Identifying and Managing Symptoms in Adult Offenders with Fetal Alcohol Spectrum Disorder:

A Resource Manual for Correctional Program Officers

by

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Dedication

To the people who taught me that family can extend further than biology.

“It won’t be easy, but it will be worth it.”
Abstract

Individuals with fetal alcohol spectrum disorder (FASD) exhibit a wide range of cognitive, social, and physical deficits following prenatal alcohol exposure. Currently, there is a gap in the literature surrounding evidence-based services and interventions for the adult population. Prevalence research reports an overrepresentation of individuals with FASD in correctional facilities. The literature highlights the importance of staff training and other health related services to assist those who may be affected by alcohol-related disorders. Therefore, a resource guide and student presentation was developed for Correctional Program Officers to recapitulate the current research in managing symptoms and providing support to adult offenders with FASD. Participants evaluated the clarity, organization, and educational aspects of a resource guide and student presentation. Based on their observations and interpretations of the information that was provided to them, they circled their level of agreement to statements that were reflective of a user-friendly product. Results show that the respondents were in strong agreement that the guide and student presentation could be used as an educational tool to enhance viewers’ knowledge on FASD. Although learning outcomes were not measured, the response rate was positive when evaluating the relevance and feasibility of the resource guide. This thesis highlights the limited research that is available to diagnose and support adults with FASD. Further research on validated screening tools and interventions is needed for individuals with FASD in order to manage and reduce the risk of secondary disabilities.
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Chapter I: Introduction

Recent research from the Canada FASD Research Network has estimated that fetal alcohol spectrum disorders (FASD) affects 4% of the Canadian population; however, prevalence rates are often ambiguous due to the invisibility and complexity of this disability (Flannigan, Unsworth, & Harding, 2018). FASD represents a group of diagnoses that are influenced by maternal alcohol consumption causing brain damage to a developing fetus (Flannigan, Pei, Stewart, & Johnson, 2017; Green, Cook, Stewart, & Salmon, 2016). Diagnoses that fall under this umbrella term include: fetal alcohol syndrome (FAS), partial fetal alcohol syndrome (pFAS), alcohol-related neurodevelopmental disorder (ARND), and alcohol-related birth defects (ARBD) (Clarke & Gibbard, 2003).

Fetal exposure to alcohol can influence lifelong mental, physical, behavioural, and learning impairments that can become increasingly problematic with the absence of support and interventions (Public Health Agency of Canada, 2006). However, unlike other birth defects, FASD is often difficult to identify and diagnose in newborns, infants, and young children and can be increasingly challenging to diagnose in adulthood (Green, Cook, & Salmon, 2015).

The challenges that are associated with diagnosing this disability frequently delay opportunities for support and intervention services. Early intervention is especially important for this population as the individuals become vulnerable to develop secondary disabilities such as mental illness, academic failure or disruption, incarceration, homelessness, and substance abuse (Government of Canada, 2017). These secondary disabilities are considered to be criminogenic risk factors and place people with FASD at a higher risk of being incarcerated or involved in legal systems in comparison to the general population (Popova et al., 2011).

According to the Canada FASD Research Network, the prevalence of Canadian offenders with FASD is estimated to be 11% to 23% for youth and 10% to 18% for adults. Researchers Burd, Selfridge, Klug, and Juelson (2003) developed a questionnaire that asked Correctional Directors to provide information pertaining to the correction system’s awareness of FAS, current screening tools used for FAS, staff training, and the accessibility to diagnostic and treatment services. In addition, the researchers also requested the total number of offenders in the specific facility and the total number of diagnosed cases (Burd et al., 2003). Directors of from 11 different provinces and territories across Canada completed the survey (85%). Results indicated that from the 148,979 offenders, only 13 were diagnosed with FAS (Burd et al., 2003). This represents an overall prevalence of 0.087 per 1000 offenders. Yukon territory exhibited higher prevalence rates of FAS affected individuals by reporting that 2.6% of offenders were affected by this disability in correctional systems (Burd et al., 2003). A high majority of survey respondents (76.9%) expressed their willingness to receive staff training and to increase their awareness on FAS affected individuals (Burd et al., 2003). Additionally, most respondents confirmed that there is limited access to FAS screening tools and diagnostic services, which could have had an influence on prevalence rates in their correctional systems (Burd et al., 2003; Flannigan et al., 2017).

In 2004, Burd, Selfridge, Klug, and Bakko replicated this study in the United States (US) and received responses from 39 (78%) states, yielding a population sample of 3,080,904 offenders. Among the 3.08 million offenders, only one individual had documentation of a pre-existing diagnosis of FAS. Additionally, only one respondent (1.8%) reported that staff had
received training on identifying, managing, and providing support to individuals with FAS but 19 respondents (35.2%) were willing to receive training (Burd et al., 2004).

In a more recent study, Popova, Lange, Bekmuradov, Mihic, and Rehm (2011) examined the prevalence of FASD in correctional facilities through the development of a systematic global literature review. The authors reported that it was impossible to provide an accurate representation of individuals with FASD in the US criminal justice system due to limited samples of data (Popova et al., 2011; Flannigan, Pei, Stewart, & Johnson, 2017). However, when examining Canadian data, the studies that were reviewed estimated prevalence rates ranging from 0.9% to 23.3%. The authors emphasized the difficulties in achieving accurate prevalence rates and acknowledged that the rate of undiagnosed cases could be significantly higher than what was identified. (Popova et al., 2011; Flannigan, Pei, Stewart, & Johnson, 2017).

These results are relevant to the challenges associated with diagnosing and receiving accurate prevalence rates of this population in both the community and in correctional facilities. Complications that are associated with reporting, screening, and diagnosing this disability make it difficult to accurately measure prevalence rates of individuals with FASD. (Pei, Flannigan, Keller, Stewart, & Johnson, 2018). In addition, the researchers’ approach to collecting data may help to explain the variance in prevalence rates (Pei et al., 2018). For example, the results that were collected by Burd and colleagues (2004) reported that only one individual had a pre-existing diagnosis of fFAS among a 3.08 million-population sample. The likelihood that only one individual was affected by an FASD related disability is improbable when comparing prevalence rates in Canada. In addition, Popova and colleagues have reported that there is limited availability of FASD data in the US making it difficult to accurately estimate prevalence rates.

The results also complemented the need for staff training and other health services to assist those who may be affected by FASD in correctional facilities. A high majority of responses were willing to receive training on providing support to populations with specialized needs therefore, a manual that outlines symptom identification and management in individuals with FASD will be developed as a resource tool for correctional program officers.

The development of a manual serves a variety of advantages in clinical settings; for example, facilitator access to evidence-based practices, enhanced treatment integrity, staff training, and ability to replicate interventions for consistency in service delivery (Mann, 2009; McMurran & Duggan, 2005). Additionally, individuals with FASD are at a higher risk to be incarcerated than the general population (Popova et al., 2011). In fact, researchers Popova and colleagues (2011) have estimated that youth who are affected by FASD are 19 times more likely to experience incarceration than youth who are not affected by this disability. However, challenges with diagnosing this disability make it difficult to address the needs of this population and receive accurate prevalence rates in correctional facilities. Therefore, by developing a manual that focuses on symptom recognition and management, it is hypothesized that it will increase staff awareness of this disability and could be used as a resource when providing services to individuals who are suspected to have FASD or other specialized needs.

**Thesis Overview**

This thesis will outline relevant information in the recent academic literature surrounding the implementation of a resource manual. A detailed explanation of the methods used including the description of participants, setting, and procedures will be provided. Additionally, descriptive statistics of the results and a discussion outlining the interpretation of the results will be
incorporated in the thesis. The strengths and weaknesses of the study will also be discussed along with an examination of multilevel challenges and future recommendations.
Chapter II: Literature Review

Functions and Purpose of Clinical Manuals

Behaviour therapy introduced the use of treatment manuals in the 1960’s (Wolpe, 1969; as cited in Caligor, 2005). The overall objectives of developing a treatment manual are to describe and analyze the empirical literature of a specific therapy in order to train therapists on how to administer uniform treatments (Caligor, 2005). Treatment uniformity involves the facilitator providing the same treatment to all clients in a treatment group by adhering to the criteria and procedures of the proposed therapy or intervention (Caligor, 2005).

Treatment uniformity measures the facilitator’s adherence to therapeutic strategies by providing a direct description of how to apply procedures and measuring the therapists competency to implement them (Caligor, 2005). Manuals provide descriptive instructions on how to implement a particular treatment by identifying a clearly defined theoretical framework, the appropriate number and sequence of sessions, the objectives and content of each session, and a detailed step-by-step explanation of the procedures needed to attain each objective (Marshall, 2009). According to Addis and Krasnow (2000), there are two types of treatment manuals, which are differentiated by their flexibility in applying therapeutic procedures. There are treatment manuals that are dictatorial, comprehensive, and session-by-session, or guides that rely on being conceptual and utilize more of an individualized approach (Addis & Krasnow, 2000; McMurran & Duggan, 2005; Marshall, 2009).

Guides. Marshall (2009) described a less structured manual as a guide. The purpose of a guide is to provide facilitators with suggestions to implement certain therapeutic strategies in a way that is more flexible and sensitive to the individualized needs of the client (Marshall, 2009). Similarly, in comparison to a more rigid manual, guides can outline a set of possible procedures that the client and therapist could collaboratively discuss and target during treatment (Marshall, 2009). By looking at the possible procedures that could be used, it would encourage the client to identify areas that would be appropriate to address in treatment and research has shown positive outcomes with collaborative approaches between the therapist and client, particularly in sexual offender treatment (Shingler & Mann, 2006; Marshall, 2009). Authors who have had experience in developing and evaluating manualized treatments have recommended that flexibility and therapeutic artistry are essential components to consider when implementing procedures in order to increase the probability of successful treatment outcomes (Addis & Cardemil, 2006). Therapeutic artistry refers to the set of skills that therapists have developed through experience and practice, which are utilized when responding to the unique and diverse needs of each client that they encounter (Mann, 2009). Guides are successful in directing therapists to utilize empirically based strategies while also encouraging flexibility and individuality in their approach (Marshall, 2009).

Development of a Guide to Address Fetal Alcohol Spectrum Disorders in Corrections

Evidence suggests that individuals with fetal alcohol spectrum disorder (FASD) are overrepresented in offender populations due to cognitive impairments that inhibit their ability to make rationalized decisions (Fast & Conry, 2004; Burd, Fast, Conry, & Williams, 2010; Popova, Lange, Bekmuradov, Mihic, & Rehm, 2011; Flannigan, Unsworth, Harding, 2018). Additionally, it was found that 94% of individuals with FASD experienced co-occurring mental health difficulties in a longitudinal follow-up study (Streissguth, Barr, Kogan, & Brookstein, 1996).
Individuals with FASD are vulnerable in correctional settings and can be easily manipulated by other offenders in making poor decisions that are followed by adverse outcomes (Burd et al., 2010). Increased staff awareness of FASD and their associated central nervous system deficits would be beneficial to provide additional protection and services to this vulnerable group in correctional facilities (Burd, Fast, Conry, & Williams, 2010). Thus, a systematic survey that collected responses to view correctional systems preference of training methodologies was completed (Burd, Selfridge, Klug, & Juelson, 2003; Burd, Selfridge, Klug, & Bakko, 2004). It was found that the use of a manual and video were most preferred for training in correction systems (Burd, Selfridge, Klug, & Bakko, 2004).

Intervention strategies to manage FASD symptoms could be easily implemented with in-service training (Burd, Fast, Conry, & Williams, 2010). As stated above, resource guides are efficient in providing facilitators with access to current research and suggestions to implement certain strategies based on the client’s needs (Marshall, 2009). The development of a guide that focuses on offenders with FASD would be advantageous to correctional staff as training manuals are found to be most preferred by correction systems (Burd et al., 2004). In addition, correctional staff, particularly correctional program officers, are required to adhere to manualized programs (Correctional Service Canada, 2018). Therefore, the development of a guide would be most convenient for correctional staff as it encourages flexibility and will not intrude with the adherence to other manualized programs.

