currently being utilized. When systems make an enormous investment in programming that strengthens weaker areas, positive results can multiply over time, creating a broader movement towards change.

Future research should examine the possibility of comorbidity between FASD and traumatic brain injury (TBI) in Indigenous women involved in the Canadian criminal justice system. Both conditions involve neurocognitive impairments that can influence impulse regulation, decision-making, and vulnerability to justice involvement; however, their overlap has not yet been sufficiently studied. Given the high rates of trauma and victimization among Indigenous women, the risk of acquired brain injury requires further scholarly investigation. Understanding how FASD and TBI interact could improve assessment, intervention, and justice responses.

Analyzing these recommendations within the context of MIDF, it is necessary to note that the approach should shift from surveillance and risk-oriented models to prevention-oriented, relational, and accountability-driven ones. Funding accountability and policy leadership are vital to ensuring that interventions do not remain symbolic reactions. They help reduce long-term risk by enhancing protective factors throughout the life course. Indigenous women with FASD can belong, be stable, and reintegrate into the community, which is one of the important mechanisms to break incarceration and reincarceration cycles.

Implications

This study examined the impact of neurocognitive disability associated with FASD on the FASD-related crime-related pathways that contribute to the overrepresentation of Indigenous women in Western Canadian prisons. The study has substantial implications for reforming justice policy and practices, particularly as they relate to prisons. This is primarily in the process of alleviating the system-level issues of stigma, insensitivity to FASD from a clinical perspective, and overt over-dependence on behavioral methods concerning risk assessment procedures. This study established the relationship between neurodevelopmental impairment, trauma, and the correlation between neurocognitive impairment and the involvement of the justice system. Such results also indicated that the comorbid problems of cognitive impairment linked with FASD, coupled with depression, suicidal thoughts, trauma, and attachment disruptions, alter the direction of the justice system in a way that is not well understood in

a correctional setting. The combination of these risk factors increases the likelihood of punitive receptions, improper risk assessment, and inadequate interventions. These active interplays must be learned and considered to develop effective, culturally based interventions. In addition, participants' statements regarding impediments to confidentiality underscore the importance of stronger information-sharing policies and consent-based systems, which, in turn, would lead to neurodevelopmentally informed decision-making in both correctional and community supervision settings.

To address gaps in research and practice, there is an urgent need to promptly screen, identify, and implement culturally appropriate, neurodevelopmentally informed interventions. Their absence remains a significant vulnerability to Indigenous women with FASD to inappropriate placement, the absence of support, and recidivism in the justice system. To achieve fair outcomes in the justice system, there is an urgent need to raise awareness, build expertise, and implement reforms that address these realities. All in all, the evidence presented in this study underscores the evidence-based changes that promote prevention, accommodation, and rehabilitation rather than surveillance and punishment. Based on the MIDF framework, the implications of the findings will encourage justice response strategies that are cognitively diverse, address historical and relational injustices, and initiate programs that promote fairness, dignity, and reintegration among Indigenous women with FASD.

Conclusion

This qualitative study fills a significant gap in the literature by exploring the role of FASD-related neurocognitive deficiencies in the interaction with trauma, disrupted

attachment, and structural injustices in creating a pathway to criminal justice participation among Indigenous female offenders in Western Canada. The results, exploring a bigger human rights crisis marked by the continuous overimprisonment of Indigenous women, especially maximum security and Structured Intervention Unit (SIU) placement, are in line with longstanding issues highlighted by the Office of the Correctional Investigator (OCI, 2025) about insufficient assessment of trauma, limited cultural responsiveness, and overuse of behaviorally based risk paradigms. This study has shown that the engagement of justice among Indigenous women with FASD cannot be described in terms of volitional criminality, but because of overlapping neurodevelopmental and cumulative trauma, as well as structurally unpredictable environments. The overlapping of cognitive, depressive, suicidal, and unresolved trauma within a correctional facility contributes to greater exposure to punitive reactions, a probability of misclassification, and adequate care and support being missed. Besides the major themes that emerged, participants also found that confidentiality barriers were an original, cross-cutting issue that might lead to reincarceration due to a lack of effective/coordinated responses to FASD-related needs.

The purpose of this study was to examine psychologists' and psychiatrists' perspectives on how FASD-related neurocognitive deficits contribute to the risk of criminal behavior among FSIW. The results highlight the importance of early screening, neurodevelopmentally competent and culturally based treatment, and justice responses that emphasize prevention, accommodation, and rehabilitation. This study, informed by the MIDF paradigm, provides the foundation for evidence-based policy and practice changes that transform the experiences of Indigenous women with FASD from one of

surveillance and punishment to one of dignity, relational accountability, and effective reintegration.

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Appendix: Interview Guide

Date:

Location:

Name of Interviewer:

Name of Interviewee:

Research Question

RQ: What are the views, perspectives, and opinions of psychologists and psychiatrists on the role that FASD may play in the risk for criminal behavior resulting in the overincarceration and reincarceration of FSIW in Western Canada (the Prairie Region and British Columbia)?

Interview Questions

Professional Perspective on FASD

1. How do you understand FASD and its potential influence on criminal behavior?
2. How do FASD-related impairments, such as difficulties with emotional regulation or executive functioning, contribute to behaviors that may lead to criminality?

Connection Between FASD and Risk

3. In your experience, how does FASD increase the risk of criminal behavior among Western Canadian incarcerated Indigenous women?

Systemic and Contextual Factors

Impact of Trauma and Colonialism:

4. To what extent do multifaceted traumas influence the overincarceration of Indigenous women with FASD?

Cultural Sensitivity in the Justice System:

5. How do systemic biases or the lack of culturally appropriate practices impact the incarceration and reintegration of Indigenous women with FASD?

Role of Correctional Practices:

6. What gaps exist in correctional practices for addressing the unique needs of Indigenous women with FASD, particularly in Western Canada?

Assessment and Risk Prediction**Effectiveness of Current Tools:**

7. How do you think current risk assessment tools (e.g., Custody Rating Scale, Security Reclassification Scale, BSC, RNR) address, or fail to address, the unique needs of Indigenous women with FASD?

Neurocognitive Assessments:

8. What role do FASD-specific neurocognitive assessments play in understanding this population's risks and rehabilitation needs?

Recidivism and Reincarceration**Cycle of Recidivism:**

9. In your experience, what factors contribute to the cycle of incarceration and reincarceration for Indigenous women with FASD in Western Canada?

Breaking the Cycle:

10. What strategies or interventions do you believe are effective in breaking the cycle of overincarceration and recidivism for this group?

Legal and Judicial Considerations

Sentencing and Justice Outcomes:

11. To what extent do you believe FASD should influence sentencing and justice outcomes for Indigenous women?
12. Have you observed cases where FASD-informed considerations positively or negatively affect legal outcomes?

***Mens Rea* and Competency:**

13. How do you think FASD-related impairments should be considered in determining criminal intent (*mens rea*) or competency to stand trial?

Culturally Grounded Interventions**Culturally Appropriate Interventions:**

14. What role do culturally grounded interventions and supports play in reducing the overincarceration of Indigenous women with FASD?

Role of Community Programs:

15. How effective are community-led, restorative justice programs in supporting Indigenous women with FASD in navigating the justice system and reintegrating into society?

Professional Practice and Insights**Integration of FASD-Informed Approaches:**

16. How do you integrate FASD-informed approaches into your psychological assessments and interventions for justice-involved Indigenous women?

Barriers to Support:

17. What barriers do psychologists and psychiatrists face when supporting justice-

involved Indigenous women with FASD, and how can these barriers be addressed?