Advantages and Disadvantages of Clinical Manuals or Guides

McMurran and Duggan (2005) and Mann (2009) reviewed the literature that examined the benefits and arguments against manualization. The advantages that were consistent in the addition of a manual in clinical settings were increased treatment integrity, accessibility to staff training in evidence-based practices, and the ability to replicate treatments across different studies and facilitators (Schnyer & Allen, 2002; McMurran & Duggan, 2005; Mann, 2009). Disadvantages that were consistent include being overly rigid and treating clients with a standardized “one size fits all” approach, restricting the ability to use clinical judgment and therapeutic artistry, and the argument that manuals do not guarantee positive treatment outcomes (McMurran & Duggan, 2005; Mann, 2009). The listed advantages and disadvantages will be further discussed throughout this review to determine the effectiveness of manuals in clinical settings.

In general, the literature supports the use of manual-based training as an effective method to increase adherence to evidence-based techniques and treatment protocols (Markowitz, Spielman, Scarvalone, & Perry, 2000; Miller & Binder, 2002; Caligor, 2005). Treatment integrity refers to the degree to which the specific techniques are applied as intended by the theory and design of a particular treatment (Waltz, Addis, Koerner, & Jacobson, 1993; Caligor, 2005). Therapist adherence measures treatment integrity and ultimately promotes staff training by comparing and identifying whether the techniques were implemented as outlined by protocol (Caligor, 2005). Markowitz, Spielman, Scarvalone, and Perry (2002) examined therapist adherence after receiving manual-based training in cognitive behavioural therapy, interpersonal therapy, supportive psychotherapy only, and supportive therapy with the addition of imipramine. Results indicated that after receiving manualized training, therapists’ adherence to evidence-based techniques for all four interventions that were prescribed increased (Markowitz et al. 2002). Similarly, Shnyer and Allen (2002) reported that treatment manualization has shown
positive results in training practitioners in the research of complementary and alternative medicine. The authors found that the treatment manuals were effective in training staff, increasing interdisciplinary communication, and allowed critical evaluations of the outcomes of the study (Shnyer & Allen, 2002).

McMurran and Duggan (2005) report that manuals can be used as a framework in training both experienced and less experienced practitioners of new treatments or strategies while simultaneously decreasing the risk of impairing treatment integrity by staff turnover. These results complement the findings that manuals can increase treatment integrity, promote staff training, and provide practitioners with evidence-based practice (Markowitz et al. 2002; Schnyer & Allen, 2002; McMurran & Duggan, 2005; Mann, 2009). However, studies have also demonstrated contrary findings regarding the application of manualized training (Henry, Strupp, Butler, Schacht, & Binder, 1993; Miller & Binder, 2002).

In a study conducted by Henry, Strupp, Butler, Schacht, & Binder (1993), therapists who received manualized training in time-limited dynamic psychotherapy exhibited counteractive effects by increasing undesirable behaviours and decreasing the therapists’ warmth and friendliness towards the client (Henry et al., 1993; as cited in Miller & Binder, 2002). However, the results of this study may have been influenced by the small sample size as only two therapists were involved in this study (Henry et al., 1993). Miller and Binder (2002) reviewed this study and suggested that further training could have reversed this effect by integrating new learning content and skills to their existing repertoires (Miller & Binder, 2002). However, the idea that manuals affect the therapeutic process and style is a dominating concern by researchers (McMurran & Duggan, 2005; Mann, 2009; Marshall, 2009; Kächele, 2013).

In a more current study, Marques, Wiederanders, Day, Nelson, and van Ommeren (2005) implemented the manualized treatment program known as the Sex Offender Treatment and Evaluation Project (SOTEP). The authors found that the use of highly structured manuals had a negative impact on the ability to have an individualized approach, implementing the treatment in an empathetic and warm manner, and addressing the features of a group climate when implementing a manualized treatment. When the authors questioned this, it was found that their highly structured therapeutic approach restricted them to work more intensively with those who needed extra support and the ability to provide extra sessions to practice coping skills (Marques et al., 2005). Additionally, the authors believed that there should have been a treatment readiness phase to address the participants’ motivation to change which was found to have negative effect on their engagement in the program (Marques et al., 2005). Mann (2000) reported that relapse prevention will not be successful if the client is not motivated to participate in the treatment program and accept its proposed goals, model of change, and methods (as cited in Marques et al., 2005). These findings highlight practitioners concerns regarding highly structured manuals and the consequences of impairing therapists’ ability to be flexible in their approach and attend to individualizes needs of clients.

Similarly, Marshall (2009) reviewed the clinical issues that are associated with the use of manuals and claimed that they impair the therapeutic relationship between a therapist and a client, negatively impact the therapeutic style of practitioners, and reduce the likelihood of positive treatment outcomes. Marshall et al. (2003) found that features of a therapist such as warmth, empathy, reinforcement, and being directive influenced 30% to 60% on the advancements of treatment targets making therapeutic style especially important. However,
Marshall (2009) reported that characteristics of the therapist are more evident and influential in treatments with sexual offenders in comparison to non-criminal disorders.

In response to these critics, some authors have challenged the belief that manuals are too rigid by identifying ways to successfully implement manualized treatments while remaining flexible and attending to the individualized needs of the client (Schnyer & Allen, 2002; Gibbons, Crits-Christoph, Levinson, & Barber, 2003; Goebel-Fabbri, Fikkan, & Franko, 2003; Addis & Cardemil, 2006). Gibbons, Crits-Christoph, Levinson, and Barber (2003) examined variables that were relevant to the responsiveness of the therapist to view if flexibility was achievable in two manual-guided treatments. Cognitive-behavioural therapy (CBT) and interpersonal therapy (IPT) were implemented in the treatment of major depression. Therapist responsiveness was measured by utilizing specific interventions or techniques in response to characteristics that were relevant to the client (Gibbons et al., 2003). Results showed that therapists were able to maintain flexibility in treatment and implemented more therapeutic techniques (Gibbons et al., 2003).

For example, the therapists were significantly more responsive to providing clients with learning statements that were designed to uncover the origins of their thoughts, emotions, and behaviours (Gibbons et al., 2003). In addition, evidence demonstrated that therapists facilitating both CBT and IPT groups elicited more questions to clarify information with clients who exhibited heightened levels of depression, controlled the effects associated with interpersonal issues when they arose, enhanced their interpersonal involvement, and demonstrated empathy while facilitating (Gibbons et al., 2003). Addis, Hatgis, Soysa, Zaslavsky, and Bourne (1999) looked at the importance of clinical flexibility and suggested that the goal of manualized treatments are for therapists to be creative and consider multiple techniques that could be utilized to meet the client needs and have flexibility in their approach. McMurran and Duggan (2005) suggest that practitioners implement a collaborative approach with clients by reviewing the session format and identifying which problems should be targeted in treatment.

Overall, the results of these studies provide some evidence that manuals can be used to train therapists to adhere to manualized treatments while also maintaining flexibility in their approach and attending to the responsivity of the client. In addition, the results show that manualized treatments can be beneficial in strengthening therapeutic skills and building one’s repertoire in service delivery (Miller & Binder, 2002; Gibbons et al., 2003).

Practitioner’s Attitudes and Knowledge of Manuals

Baumann, Kolko, Collins, and Herschell (2006) sought to describe the characteristics and skills that were relevant to training and the use of evidence-based practices in community practitioners. Through the use of group discussions and three different self-report questionnaires, the practitioner’s perspectives and attitudes towards the use of manuals in clinical settings were examined. In addition, they also examined background characteristics, common intervention techniques, and work environments (Baumann, Kolko, Collins, & Herschell, 2006).

In terms of treatment manualization, there were few reports of utilizing manuals in clinical settings; however, many of the practitioners acknowledged the importance in its purpose (Baumann et al., 2006). The authors reported that similar to previous studies with psychologists (Addis & Krasnow, 2000) practitioners elicited both positive and negative opinions pertaining to the use of manuals. Attitudes towards manualized treatments were more prevalent than the practitioners’ experience in using manuals or guides in clinical settings (Baumann et al., 2006).
The authors reported that practitioners may not be aware of the different types of manuals that are offered or have had limited exposure to using manuals (Baumann et al., 2006).

The participants that were involved in this study were provided with five different treatment manuals and completed a questionnaire that assessed the probability and usefulness of using manuals in clinical settings. The five manuals differed from one another based on the recipient of therapy (child or parent) and therapeutic intervention including cognitive behaviour therapy, anger management, and parent training (Beaumann et al., 2006).

Results indicated that over 60% expressed that all five manuals were important to use in the provision of services and approximately half of the group reported using them while implementing treatments (Baumann et al., 2006). In addition, 97% of the sample disclosed that at least one of the five manuals were “somewhat” or “very important” to incorporate into treatment (Baumann et al., 2006). Similarly, Addis and Cardemil (2006) argued that there are misunderstandings among practitioners in regards to the purpose and function of treatment manuals or guides. The authors report that manuals are stereotyped as being highly structured or rigid and practitioners dismiss their importance due to the belief that they impair therapist skill, creativity, and responsiveness to the client (Addis & Cardemil, 2006).

Furthermore, Addis and Krasnow (2000) developed a survey to collect data on practitioners’ attitudes and knowledge of manuals in terms of their content and purpose in clinical settings. Similar to the findings of Baumann et al. (2006), results demonstrated that practitioners’ attitudes and beliefs towards manuals were more prevalent than their actual knowledge and experience in utilizing them (Addis & Krasnow, 2000). Approximately one-third of the respondents reported that they were very (9%) or somewhat unclear (29%) of what manualized treatments contain and almost half (49%) reported that they never use manuals in clinical settings (Addis & Krasnow, 2000). In addition, the authors also reported that 23% of respondents would not use a manual and 29% have considered using them in clinical practice (Addis & Krasnow, 2000). When evaluating how many practitioners have developed a manualized treatment, only 16% of respondents have had experience and 66% reported that they do not do research in their clinical work (Addis & Krasnow, 2000). This finding relates back to the advantage of accessibility to staff training and evidence-based practice. Being that the practitioners did not have experience in developing or conducting their own research in the treatments that they administer (Addis & Krasnow, 2000), it would be beneficial to have a tool that can measure their adherence to treatment protocol.

In support of manualized strategies, Addis and Cardemil (2006) have indicated that manuals are effective in providing details regarding the structural and conceptual boundaries of certain therapies. This would provide guidance and restrictions to certain therapeutic strategies that have shown to be helpful or avoided in treatment. Additionally, the authors found that manuals are useful in training practitioners with empirically-based psychotherapies and does not impact therapist artistry when implemented properly. However, the misunderstandings and attitudes that practitioners have towards the use of manuals could restrict opportunities to gain experience in implementing or developing manualized treatments (Addis & Krasnow, 2000; Addis & Cardemil, 2006; Baumann et al., 2006). The outcomes of not using manuals in clinical practice can limit opportunities to train staff and ultimately strengthen their therapeutic skills. Additionally, limited access to manualized treatments can threaten treatment integrity as practitioners are unable to reflect and measure whether they were adhering to treatment protocols or not.
Use of Manuals and Guides in Corrections

According to the Government of Canada (2018), the Commissioner’s Directives state that correctional programs must adhere to certain policies, acts, and regulations to ensure that offenders are receiving efficient programming to promote rehabilitation and reintegration into the community. All staff who are involved in the development and facilitation of correctional programs must follow practice directives by adhering to user guides, manuals, guidelines, and frameworks that are provided to them (Correctional Service Canada, 2018). Adherence to these practice directives is reported to enhance the effectiveness of correctional programs by ensuring treatment integrity and respect to individual differences. There are manualized programs with different streams to target different population of offenders including those who identify as Aboriginal or who demonstrate specialized mental health needs (Correctional Service Canada, 2018). The literature also supports the use of manuals in correctional programming (Andrews & Bonta, 2003; Lowenkamp, Latessa, & Smith, 2006; Mann, 2009; Wright, Pratt, Lowenkamp, & Latessa, 2013). Mann (2009) reports that individuals who work with incarcerated offenders are frequently exposed to many daily challenges that can interfere with program delivery and adherence to treatment protocol. The addition of a manual can help address and manage these challenges (Mann, 2009). It has also been documented throughout correctional literature that there is a clear relationship with program integrity and treatment effectiveness (Lowenkamp et al., 2006). Lowenkamp, Latessa, and Smith (2006) found that treatment integrity was correlated with decreased rates of recidivism among a sample of 3,237 offenders over the course of a two-year period. It was also noted throughout correctional literature that manuals are effective in focusing on the criminogenic needs of offenders by targeting pre-determined goals and outcomes (Mann, 2009).

Furthermore, Andrews and Bonta (2003) identified six core features for effective rehabilitation in correctional programming. These six features include the use of cognitive-behavioural strategies, being manual-based, highly structured in identifying objectives for each session, facilitated by trained and qualified professionals, delivered as intended, and supportive of rehabilitation (Andrews & Bonta, 2003). However, there are authors that will challenge this theory and believe that manuals have a negative influence on treatments that are offered to offenders (Marshall, 2009).

Principles that are imperative to attend to in correctional programming include the issues associated with the risk, needs, and responsivity of the client. Evidence-based treatment programs that adhere to the risk, need, and responsivity principle (RNR) have proven to reduce criminal recidivism and are implemented in all correctional settings (Bonta & Andrews, 2007). Currently, there is a demand for sensitivity to the responsivity principle, which entails that treatment must be adjusted in order to attend to the unique and diverse features of each offender (Marshall, 2009). However, highly structured manuals are believed to inhibit the flexibility of attending to the individualized needs of the client (McMurran & Duggan, 2005; Marshall, 2009; Kächele, 2013). Marshall (2009) reports that because manuals restrict this ability, the behaviours that are targeted in programming will not be reduced. However, as previously noted, authors have provided evidence that facilitators can adhere to manualized treatments while remaining flexible and allowing clinical judgement in their approach. Ultimately, it comes down to the therapists’ competence to balance and manage their adherence to technical procedures while utilizing their experience and skills to maintain flexibility.
Conclusion

There is a considerable amount of mixed findings in relation to the effectiveness of manuals in clinical practice. Debates on its effectiveness have been ongoing and Marshall (2009) reports that these debates can be combative. Carey (2004) states that the use of manuals in clinical practice is “fundamentally insane” (p. 1) while other researchers such as Tavris (2003) declare that therapists’ objections to gaining experience and utilizing manualized treatments is ignorant and stubborn (as cited in Marshall, 2009). When reviewing the literature, it is apparent that there are both advantages and limitations in the use of manualized treatments. However, adherence to evidence-based practice is especially important when implementing correctional programs to offenders (Andrews & Bonta, 2003; Lowenkamp, Latessa, & Smith, 2006; Mann, 2009; Wright, Pratt, Lowenkamp, & Latessa, 2013) Correctional staff have experience in utilizing manualized treatments as it is a core ingredient in correctional programming to ensure treatment integrity (Andrews & Bonta, 2003). Therefore, the addition of a resource guide outlining specific strategies that could be used in programming could be beneficial to staff as they already have extensive knowledge with receiving training and adhering to manualized treatments.

When taking the correctional literature into consideration and the ability to train staff on technical strategies through the use of guides, it is hypothesized that the development of a research guide may be beneficial to correctional program officers. The guide will highlight relevant information pertaining to the identification and management of FASD in correctional programming. Guides are an efficient method to outline research and provide suggestions for therapeutic strategies while remaining flexible in its approach (Marshall, 2009). Therefore, it may increase staff awareness of this disability and be used as a tool to assist in the management of FASD symptoms in correctional programming. In addition, the content and organizational aspects of the guide are hypothesized to generate positive results on the evaluation surveys as it is developed in a way that is user-friendly and simple to apply while adhering to other manualized programs.
Chapter III: Method

Setting

This project was implemented at a maximum-security institution that houses adult male offenders serving federal sentences. The programs department at this correctional facility use cognitive-behavioural based programming to identify offenders’ potential risks in the community to build skills that are essential to their rehabilitation.

Facilitator

A fourth-year Behavioural Psychology student developed a resource guide and facilitated a presentation.

Participants

No participants were involved in the creation or implementation of the selected strategies that were outlined in the resource guide. Correctional program officers, who are currently employed at the correctional institution, are the intended users of the guide and attended the presentation. They have experience with implementing correctional programs and have varying educational backgrounds in mental health, behavioural sciences, and criminology.

Informed Consent

A consent form (Appendix A) was distributed to outline the important aspects of participation and provided a detailed explanation of how confidentiality will be maintained. As the original consent forms do not have permission to leave the facility, a verification letter (Appendix B) was signed by the Correctional Program Manager to verify that informed consent was obtained. The signed consent forms will be stored at the institution for 10 years. The consent forms will then be destroyed accordingly following the 10-years.

Measures

Manual evaluation survey. The Manual Evaluation Survey (Appendix C) survey is comprised of six questions and was rated using a 5-point Likert scale ranging from 1 (needs improvement) to 5 (strongly agree). Likert scales are effective in collecting individualized responses, which are useful when evaluating the quality of information that is being presented due to varying opinions, educational backgrounds, and perspectives. The purpose of the survey was to determine if the guide was user-friendly by evaluating whether the content was relevant, educational, and easily understood by readers. In addition, the organizational components of the guide were evaluated by assessing the readability of the font, whether the chapters were sequenced appropriately, and if the content was organized strategically for easy reading and navigation.

Presentation evaluation survey. The Presentation Evaluation Survey (Appendix D) is comprised of five questions that evaluated the student’s ability to present the information in a public forum. Participants evaluated the presentation in terms of the speaker’s volume, eye contact, organizational skills, and ability to deliver the information in an educational manner. Participants were asked to rate each question on a 5-point Likert scale ranging from 1 (needs improvement) to 5 (strongly agree).
Apparatus

This project required the resource guide (Appendix E), the evaluation surveys, pens to record answers on the surveys, and a projector to display the information for the student presentation. The participants were provided a physical copy of the guide as well as an electronic copy for easy accessibility. In addition, the participants were given hard copies of the PowerPoint slides (Appendix F) from the student presentation that outlined the information that was being conferred.

Design

The research design is non-experimental as no variables were manipulated. The collected data was derived from participants’ responses to the Manual Evaluation Survey and the Presentation Evaluation Survey. The two surveys were collected and interpreted by the Behavioural Psychology student to determine if the guide was user-friendly. The guide can be considered user-friendly if responses from the surveys are rated as 4 or more on the Likert scale. This would indicate that the intended users “agreed” or “strongly agreed” with the series of statements that evaluated the content and organizational aspects of both the manual and student presentation. Therefore, if respondents circled 3 or less on the Likert scale when responding to the series of statements, it can be presumed that the guide would need revision to strengthen the areas that would need improvement.

Procedure

Development of the resource guide. The first chapter of the guide includes an introduction to FASD by outlining the effects of FASD, the problems associated with diagnosis, FASD prevalence rates, and the risks that are involved for developing secondary disabilities. The second chapter identifies symptoms and provides checklists to assist facilitators with organizing their observations of the client’s strengths and their impairments that require extra support. The third chapter provides general strategies that have been found to manage symptoms in a learning environment. The correctional program officers adhere to manualized programs and would need strategies that are flexible and easy to implement. Therefore, the strategies were retrieved from a variety of books and empirical articles that focused their attention on managing FASD symptoms with children and youth in a classroom environment. The programs are delivered in a classroom-style environment where they are teaching skills such as how to cope with stress, increase interpersonal skills, and develop achievable goals. The strategies that were outlined are general and could be applicable in correctional programming as they share similar environments.

Informed consent. Prior to receiving access to the resource guide, informed consent was obtained from each participant.

Signed verification letter. A verification letter was signed by the Corrections Program Manager to verify that informed consent was obtained.

Manual evaluation survey. After receiving consent, the correctional program officers were given a hard copy of the Manual Evaluation Survey. The student encouraged participants to read the survey before navigating through the manual in order to be aware of the content and organizational aspects that were being evaluated. Participants were provided with an electronic copy of the resource guide. A hard copy of the guide was also accessible if participants preferred to read the guide manually. The guide was provided to participants one-week before attending
the presentation. The reason for this was to ensure that participants had enough time to read and evaluate the guide while also having the information recently in their memory. Participants returned the evaluation surveys once they finished reading the guide.

**Development of the student presentation.** The student presentation is an overview of the chapters in the guide. Throughout the presentation, prompts were provided for group discussions and specific examples were given when identifying symptoms and possible strategies that could be implemented during correctional programming. The purpose of the presentation was to recapitulate the learning material in the guide, benefit those who prefer visual learning, and provide opportunities for questions or discussions.

**Presentation evaluation survey.** The date, time, and place for the presentation was selected and announced via email to the correctional program officers who agreed to participate. The presentation took place in a classroom that is assigned for correctional programs in the programs department. The participants were provided with a hardcopy of the PowerPoint slides, a pen, and the Presentation Evaluation Survey. Before commencing the presentation, the student encouraged participants to read the evaluation survey and complete it once the presentation had finished.

**Measures.** The participants evaluated the clarity, organization, and educational aspects of both the resource guide and student presentation. Based on their observations and interpretations of the information that was provided to them, they circled the statement that they agreed most with based on a 5-point Likert scale ranging from 1 (*needs improvement*) to 5 (*strongly agree*).

**Data interpretation.** The responses from each survey were collected and interpreted using descriptive statistics. Results are represented using descriptive statistics by calculating the frequency of responses that were in favour of a particular score and expressed through a statistical value. This would require calculating the sum of responses that were in agreement of a score for each statement and divided by the total number of respondents who completed each survey. Scores were then represented through a frequency distribution table to visually summarize results from each survey.
Chapter IV: Results

Supporting Information

Manual evaluation survey. Eight correctional program officers agreed to participate in the evaluation of a resource manual. Overall, the respondents selected responses on the survey that endorsed the resource guide as being user-friendly. When evaluating the content and organizational components of the resource guide, every respondent in the sample selected 4 (agree) or 5 (strongly agree) on the Likert scale for each statement question. This data indicates that the respondents either “agreed” or “strongly agreed” with the survey statements that examined characteristics of a user-friendly product.

When evaluating the content of the resource guide, the results revealed that 75% of the respondents were in strong agreement that the language was easy to understand. In regards to the topics that were covered, 87.5% of the respondents strongly agreed that the information was relevant and educational. The results also indicate that respondents rated the guide as an effective tool for providing readers with an overview of FASD by a 70% response rate.

The organizational components of the resource guide also produced positive results. When evaluating whether chapters were arranged in a logical manner, 87.5% of the respondents were in strong agreement with this statement. In addition, all respondents (100%) strongly agreed that the guide was simple to navigate throughout chapters.

The feasibility of the resource guide was also evaluated and 75% of the respondents strongly agreed that the strategies that were outlined could be easily implemented in correctional programs. These findings reveal positive results when evaluating the content, organization, and feasibility of a user-friendly product. The frequency of response rates for the Manual Evaluation Survey is presented in Table 1.
Table 1

Frequency of Scores for the Manual Evaluation Survey

<table>
<thead>
<tr>
<th>Survey Statement(s)</th>
<th>1 Strongly Disagree</th>
<th>2 Disagree</th>
<th>3 Neutral</th>
<th>4 Agree</th>
<th>5 Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The language was easy to understand</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Chapters are arranged in a logical manner.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Readers can easily navigate through chapters.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>The topics were relevant, focused, and informative.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>The guide provided readers with a good overview of the disability and how people are affected by it.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>The strategies could be easily implemented with guidance from the manual.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Overall, the resource guide could be a useful tool in educating viewers on:</th>
<th>1 Strongly Disagree</th>
<th>2 Disagree</th>
<th>3 Neutral</th>
<th>4 Agree</th>
<th>5 Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>FASD symptoms</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Strategies could be implemented</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>7</td>
</tr>
</tbody>
</table>

Presentation evaluation survey. Ten correctional program officers agreed to attend the student presentation and completed the Presentation Evaluation Survey. Overall, the feedback revealed positive results when evaluating the content and organizational components of the student presentation. Results indicate that 90% of the respondents were in strong agreement that the presenter maintained eye contact and spoke confidently about the material. In addition, 60% of the respondents strongly agreed that the presenter used examples and pictures to keep viewers engaged. With regard to the presenter’s knowledge of the subject, 90% of the respondents strongly agreed that the presenter appeared to be educated on the material that was being conferred.

The content of the student presentation also revealed positive results. When evaluating the topics that were covered in the presentation, 90% of the respondents were in strong agreement that the information was relevant and educational. Additionally, 70% of the respondents strongly agreed that the presenter provided explanations of possible strategies that...
could be implemented when working with a client who is suspected to have FASD. The results of the Presentation Evaluation Survey are presented in Table 2.

Table 2

*Frequency of Scores for the Presentation Evaluation Survey*

<table>
<thead>
<tr>
<th>Survey Statement(s)</th>
<th>1 Strongly Disagree</th>
<th>2 Disagree</th>
<th>3 Neutral</th>
<th>4 Agree</th>
<th>5 Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presenter maintained eye contact and spoke confidently.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Provided examples and pictures to keep viewers engaged.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Presenter was knowledgeable about the topic and answered questions.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Information was educational and topics were relevant.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>9</td>
</tr>
</tbody>
</table>

**Overall, the presentation could be a useful tool in educating viewers on:**

<table>
<thead>
<tr>
<th>Survey Statement(s)</th>
<th>1 Strongly Disagree</th>
<th>2 Disagree</th>
<th>3 Neutral</th>
<th>4 Agree</th>
<th>5 Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>An overview of FASD</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>FASD and the criminal justice system</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>FASD symptoms</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Strategies that could be implemented</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>7</td>
</tr>
</tbody>
</table>

**Changes to the Resource Guide**

Responses from the evaluation surveys revealed positive feedback regarding the content and organizational components of the resource guide. Therefore, there were relatively minor changes when finalizing the resource guide. Changes that were made to the resource guide were related to grammatical errors and APA formatting. In addition, footnotes were added with the corresponding reference to provide readers with resources for the information that was presented. No major changes were made to the content of the resource guide.

**Final Product**

The resource guide was developed as a tool for correctional program officers when facilitating programs with clients who exhibit behavioural symptoms that are common with alcohol-related disorders. The guide provides an overview of FASD research and common identifying symptoms that could be observed while facilitating programs. The guide also provides users with strategies that could be easily implemented during sessions. The population is targeted towards adult offenders with FASD and others who demonstrate similar deficits in
their cognitive, behavioural, or learning abilities. The resource guide and student presentation was implemented to increase staff awareness on working with offenders who are affected by FASD. The responses from both evaluation surveys were positive when evaluating the guide as a user-friendly product. The results from the evaluation survey report advantageous outcomes in using manualized training to increase staff awareness of current research.
Chapter V: Discussion

Summary

There is a gap in the literature on assessing, diagnosing, and managing FASD symptoms in adult populations. Research suggests higher prevalence rates of FASD among offender populations; however, receiving a diagnosis in adulthood is difficult and very unlikely. The absence of a diagnosis and the invisibility of the disorder can make it more difficult for staff to accommodate and provide support to offenders with FASD.

A systematic survey that collected responses to view correctional systems preference of training methodologies found that the use of a manual and video were most preferred (Burd, Selfridge, Klug, & Bakko, 2004). The literature suggests that guides are successful in increasing facilitators’ knowledge of empirically based strategies while also encouraging flexibility and individuality in their approach (Marshall, 2009). Therefore, a resource guide and student presentation was developed for correctional program officers to highlight current research on the biological, behavioural, and social variables of FASD.

The data from the Manual Evaluation Survey report positive results in the content, organization, and feasibility of the resource guide. The survey evaluated characteristics of a user-friendly product and there was strong agreement that the guide could be used as an effective tool to educate readers on FASD. These results indicate promising outcomes with the development and implementation of a manual in clinical settings.

Burd, Selfridge, Klug, and Bakko (2004) reported that individuals working in a correctional system also prefer a visual component or video when completing training. The purpose of the current presentation was to recapitulate the learning material in the guide, providing benefit to those who prefer visual learning, and provide opportunities for questions or discussions.

The feedback from both evaluation surveys report positive results when presenting evidence-based research through the use of a manual and presentation. Respondents endorsed statements that are reflective of a user-friendly product and were in strong agreement that the content was relevant and applicable. Although learning outcomes were not measured, respondents had the opportunity to use the resource guide as an educational tool. Frequently educating oneself in reference to evidence-based research can strengthen clinicians’ practice and promote professional growth. The information that was provided in the resource guide could be used to manage symptoms and provide support to clients who are suspected to have FASD.

Strengths

With regard to the resource guide, the readability and formatting is one of its greatest strengths. The resource guide was formatted using a textbook-style approach to organize the information methodically and to highlight important concepts. The intended users of the guide were in strong agreement that the chapters were arranged logically for easy navigation. In addition, the data suggest that the language was clear and appropriate for the intended users. The written language does not require advanced knowledge of psychological concepts and definitions are provided throughout the guide to assist with the comprehension of advanced vocabulary.

Additionally, the resource guide provides strategies that are easily applicable to other clients who demonstrate similar deficits in their cognitive or behavioural functioning. Clients commonly exhibit difficulties with behavioural management, learning, and memory. Facilitators
could use the listed strategies when a client is exhibiting similar difficulties, as the strategies can be generalized and applicable to a diverse set of clients.

Finally, as correctional program officers adhere to a manualized program, the resource guide demonstrates strengths in its feasibility. Providing enhanced support is difficult when there are flexibility restrictions in the facilitators’ approach. However, the intended users of the guide were in strong agreement that the symptom management strategies could be easily implemented while facilitating. The strategies were cautiously selected based on its ease of application, age appropriateness, and consideration of time restraints.

**Limitations**

Addressing the limitations of a research project provides other students or researchers with the ability to learn, expand, and improve from the initial design. The following analysis will outline the limitations that exist within the methods that were used for this thesis project.

The first limitation includes the minimal research that is available on assessing, diagnosing, and providing treatment to adults with FASD. There is a sufficient body of research in the medical community that examines the physical and physiological traits of FASD. However, the literature on the behavioural, cognitive, and psychological consequences of prenatal alcohol exposure is scarce. Currently, a majority of FASD research in the social sciences are tailored towards children and youth in educational or home settings. The gaps in the literature place constraints on the external validity by having to generalize the findings to adult populations.

Secondly, the project did not measure the respondents’ learning outcomes, which places threats to the internal validity of the research project. It cannot be concluded that knowledge or skills were increased amongst staff; therefore, the addition of a manual having advantageous outcomes in a clinical setting cannot be verified. In addition, the strategies that were outlined in the resource guide are suggestions for application and have not been implemented with clients to determine their effectiveness. Reading the material and evaluating the characteristics of a user-friendly product does not measure adherence, application, or effectiveness of the resource guide. The intended use of the resource guide is to apply the knowledge and proposed procedures to clients who are suspected to have FASD. However, when respondents are evaluating the quality of the manual, it may not reinforce the intended use and application of procedures.

The final limitation is the small sample size that participated in the evaluation of the resource guide and student presentation. The selection procedures involved one department at the correctional institution; however, recruiting participants from different departments could have increased the reliability of the responses. Receiving responses from different educational backgrounds and having a larger sample size would provide more data and be more reflective of the level of agreement for each survey statement. A larger sample size generates more reliable data and would strengthen the external validity of the research project.

**Multilevel Challenges**

There are a multitude of challenges that can arise when developing a research manual. Barriers are always present when conducting research and it is important to use a holistic approach by examining challenges that are present at the client, program, organizational, and societal level of any intervention or product. Therefore, the following analysis will provide an explanation of the multilevel challenges that had an impact on this research project.
Beginning with the client level, challenges can arise when a manualized program is not tailored to the client’s current level of functioning. The symptom management strategies that are outlined in the resource guide have potential to enhance support and learning outcomes with offenders who are suspected to have FASD. However, specialized or individual treatment programs may be more effective for this population. This resource guide may be effective in listing strategies that could manage FASD symptoms however; it does not intervene on the neurodevelopmental needs of this population. Clients should be receiving the best form of treatment and if there are limited resources, it can create complications for the individual and facilitator.

At the program level, restrictions in time and application diminish opportunities to intervene and support individuals with specialized needs. Since correctional program officers adhere to manualized programs, there are restrictions on the facilitator’s ability to apply additional support. Applying additional support to a particular client can distract the facilitator from attending to the needs of other group members. This can have problematic consequences on the program delivery and learning outcomes of the group.

From the organization level, funding and resources are limited to address the needs of FASD in correctional facilities. There are plenty of services that are offered to the offender population; however, when research and funding are limited, it becomes more difficult to initiate solutions. The research suggests that a multidisciplinary team is typically required to achieve an FASD diagnosis and recommendations for treatment but multidisciplinary teams and obtaining the necessary technology can be costly. In addition, there are many factors that interfere with the ability to achieve an FASD diagnosis in adulthood. If the organization cannot obtain a diagnosis or identify an appropriate treatment plan for a client, the individual may not benefit from programs or other services that are offered to them.

Finally, at the societal level, the lack of public awareness and research creates barriers for individuals with FASD to receive treatment and manage their primary disability. Obtaining a diagnosis typically requires various cognitive assessments and a multidisciplinary team. These requirements can be costly and interfere with an individual’s ability to receive treatment and reduce their risk of developing secondary disabilities. Secondary disabilities include homelessness, incarceration, substance abuse, and school disruption. These secondary disabilities can have a significant impact on the individual’s quality of life however, communities and the economy also face consequences. Increasing the accessibility to diagnostic services and behavioural interventions can have positive outcomes and reduce the likelihood of these secondary disabilities.

**Recommendations for Future Research**

There is a significant need for FASD research in the social science field. Having a greater understanding of the behavioural, cognitive, and psychological consequences of prenatal alcohol exposure may increase the likelihood of effective treatment programs for the adult population in the community and institutionally. Currently, researchers are recommending further investigation in developing validated screening tools and behavioural interventions for adults with FASD. Increasing awareness and resources for individuals who are affected by an alcohol-related disorder can help to reduce the development of secondary disabilities. If services that specifically focused on offenders with FASD were available, it may reduce recidivism rates and improve their quality of life.
In terms of developing and implementing a manual in clinical settings, further research could focus on measuring staff learning outcomes, application, and the likelihood of using the manual in the future. The resource guide was evaluated based on its content and structure; however, this information does not provide results on the effectiveness of manualized training. Conducting future research on the application of manualized training could provide useful information to the literature as findings in terms of its effectiveness are mixed.

**Contributions to the Field of Behavioural Psychology**

Public awareness of FASD is increasing and researchers have acknowledged the importance in identifying methods to diagnose and manage symptoms of alcohol-related disorders. Highlighting the demand for additional research provides others with opportunities to explore various gaps in the literature and propose possible solutions. This project contributes to the field of behavioural psychology by identifying a group of individuals who would benefit from the implementation of behavioural interventions. Currently, there is an insufficient collection of research for this disorder in the social sciences. The resource guide that was developed for this project provided its readers with a good overview of the research that has been published to date. Students who are in the Behavioural Psychology program can benefit from the information that was provided in this thesis and can expand, improve, or generate new ideas that attends to the needs of individuals who are affected by FASD.
References


Appendix A: Consent Form

**Project Title:** Managing Symptoms in Adult Male Offenders with Fetal Alcohol Syndrome: A Resource Manual for Correctional Program Officers  
**Principal Investigator:** Stephany Bathurst  
**College Supervisor:** Lana Di Fazio  
**Placement Supervisor:**  
**Name of Institution:** St. Lawrence College  
**Name of Institution/Agency:**  

**Invitation**

You are invited to participate in the evaluation of an educational manual and presentation on Fetal Alcohol Spectrum Disorders (FASD). I am a fourth-year student in the Behavioural Psychology program at St. Lawrence College and am currently placed at Millhaven Institution. As part of this placement experience, I am required to complete a research project and would like to ask for your help to complete it. The information below will help you to understand your involvement in this project and how confidentiality will be maintained.

**Why is this project being done?**

My project will involve the development of a manual that provides an overview of Fetal Alcohol Spectrum Disorders and cognitive-based strategies to assist with symptom management. This population is at high risk to be involved in the criminal justice system and have high prevalence rates in correctional institutions. It is likely that one of you has or will work with a client who is affected by FASD. Therefore, a resource manual outlining evidence-based research on FASD was developed to spread awareness of this disability and provide strategies to manage symptoms while implementing correctional programs.

**What will you need to do if you take part?**

If you choose to take part in this project, you will be asked to evaluate a resource manual and student presentation through two different surveys. You will be provided the manual electronically and the first survey will ask questions pertaining to the content and organizational aspects of the information that was provided to you. You will also be asked to participate and in the evaluation of a student presentation. This presentation will outline information in the manual and provide opportunities for questions and group discussions. You will then be asked to fill out another survey that will ask questions relating to the speaker and content.

**What are the potential benefits of participating?**

The potential benefits of participating in this project may include learning useful strategies that could be used when implementing programs and providing services to individuals with specialized needs. In addition, you will contribute to improving the manual by providing feedback through the surveys. The presentation feedback can also provide valuable information to continue my skill development.
What are the potential benefits to others?
Information from this project may be used to manage behavioural symptoms displayed by individuals who display symptoms associated with FASD and possibly contribute to their performance in programs.

What happens if something goes wrong?
It is unlikely that you will experience any negative outcomes; however, if you feel like something is troubling you at any point in this process, please speak with your programs manager or myself to find helpful resolutions.

Will the information you collect from me in this project be kept private?
Completions of surveys are optional and anonymous therefore, no names or other forms of identification will be used for this project. However, because it is anonymous, once you have completed the surveys, your responses cannot be withdrawn. The results from the project will be made available at the St. Lawrence College library with the potential of it being published in professional journals or conferences but will not breach individual confidentiality. Informed Consent Forms will be stored securely at your employment site for 10 years and will thereafter, be shredded.

Do you have to take part?
Your participation is completely voluntary and it is up to your discretion if you would like to take part in this project. If you do decide to participate, you will be asked to sign a consent form. At any time, should you change your mind, you can stop participating without providing any explanations.

Contact for further information
The project was developed under the supervision of Lana Di Fazio, my supervisor from St. Lawrence College. I appreciate your interest in participating in my project and if you have any questions please feel free to contact me, Stephany Bathurst, at SBathurst14@student.sl.on.ca or my College Supervisor, Lana Di Fazio, at LDiFazio@sl.on.ca. If you have concerns about the way this research is being conducted or about your rights as a participant you may contact the St. Lawrence College Research Ethics Board (SLC-REB) Chair at reb@sl.on.ca.
Consent

If you agree to take part in this research project, please complete the following form and return it to me as soon as possible. A copy of this signed document will be given to you for your own records. The original will be retained at the agency.

By signing this form, I agree that:

☐ The study has been explained to me.
☐ All my questions were answered.
☐ Possible harm and discomfords and possible benefits (if any) of this study have been explained to me.
☐ I understand that I have the right not to participate and the right to stop at any time.
☐ I am free now, and in the future, to ask any questions I have about the study.
☐ I have been told that my personal information will be kept confidential.
☐ I understand that no information that would identify me will be released or printed without asking me first.
☐ I understand that I will receive a signed copy of this consent form.
☐ I understand that the data from this study will be presented at the St. Lawrence College Behavioural Psychology Poster Gala, and may be reported at other conferences or published in a scientific journal. No identifying information will be included in these reports. I hereby consent to take part.

<table>
<thead>
<tr>
<th>Participant Name</th>
<th>Signature of Participant</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Student Printed Name</th>
<th>Signature of Student</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix B: Verification Letter

This letter is to confirm that written consent was obtained by Stephany Bathurst, a Behavioural Psychology student at St. Lawrence College, to implement a program/project. The program was approved by [REDACTED], her agency supervisor, and Lana Di Fazio, her college supervisor. The written consent explained the details of the program/intervention, including the risks and benefits of participating. Staff signed the consent forms on December 3rd, 2018.

The consent forms will be kept in a locked storage cabinet at the Institution for a minimum of 10 years according to the professional standard.

<table>
<thead>
<tr>
<th>Student Name (Printed)</th>
<th>Student Signature</th>
<th>Date</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Agency Supervisor Name (Printed)</th>
<th>Agency Supervisor Signature</th>
<th>Date</th>
</tr>
</thead>
</table>
Appendix C: Manual Evaluation Survey

**Instructions:** Please circle the number that best reflects your opinion of each statement listed below.

1. The language used in the manual was easy to understand

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Needs Improvement</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

2. Chapters are arranged in a logical manner

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Needs Improvement</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

3. The topics that were covered were relevant, focused, and informative

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Needs Improvement</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

4. The Introduction to FASD provided readers with a good overview of the disability and how people are affected by it

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Needs Improvement</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
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</table>

5. The strategies that were outlined were explained thoroughly and could be easily implemented with guidance from the manual

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6. The language used in the manual was easy to understand

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</table>
7. Overall, the manual can be used as an effective tool in educating readers on:

<table>
<thead>
<tr>
<th>Identifying FASD Symptomology</th>
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<td>Strongly Agree</td>
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Appendix D: Presentation Evaluation Survey

Instructions: Please circle the number that best reflects your opinion of each statement listed below.

1. **The presenter maintained eye-contact and spoke confidently about the material**

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<tr>
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<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
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</tbody>
</table>

2. **The presenter used examples and pictures to keep viewers engaged**

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<tr>
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<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
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3. **The presenter involved viewers by asking questions or initiating group discussions**

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<tr>
<td>Needs Improvement</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
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4. **The information presented was educational and the selected topics were relevant**

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</tbody>
</table>

5. Overall, the presentation could be used to educate viewers on:

<table>
<thead>
<tr>
<th>Fetal Alcohol Spectrum Disorders</th>
<th>Needs improvement</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<td>Strongly Agree</td>
</tr>
<tr>
<td>Strength-based Interventions</td>
<td>Needs improvement</td>
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<td>3</td>
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<td>5</td>
<td>Strongly Agree</td>
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</tbody>
</table>
Appendix E: Final Product of Resource Guide
Appendix F: Final Product of Student Presentation

Fetal Alcohol Spectrum Disorders

Presentation by: Stephanie Bathurst

Introduction

The topics that are going to be covered in this presentation include:
1. Basic information of Fetal Alcohol Spectrum Disorders
2. Common identifying symptoms
3. General strategies that can be used to support their learning needs in programming.

What are Fetal Alcohol Spectrum Disorders?

- Fetal Alcohol Spectrum Disorder (FASD) is an umbrella term that is used to describe the varying effects that can occur in an individual who has been prenatally exposed to alcohol.
- These effects can range from mild to severe and may include physical, mental, behavioural, and/or learning disabilities.
- It is important to understand that FASD is a brain-based disability that will affect each client differently.

FASD Diagnoses

Medical diagnoses that fall under the FASD umbrella term include:
- Fetal Alcohol Syndrome (FAS)
- Partial Fetal Alcohol Syndrome (pFAS)
- Alcohol Related Neurobehavioural Disorder (ARND)

The psychiatric diagnosis is known as:
- Neurobehavioural Disorder Associated with Prenatal Alcohol Exposure

These diagnoses differ based on the presence or absence of sentinel facial features and the confirmation of prenatal alcohol exposure.

Fetal Alcohol Syndrome (FAS)

Criteria for Diagnosis:
Three sentinel facial features must be present:
1. Shortened eye openings
2. Smooth or flattened philtrum (which is the groove under your nose)
3. Thin upper lip.
Fetal Alcohol Syndrome (cont.)

Criteria for Diagnosis:

At least 2 of 10 brain domains need to show significant impairment.

The 10 brain domains that are assessed include:

- Neuroanatomy/neurophysiology
- Motor skills
- Cognition
- Executive functioning
- Language
- Memory
- Academic achievement
- Attention
- Affect regulation
- Adaptive behavior/social skills/social communication

Fetal Alcohol Syndrome (cont.)

Finally, there needs to be reliable evidence that the individual was prenatally exposed to alcohol. Typically, this requires confirmation from the mother.

However, with this particular diagnosis, if the 3 facial features are present in a severe way, the diagnosis can be made without the confirmation of prenatal alcohol exposure.

It is important to note that FAS is the more severe end of the FASD spectrum and is relatively rare.

In a survey that received responses from Canadian FASD diagnostic clinics, only 2.1% of the individuals assessed received a diagnosis of FAS.

FASD Without Sentinel Facial Features

- Partial Fetal Alcohol Syndrome (pFAS)
- Alcohol Related Neurobehavioral Disorder (ARND)
- Neurobehavioral Disorder Associated with Prenatal Alcohol Exposure (ND-PAE)

FASD Without Sentinel Facial Features:

2, 1, or none of the distinct facial features are present.

According to the literature, the majority of the individuals do not show any of the facial features. This can explain why FASD is known as an indivisible disability.

It is important to note that the facial features do not reflect the degree of brain damage.

As with the first diagnosis, at least 3 of the 10 brain domains must be impacted in a significant way.

And finally, with this diagnosis, there needs to be reliable evidence of alcohol exposure during pregnancy.

Primary and Secondary Disabilities

Common Primary Disabilities

Conditions that the individual is born with as a result of prenatal alcohol exposure causing brain damage. Primary disabilities may include:

- Cognitive functioning
- Social skills
- Health conditions
- Learning disabilities
- Attention/hyperactivity
- Motor skills

What’s really happening...

is not always obvious on the surface.
Primary and Secondary Disabilities

Common Secondary Disabilities

The absence of a clinical diagnosis and enhanced support increases the likelihood that individuals with FASD will develop secondary conditions. These problems may arise due to lack of support and behavioral interventions to manage the primary conditions. Secondary disabilities may include:

- Homelessness
- Behavioral problems
- Incarceration
- Mental health problems
- Substance abuse
- Difficulty with managing daily tasks
- Disrupted school experiences
- Difficulties maintaining employment
- Lack of positive support - friends

Prevalence in the Canadian Criminal Justice System

Involvement in the criminal justice system is experienced by many people with FASD.

- Researchers have found that youth with FASD are 19 times more likely to be incarcerated than youth who are not impacted by an alcohol-related disability.
- Additionally, among a sample of 253 participants with FASD, it has been reported that 60% had contact with the law and 42% had been incarcerated at some point for a crime.
- The estimated prevalence of Canadian offenders with FASD is 11-23% for youth and 10-18% for adults.

As mentioned earlier, FASD is a brain-based disorder.

Through the use of brain-imaging studies, researchers have found that individuals with FASD have notable differences in their brain structure and functioning.

- Structural abnormalities are correlated with impairments in cognitive functioning.
- Functional imaging studies have detected many differences in the active brain in relation to memory, learning, and inhibitory control.

Central Nervous Dysfunction

- Microcephaly (Small Brain Size)
- Tremors
- Seizures
- Hypersensitivity
- Attention Deficits
- Gross Motor Difficulties
- Fine Motor Difficulties
- Learning Disabilities
- Developmental Delays
- Executive Dysfunction
- Intellectual Disabilities
- Sensory Integration Difficulties
- Memory Difficulties
- Difficulty Processing Information
- Impulsivity
- Distractibility
- Difficulty with Abstraction
- Difficulty Understanding Consequences

Why?
Symptoms: Cognitive Functioning

**Cognitive Functioning:** mental processes that lead to learning and acquiring information; involves perception, thinking, reasoning, and remembering.

**Symptoms:**

- **Intellectual Ability:**
  - Decreased IQ in children and adults with FASD.
  - Deficits in both verbal and performance aspects.
  - IQ scores can range from severe intellectual disability to average.

- **Attention:**
  - Significant deficits in sustained and focused attention.
  - Slower information processing speed.
  - Hyperactivity.
  - Being easily distracted by environmental factors (sounds, smells, movements, visuals).
  - Adapting to change or transitions.

- **Executive Functioning:**
  - Have difficulties understanding the consequences to their actions and learning from previous mistakes, making them vulnerable to high-risk behaviors and to poor adaptation to societal expectations.
  - Demonstrates deficits in problem solving and reasoning.
  - Poor judgment skills or vigilance (lacks awareness of possible dangers or difficulties).

- **Language:**
  - Delayed language development.
  - Expressive and receptive language.

- **Learning and Memory:**
  - Slower at learning; deficits in long-term, short-term, and working memory.
  - Deficits in both visual and verbal memory tasks.
  - Recalling information even after multiple incidences of reminding them.
  - Remembering to attend appointments or other obligations.
  - Accessing, selecting and organizing information when needed.

**Executive Functions**

<table>
<thead>
<tr>
<th>Executive Function</th>
<th>Problem Solving</th>
<th>Reasoning</th>
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<tbody>
<tr>
<td>Inhibition</td>
<td>Works alongside behaviour, or overwhelmed</td>
<td>Works alongside behaviour, or overwhelmed</td>
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<tr>
<td>Problem solving</td>
<td>Difficulty in planning, initiating, or executing plans</td>
<td>Difficulty in planning, initiating, or executing plans</td>
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<tr>
<td>Social skills</td>
<td>Difficulty in regulating emotions or responding appropriately</td>
<td>Difficulty in regulating emotions or responding appropriately</td>
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<tr>
<td>Planning</td>
<td>Difficulty in initiating or completing tasks</td>
<td>Difficulty in initiating or completing tasks</td>
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<tr>
<td>Time management</td>
<td>Difficulty with abstract concepts of time and money</td>
<td>Difficulty with abstract concepts of time and money</td>
</tr>
<tr>
<td>Internal/external</td>
<td>Difficulty in adjusting to changes or adapting to the environment</td>
<td>Difficulty in adjusting to changes or adapting to the environment</td>
</tr>
<tr>
<td>Working memory</td>
<td>Problems with organizing and retaining information</td>
<td>Problems with organizing and retaining information</td>
</tr>
<tr>
<td>Self-regulation</td>
<td>Needs frequent cues, requires &quot;policing&quot; by others</td>
<td>Needs frequent cues, requires &quot;policing&quot; by others</td>
</tr>
<tr>
<td>Verbal-sover</td>
<td>Needs to be kept in order, needs clear feedback</td>
<td>Needs to be kept in order, needs clear feedback</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>Risk taking skills more efficient than gross motor</td>
<td>Risk taking skills more efficient than gross motor</td>
</tr>
<tr>
<td>Generalization</td>
<td>Usually &quot;take away&quot; emotions, exaggerated</td>
<td>Usually &quot;take away&quot; emotions, exaggerated</td>
</tr>
<tr>
<td>Motivation</td>
<td>Appears lack of motivation, lacks external motivators</td>
<td>Appears lack of motivation, lacks external motivators</td>
</tr>
<tr>
<td>Judgment</td>
<td>Difficulty in weighing pros and cons when making decisions</td>
<td>Difficulty in weighing pros and cons when making decisions</td>
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**Research has found that individuals with FASD:**

- Demonstrates persistent behavioral problems (particularly in aggressive and delinquent domains) that may increase with development.
- At higher risk to have problems related to alcohol and drug use.
MANAGING SYMPTOMS IN ADULT MALE OFFENDERS WITH FASD

Behavioural Dysfunction

Deficits in Adaptive Functioning:
- Personal and social skills needed to live independently
  - Most deficits in social skills, interpersonal relationships
  - Does not meet age-appropriate expectations/functioning
    Requires assistance with daily tasks

Emotional Functioning:
- Mental health disorders and emotional difficulties
  - It has been estimated that approximately 95% of people who have FASD have co-occurring disorders
  - Depression, bipolar disorder, schizophrenia, antisocial personality disorder, conduct disorder, ADHD, attachment disorders.

Social Functioning

Four social skills:
- Difficulties understanding social cues or how to behave in certain situations/environments
- Communicational deficits - difficulty maintaining conversations and placing meaning on what the other person is saying
- Problems with response inhibition and impulse control

Trouble getting along with others and making friends
- At a higher risk to be victimized or influenced by antisocial peers
- Lack of social support and relationships increases their risk to develop secondary disabilities or conditions (depression, anxiety, dropping out of school)

Strategies

Take a step back and consider:
- Are these behaviours reflective of a skill deficit or a performance deficit?
- Does he have a history of substance abuse or mental health problems?
- Is his level of functioning age-appropriate or comparable to other group members?

Instead of assuming that the behaviours being demonstrated are intentional, try to consider why they may be happening:
- What is the root cause?

Strategies

Make observations to view their current level of functioning
Find out what their strengths and challenges are:
- Use their strengths to your advantage and focus on them when delivering programs - using a strength-based approach is helpful and will encourage them.
- Refer to the 10 brain domains - what areas of functioning need support?
- Use the manual to look up specific strategies for specific brain regions

Strategies

Go over the rules early and frequently throughout programming
Write the rules down where it is easily visible
- Remind them of the rules frequently; memory impairments can make it difficult for individuals with FASD to remember expectations and rules.
- Keep the rules simple and as specific as possible

Develop a self-monitoring sheet that focuses on rules or appropriate behaviour
- This can be used as a visual aid and prompt to address behaviours such as calling out, saying inappropriate comments, or identifying emotions to acknowledge when they are going from green (good) to red (angry, upset, overwhelmed).
- Another method to remind them of the rules and expectations.

Strategies

Modify the environment to help them adjust
Structure and consistency are important:
- Have a daily schedule that is easily visible and organized in sequence of the activities that will take place.
- Transitions without warning can be hard for individuals with FASD to process
- Warn them of transitions before proceeding

Write down the important points to each session before starting
- Quickly go over the important points that will be highlighted in the session before starting
- Before proceeding to the next section, check for comprehension

Sensory issues: lighting, sounds, unfamiliar environments and smells
- Can be very sensitive to environmental factors which can lead to feeling overwhelmed, distracted, frustrated etc.
- Have minimal visual or auditory distractions if possible
MANAGING SYMPTOMS IN ADULT MALE OFFENDERS WITH FASD

Strategies

Use a holistic approach
Focus on all aspects of their life: mental health, substance abuse, adapting to being incarcerated, basic living skills
- Encourage and help them to use the resources that they may need: mental health, grievance, employment, speaking with their parole officer.
- Try to be as helpful as possible during this process (Bring forms to them if they keep forgetting, contact their parole officer, give step by step instructions).
Set appropriate goals that:
- Reflect their current level of functioning — achievable, realistic
- Compliment their strengths and interests — use a strength based approach
- Specific and understood by the offender

Strategies

Provide opportunities to practice pro-social behaviour through the use of role-plays:
- Frequently modeling and practicing skills is important
- Areas of focus may include skills that address impulse control, conflict resolution, and problem solving.

Strategies

Modify and Adapt Program Delivery
Instructions or explanations should be short, clear, and as specific as possible:
- Use simplistic language and visual aids
- Use sequential and repetitive teaching strategies
When highlighting the key points of discussions, take a step back to check for comprehension
- Review main topics before and after each session
- Write down the important concepts after identifying them
- Exaggerate and repeat main ideas
- Try to connect the idea to one of his strengths when it is applicable

Strategies

Explain instructions in different ways
- Use verbal and visual aids
- Confirm that he understands the instructions or how to complete the worksheet
- Ask him to explain the instructions to you if possible, adapt worksheets
- Enlarge font and spacing
- Reduce the amount of text so that it is as specific as possible
Slow down the pace
- Allow time for him to process what is being said and provide extra time to complete worksheets
- Encourage him to ask for help
- Scribe or complete the worksheets with him

[References]

Managing Symptoms in Adult Offenders with Fetal Alcohol Spectrum Disorder (FASD):
A Resource Guide for Correctional Program Officers

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Introduction

This manual was developed to increase staff awareness on Fetal Alcohol Spectrum Disorders (FASD) in correctional facilities. This guide may be useful when facilitating a correctional program with an offender who is suspected to have FASD or demonstrating similar behavioural or learning needs. This resource guide is designed to provide correctional program officers (CPO’s) with a clear understanding of:

1. What fetal alcohol spectrum disorder (FASD) is
2. Common identifying symptoms including physical, mental, behavioural, and/or learning disabilities
3. Strategies that may be useful in managing symptoms and strengthening learning outcomes in correctional programming

Understanding that each client will demonstrate a unique set of impairments and strengths in their social, behavioural, cognitive, and learning functioning is important.

- The symptoms that are outlined in this guide can be demonstrated by offenders without FASD so it is important to consider multiple areas of functioning and look beyond the behaviour.
- The strategies that are outlined in this guide are also general and can be used with other offenders who demonstrate similar learning needs.
Overview of Fetal Alcohol Spectrum Disorders

Fetal Alcohol Spectrum Disorder (FASD) is an umbrella term that is used to describe the varying effects of prenatal alcohol exposure (PAE) and the damages it can cause to a developing brain. These effects may include physical, mental, behavioral, and/or learning disabilities and can range from mild to severe. ¹

Diagnoses that fall under this umbrella term include: ²

**Fetal alcohol syndrome (FAS):** Most identifiable and severe end of the FASD spectrum

- **Criteria for Diagnosis:**
  - Growth deficits (height or weight below 10th percentile)*
  - Distinct set of facial anomalies (small narrow eyes, smooth groove above the upper lip, and a thin upper lip)
  - Damage to the central nervous system causing impairments to multiple areas of functioning (smaller brain size, learning disabilities, motor deficits, attention deficit and hyperactivity, developmental delays)
  - Confirmation (can also be unconfirmed) of prenatal alcohol exposure (confirmation from the mother, physical characteristics that match an FASD profile)

**Partial fetal alcohol syndrome (pFAS):** Less severe end of the FASD spectrum

- **Criteria for Diagnosis:**
  - Presence of some but not all of the distinctive growth deficits and facial anomalies
  - Damage to the central nervous system
  - Confirmation of prenatal alcohol exposure

**Alcohol-related neurodevelopmental disorder (ARND):** Most prevalent

- **Criteria for Diagnosis**
  - Damage to the central nervous system
  - Confirmation of prenatal alcohol exposure

The Diagnostic and Statistical Manual of Mental Disorders (DSM-5) includes a psychiatric diagnosis known as ³

**Neurobehavioural Disorder Associated with Prenatal Alcohol Exposure** – difficulties with daily functioning due to neurocognitive impairments caused by prenatal alcohol exposure. Can experience problems with mental health, memory, impulse control, communicational abilities, and daily living skills- does not require physical symptoms

---

³ National Institute on Alcohol Abuse and Alcoholism (2015). Fetal Alcohol Exposure.
Overview of Fetal Alcohol Spectrum Disorders

Fetal alcohol spectrum disorders are characterized by three main categories:

1. **Growth deficiency**
2. **Facial characteristics**
3. **Central nervous system dysfunction**.

These three characteristics can vary in severity from one individual to the next and some characteristics may not be present at all. Confirmation of prenatal alcohol exposure and central nervous system dysfunction are the primary features of FASD.⁴

---

**Central nervous system dysfunction** can be **structural** (small brain size, underdeveloped brain regions), or **functional** (cognitive and behavioural deficits, motor and coordination).⁵

Imaging studies have shown that individuals with FASD have considerable differences in their brain structure and activity in comparison to non-exposed individuals with normal brain development. These findings have provided researchers and health care professionals with evidence to explain the sensory processing, cognitive, and behavioural deficits that are often exhibited by individuals with FASD.⁶

Specific brain regions that are affected by prenatal alcohol exposure will be discussed in Chapter Two. However, understanding that this disorder is characterized by damage to the central nervous system is important to understand the symptoms and behaviours of FASD.

---

⁴ National Institute on Alcohol Abuse and Alcoholism (2015). Fetal Alcohol Exposure.
Chapter I: Causes of FASD

Prenatal alcohol exposure is associated with a wide range of physical, cognitive, social and behavioural impairments.\(^7\)

Impairments that are commonly exhibited by individuals with FASD are:

- Intellectual and learning disabilities
- Impairment of executive functions
- Speech and language delays
- Difficulties managing behavior and emotions
- Poor social skills
- Motor deficits

The severity of symptoms can vary significantly from one individual to the next.

Factors that have shown to have an influence on the severity of symptoms: \(^8\)

- **Quantity** - how much alcohol was consumed per occasion while pregnant
- **Frequency** - how often alcohol was consumed during the pregnancy
- **Timing** - in what stage did the mother consume alcohol
- **Genetics** - the body’s ability to metabolize alcohol (both mother and fetus)

Maternal variables that can impact the severity of symptoms before birth: \(^9\)

- High levels of stress
- Physical and social environment
- Nutrition/Health
  - Have lower-than-average weight, height, and body mass index
  - Smoke

Maternal/Paternal variables that can impact the severity of symptoms after birth:

- Education
- Socioeconomic status/income
- Ability to cope with stress
- Ability to provide support to the child
- Physical and social environment (living conditions, neighbourhood)

---

\(^7\) Canada FASD Research Network (2018). Basic information.

\(^8\) Clarke, M., & Gibbard, B. (2003). Overview of Fetal Alcohol Spectrum Disorders for mental health professionals. *Journal of the Canadian Academy of Child and Adolescent Psychiatry*, 12(3), 57-63

Comorbidity (co-occurring health conditions or disorders) is very common in clients with FASD because alcohol can affect any organ or system while the fetus is developing. A recent study found that individuals with FASD can be susceptible to 428 possible comorbid conditions. It has been estimated that approximately 90% of people who have FASD have co-occurring disorders.  

### FASD co-occurs with a wide range of psychiatric disorders including:

- **Mood disorders** (e.g., depression, bipolar disorder)
- **Psychosis** (e.g., schizophrenia)
- **Developmental disorders** (e.g., autism)
- **Personality disorders** (e.g., antisocial personality disorder)
- **Behavioural disorders** (conduct disorder, ADHD, oppositional defiant disorder)
- **Attachment disorders**

Additionally, a high prevalence of individuals with FASD have difficulties with:

- Trauma
- Substance Abuse
- Sleeping problems

### Possible health conditions can include:

- Vision or hearing problems
- Heart defects and problems with kidneys, bones, and liver
- Blood circulation
- Digestion
- Respiratory systems

Comorbidity and symptoms that overlap with other mental health disorders can explain the complications that are involved with screening, assessing, and diagnosing this disorder. This can lead to individuals with FASD being misdiagnosed and receiving medications or treatment services that do not fully benefit their needs.

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Chapter I: Prevalence

Establishing prevalence rates of FASD is difficult to accurately measure due to challenges surrounding recognition, screening, and diagnosis.  

**Invisibility:**
- Unlike other birth defects, FASD is often difficult to identify and diagnose in newborns, infants, and young children and can be increasingly challenging to diagnose into adulthood.
- Physical defects are often not present or fade as the individual reaches adolescence and adulthood, making it more difficult to obtain an accurate diagnosis.

**Social Determinants:**
- Social factors play a big role in providing healthcare professionals with the information that is needed to diagnose individuals with FASD. An easier method to obtain an FASD diagnosis is for the mother to disclose that she consumed alcohol during the pregnancy.
  - This is helpful because the disability is often invisible to the public eye and the symptoms can be very similar to other disorders such as ADHD and conduct disorder. However, the stigma associated with drinking while pregnant can make mothers feel ashamed and reluctant to disclose that information.

**Screening tools:**
- The research for validated screening and assessment tools are very limited for individuals with FASD, particularly with the adult population.
- Researchers have reported a high need for validated assessment instruments.

These factors can explain why this disability is highly underdiagnosed and why researchers struggle to obtain accurate prevalence rates for this population.

However, based on current research, it is estimated that 4% of the Canadian population is affected by FASD.

When comparing this figure to other common disabilities, an estimated prevalence of 4% makes FASD:
- **2.5** times more common than Autism Spectrum Disorder (1.52%)
- **19** times more common than Cerebral Palsy (0.21%)
- **28** times more common than Down Syndrome (0.14%)
- **40** times more common than Tourette’s Syndrome (0.10%)

---

Chapter I: Prevalence – Special Populations

**Children in Care:** The prevalence of FASD is reported to be higher in children who are involved in the child welfare system, foster care, and orphanages. For the reason being that a high percentage of children who are removed from their biological homes have parents who struggle with substance abuse, it is believed that they are at higher risk to have prenatal alcohol exposure and FASD. In a study where researchers completed a comprehensive review of the first 1,400 patients to be assessed for FASD, the authors found that a high majority (70.5%) were not living with their biological parents at the time of their medical evaluation. The estimated prevalence of FASD among children in care is 3-11%.

**Justice Populations:** Involvement in the criminal justice system is experienced by many people with FASD. Researchers have found that youth with FASD are 19 times more likely to be incarcerated than youth who are not impacted by an alcohol-related disability. Additionally, among a sample of 253 participants with FASD, it has been reported that 60% had contact with the law and 42% had been incarcerated at some point for a crime. The estimated prevalence of Canadian offenders with FASD is 11-23% for youth and 10-18% for adults.

**Indigenous Communities:** Global prevalence among special populations have indicated that FASD was 15.6 to 24.6 times higher in aboriginal populations when comparing children and youth in the general population. Researchers have found that the prevalence of FASD among indigenous groups range based on the population:

- 0.7% of children living off-reserve in Western provinces
- 3.3% of children in the Yukon and northwestern BC
- 5-10% of children from a Manitoba First Nations community
- 19% of children from an isolated BC First Nations community
- 37% of young offenders in BC

FASD can negatively impact individuals of all ages, genders, cultures, and socioeconomic backgrounds. However, personal and environmental factors can place certain populations at higher risk for having a child with FASD. Factors that have shown to impact the overall health of Canadians and put individuals at risk for drinking while pregnant include income, social support, educational background, employment, environment, coping skills, and mental illness.

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Chapter I: The Diagnostic Process

Multidisciplinary Team

Being that symptoms of FASD can vary significantly from one individual to the next, it is important that multiple domains of functioning are assessed and targeted in treatment.

The information that is gathered through assessments is important for successful management of symptoms as it elicits recommendations for treatment that is tailored to the individual’s needs, strengths, and challenges.

Therefore, the use of a multidisciplinary team is often preferred in order to achieve an accurate diagnosis and recommendations for treatment.

<table>
<thead>
<tr>
<th>The multidisciplinary team may vary and is dependent on the individuals needs however, typically they will consist of:</th>
<th>Extra support may also include:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coordinator for case management (nurse, social worker)</td>
<td>Addiction counsellors or other mental health professionals</td>
</tr>
<tr>
<td>Physician that is specifically trained in FASD diagnosis</td>
<td>Cultural interpreters</td>
</tr>
<tr>
<td>Psychologist and/or Psychiatrist</td>
<td>Probation officers</td>
</tr>
<tr>
<td>Occupational therapist</td>
<td>Teachers</td>
</tr>
<tr>
<td>Speech-language pathologist</td>
<td>Employers</td>
</tr>
<tr>
<td></td>
<td>Family</td>
</tr>
</tbody>
</table>

Diagnostic guidelines can be organized into 6 categories:

- Screening and referral
- Maternal alcohol history during pregnancy
- Physical examination and differential diagnosis (differentiating between two or more possible conditions that share similar behavioural characteristics or symptoms).
- Neurobehavioural assessments
- Assessing diagnostic criteria for fetal alcohol syndrome (FAS), partial FAS, and alcohol related neurodevelopmental disorder
- Recommendations for treatment and follow-up

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Chapter I: Barriers for FASD Services in Corrections

There are numerous challenges in providing services to individuals with FASD in the community and especially when they are in custody.

Some of these challenges include:

- There are very few diagnostic sites that specialize in FASD.
  - Even when diagnostic sites exist, they typically only target specific populations such as children and youth.
  - There are also very limited screening tools for adults with FASD.
- Diagnostic services can be very expensive when gathering a multidisciplinary team and completing cognitive assessments.
  - In order to provide adequate services to individuals with FASD, long-term and sustained availability of funding is needed.
- In addition, other factors such as stigma, lack of public health awareness, and the invisibility of the disorder can explain why the high majority of individuals with FASD do not receive a diagnosis or supportive services.

In summary, it is very difficult to receive a diagnosis of FASD, especially once you have reached adulthood. Having said this, for individuals who are in custody, obtaining an FASD diagnosis is very unlikely.

Having the ability to diagnose individuals with FASD in corrections would be beneficial to provide specialized support and protective measures.

However, a diagnosis does not impede the ability to recognize this disability and provide support to those who demonstrate similar social, behavioural, and learning needs.
Chapter II: Effects and Characteristics of FASD

Physical Effects: Brain and Central Nervous System (CNS)

Through the use of brain-imaging studies, researchers have found that individuals who have been prenatally exposed to alcohol have notable differences in their brain structure and functioning. Evidence has shown that the structural abnormalities caused by fetal alcohol exposure are correlated with impairments in cognitive functioning. Functional imaging studies have detected many differences in the active brain in relation to memory, learning, and inhibitory control.

It is important to understand the structural and functional abnormalities in the brain in order to have a better understanding of how it would affect behaviour. Therefore, common brain regions that are affected by prenatal alcohol exposure are outlined below:

**Overall brain size:** Numerous neuroimaging studies have found that individuals with FASD have smaller head sizes as well as smaller brains in comparison to non-exposed individuals.

**Other neuroimaging findings include:**

“Malformations of the brain tissue (both in the “gray matter” regions, which contain mostly nerve cell bodies and extensions called dendrites, and in the “white matter” regions composed primarily of nerve fibers, or axons, that transmit impulses).” (pg. 287)

“Failure of certain brain regions to develop at all (such as the corpus callosum, the central tract inside the brain that unites the left and right hemispheres).” (pg. 287)

“Failure of certain cells to migrate to their appropriate locations during embryonic brain development.” (pg. 287)

“A tendency for the tissue to die off in other brain regions (such as the cerebellum, a region at the base of the brain that coordinates body movements).” (pg. 287)

---

Chapter II: Effects and Characteristics of FASD

Physical Effects: Brain and Central Nervous System (CNS)

Areas of the brain that are commonly affected: 20

- **Cerebral Cortex** – sensory and motor control, thinking and abstract thought, working memory, speech and language, and visual and hearing perception
- **Frontal lobes** - executive functions, impulse control, judgement.
- **Cerebellum** - coordination, movement, cognitive processing, language development and fluency, task sequencing, and time perception.
- **Basal Ganglia** - processes memory, time perception, setting goals, predicting outcomes.
  - **Caudate Nucleus** cognitive function, motivation, and executive functioning
- **Hippocampus** - learning and memory.
- **Corpus Callosum** – processes information between right and left-brain, motor functions, coordination

Central Nervous Dysfunction 21

- Microcephaly (Small Brain Size)
- Tremors
- Seizures
- Hyperactivity
- Attention Deficits
- Gross Motor Difficulties
- Fine Motor Difficulties
- Learning Disabilities
- Difficulty with Abstraction
- Difficulty Understanding Consequences
- Developmental Delays
- Intellectual Disabilities
- Sensory Integration Difficulties
- Memory Difficulties
- Difficulty Processing Information
- Impulsivity
- Distractibility

---

Chapter II: Effects and Characteristics of FASD

Physical Defects

Distinctive facial features may include:

- Small head circumference
- Distinctive facial abnormalities
  - Small eyes, thin upper lip, a short/upturned nose, and a smooth skin surface between the nose and upper lip
- Minor facial characteristics
  - Flat midface
  - Underdevelopment of the upper ear
- Growth deficiencies
  - Typically low body weight
  - Shorter in height
- Joints, limbs and finger deformities
- Vision or hearing problems
- Heart defects and problems with kidneys, bones, and liver


---

Chapter II: Effects and Characteristics of FASD

Cognitive Functioning: mental processes that lead to learning and acquiring information; involves perception, thinking, reasoning, and remembering.23

Cognitive deficits may include:

- Impulsivity
- Intellectual disabilities, learning disorders and delayed development
- Poor memory skills – short-term and long-term
- Experiences difficulties with attention, staying on task, following lengthy conversations, and processing information
- Demonstrates deficits in problem solving and reasoning
  - Difficulties with understanding cause and effect relationships (choices and consequences), learning from experience, using logic to solve problems
- Poor judgment skills or vigilance (lacks awareness of possible dangers or difficulties)
- Jitteriness or hyperactivity
  - People with FASD are often misdiagnosed for ADHD- shares similar behavioural characteristics
- Rapidly changing moods
- Delayed language development
  - Difficulties with expressive and receptive language
- Executive dysfunction*

Cognitive Impairments will cause difficulties in the following areas:

<table>
<thead>
<tr>
<th>Intellectual Ability</th>
<th>Attention and Information Processing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Functioning</td>
<td>Language</td>
</tr>
<tr>
<td>Visual Perception and Visual Construction</td>
<td>Learning and Memory</td>
</tr>
<tr>
<td>Social Cognition</td>
<td>Number Processing</td>
</tr>
<tr>
<td>Motor</td>
<td></td>
</tr>
</tbody>
</table>

Definitions: 24

Executive Functioning: A set of mental processes that are necessary for cognitive control of behavior: selecting and successfully monitoring behaviors to attain a chosen goal.


Chapter II: Effects and Characteristics of FASD

**Executive Functioning:**

<table>
<thead>
<tr>
<th>Executive Functions of the Prefrontal Cortex</th>
<th>Effects of Alcohol Exposure on Behaviours Related to Executive Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• inhibition</td>
<td>• socially inappropriate behaviour, as if inebriated</td>
</tr>
<tr>
<td>• problem solving</td>
<td>• inability to figure out solutions spontaneously</td>
</tr>
<tr>
<td>• sexual urges</td>
<td>• inability to control sexual impulse, esp. in social situations</td>
</tr>
<tr>
<td>• planning</td>
<td>• inability to apply consequences from past actions</td>
</tr>
<tr>
<td>• time perception</td>
<td>• difficulty with abstract concepts of time and money</td>
</tr>
<tr>
<td>• internal ordering</td>
<td>• like files out of order, difficulty processing information</td>
</tr>
<tr>
<td>• working memory</td>
<td>• problems with storing and retrieving information</td>
</tr>
<tr>
<td>• self-monitoring</td>
<td>• needs frequent cues, requires “policing” by others</td>
</tr>
<tr>
<td>• verbal self-regulation</td>
<td>• needs to talk to self out loud, needs feedback</td>
</tr>
<tr>
<td>• motor control</td>
<td>• fine motor skills more affected than gross motor</td>
</tr>
<tr>
<td>• regulation of emotion</td>
<td>• moody “roller coaster” emotions, exaggerated</td>
</tr>
<tr>
<td>• motivation</td>
<td>• apparent lack of remorse, needs external motivators</td>
</tr>
<tr>
<td>• judgment</td>
<td>• inability to weigh pros and cons when making decisions</td>
</tr>
</tbody>
</table>

Source: National Organization for Fetal Alcohol Spectrum Disorders Australia
**Social and Behavioural**: Individuals with FASD exhibit deficits in social behaviour and develop a wide range of secondary disabilities because social skills.  

<table>
<thead>
<tr>
<th>May experience difficulties in the following areas:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Difficulty or disruptions in school</td>
</tr>
<tr>
<td>o Diminished intellectual functioning, attention, memory</td>
</tr>
<tr>
<td>o Higher risk to drop out of school and experience academic challenges</td>
</tr>
<tr>
<td>• Trouble getting along with others and making friends</td>
</tr>
<tr>
<td>o At a higher risk to be victimized or influenced by antisocial peers</td>
</tr>
<tr>
<td>o Lack of social support and relationships increases their risk to develop secondary disabilities or conditions (depression, anxiety, dropping out of school)</td>
</tr>
<tr>
<td>• Poor social skills</td>
</tr>
<tr>
<td>o Difficulties understanding social cues or how to behave in certain situations/environments</td>
</tr>
<tr>
<td>o Communicational deficits - difficulty maintaining conversations and placing meaning on what the other person is saying.</td>
</tr>
<tr>
<td>• Trouble adapting to change and transitions</td>
</tr>
<tr>
<td>• Problems with response inhibition and impulse control</td>
</tr>
<tr>
<td>• Poor concept of time</td>
</tr>
<tr>
<td>• Problems staying on task or completing tasks</td>
</tr>
<tr>
<td>• Deficits in goal-oriented behaviour and skills required to plan something</td>
</tr>
<tr>
<td>• Demonstrating age appropriate behaviour</td>
</tr>
<tr>
<td>o Living independently, obtaining employment.</td>
</tr>
</tbody>
</table>

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Chapter II: Primary and Secondary Disabilities

Primary Disabilities

Conditions that the individual is born with as a result of prenatal alcohol exposure causing brain damage. Primary disabilities may include:

- Cognitive functioning
- Social skills
- Adaptive behaviour
- Learning disabilities
- Attention/hyperactivity
- Motor skills

Secondary Disabilities

The absence of a clinical diagnosis and enhanced support increases the likelihood that individuals with FASD will develop secondary conditions. These problems may arise due to lack of support and behavioural interventions to manage the primary conditions. Secondary disabilities may include:

- Homelessness
- Behavioural problems
- Involvement in the Criminal Justice System
- Mental health problems
- Substance abuse
- Difficulty with managing daily tasks
- Disrupted school experiences or “drop out”
- Difficulties maintaining employment
- Lack of positive support - friends

The impact or severity of secondary disabilities can be reduced by structure, consistency, and support from home and in school during the early developmental stages of their lives.

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Chapter III: Criminogenic Risk Factors of FASD

Because offenders with FASD are over-represented in correctional facilities, researchers have considered parental alcohol exposure as a serious and violent offending (SVO) pathway for adolescents. Serious and violent offending for individuals with FASD are mediated by other risk and protective factors that are present in their life. 28

In a study that compared characteristics of young offenders with and without FASD, it was found that youth with FASD demonstrated greater criminogenic risk than youth without.

Results found that individuals with FASD were more likely to:

- Be placed in foster care
- Experience more difficulties with self-control
- Experience more incidents of sexual and physical abuse
- Have behavioural disorders and mental health problems
- Use alcohol at an earlier age
- Be incarcerated at a younger age
- Have more incidences of being arrested

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Chapter III: Criminogenic Risk Factors of FASD

A.L.A.R.M

These neuropsychological deficits are found to cause difficulty for individuals when interacting with legal systems.

A- Adaptive Functioning:
- Refers to the competency to meet age-appropriate expectations of personal independence and social responsibility.
- Evidence has also shown that individuals with FASD score significantly lower on adaptive scores than IQ scores.
  - This suggests that at age 18, their adaptive skills may be functioning at the same level as a 10-year-old.

B- Language and Communication Skills:
- It is common that individuals with FASD demonstrate impairments in expressive (putting thoughts into words) and receptive language (comprehension).
  - This can be problematic during the legal processes when:
    ▪ Responding to interrogation questions
    ▪ Communicating with lawyers
    ▪ Participating in court
    ▪ Understanding the proceedings to their offence

A- Attention
- Attentional deficits, impulsivity and hyperactivity are common behavioural characteristics and have been found to affect 60-75% of people with FASD.
- Reacting impulsively and cognitive impairments that affect their ability to consider the consequences to their actions place these individuals at higher risk to be involved in the criminal justice system.
- Additionally, a common secondary disability that these individuals experience is substance abuse. Impairments in impulse control while under the influence also increases their risk to be charged or incarcerated.

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Chapter III: Criminogenic Risk Factors of FASD

**R- Reasoning and Executive Function**

- The cognitive processes involved with *executive functioning* includes the ability to self-regulate attention, emotions, and impulsions. Additionally, executive control refers to the ability to integrate new information with previous experiences, make rational decisions, solve problems effectively, and link behaviour to potential consequences.
- Poor reasoning skills increases their risk in to be charged (or repeatedly charged for the same offence) in the community and while serving time at an institution.
- Misinterpreted to have a lack of remorse when in reality, it may be a reflection of impaired reasoning (e.g. yelling at someone to give them their phone: “it’s not stealing because he gave it to me”).

**M- Memory**

- Memory impairments are also common with individuals who have FASD.
- Individuals with FASD may appear to be lying when in reality they are trying to fill in the blanks when recalling information.
  - This can be problematic when:
    - Remembering instructions from their lawyer before attending court
    - When trying to recall information pertaining to their offence- can jeopardize their testimony
    - Repeated questioning
Chapter IV: General Strategies to Manage FASD Symptoms

Step 1: Be willing to consider other functions of the behaviour: What is the root cause?  

At this point in time, you have acknowledged that there will be treatment barriers in response to the client’s engagement of maladaptive behaviours and/or learning disabilities. You are concerned for the other group members as you do not want these behaviours to distract them. You are also noticing that this particular client needs extra support, frequent clarification, and does not comprehend the material even after multiple efforts to provide instructions. You are finding that you may need to try a different approach.

What do you do now?

- Take a step back and consider:
  - Are these behaviours reflective of a skill deficit or a performance deficit?
  - Does he have a history of substance abuse or mental health problems?
  - Is his level of functioning age appropriate or comparable to other group members?

- Instead of assuming that the behaviours being demonstrated are intentional, try to consider why they may be happening- What is the root cause?
  - When considering the fact that individuals with FASD are at a higher risk to develop problems with substance abuse, co-occurring mental health disorders, and other secondary disabilities, it is important to understand that there are typically other factors at play.

- Observe the behaviours and learning abilities of the individual and question if they match the profile of an individual with FASD.
  - If you have a suspicion that they may meet the criteria for an FASD related disability, you can then proceed to step two.

Definitions

Skill Deficit: The individual has not developed the skills that are necessary to act appropriately in social situations and would need to learn the skills in order to be socially competent.

Performance Deficit: The individual has demonstrated good social skills and understands how to act in social situations but does not make efforts to apply them.

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Chapter IV: General Strategies to Manage FASD Symptoms

Step 2: Organize observations to view their current level of functioning.

- After considering other factors and suspecting that your client may fit the profile of someone with FASD, it is important to observe them directly and find out what their strengths and challenges are. This will be helpful when looking up strategies in the manual (page _) that could be useful and relevant to their behaviours.
  - Identifying their strengths is important as research has shown that using strength-based approaches are beneficial with individuals who have FASD.
- In addition, the 4-Digit Code Caregiver Interview Checklist (Astley, 2004) could be completed to receive further guidance on areas that could be targeted or adjusted during programming (page #).
  - This checklist is not identified as a validated FASD screening tool- it simply provides assistance with assessing the individuals functioning to view if it may fit the profile of an individual with FASD.
  - This checklist is intended to be completed with the client however, due to the sensitivity and inability to confirm a diagnosis, it should be completed by yourself based on your own observations.
  - It may help to organize your observations in order to make a more informed decision on the strategies that could be used to benefit his current functioning and learning abilities. It simply allows you to gather more information and have a visual aide to organize your observations.
- Please note: FASD is a complex disability and it is important to approach this process with care and sensitivity. In the absence of a multidisciplinary team or trained professionals, it is very difficult to confirm a FASD diagnosis; especially when it is solely based on observations. Additionally, the behaviours that are outlined in this checklist overlap with other disorders, which can explain why FASD is frequently misdiagnosed. Therefore, avoid labelling and focus on providing support where it is needed.
The 4-Digit Code Caregiver Interview Checklist

**FUNCTIONAL / Non-Standardized Observational Measures**

Severity Score: Severity of delay/impairment (Displayed along left margin)
Circle: 0 = Unknown, Not Assessed, Too Young  |  1 = Within Normal Limits  |  2 = Mild to Moderate  |  3 = Significant

<table>
<thead>
<tr>
<th>Severity</th>
<th>Caregiver Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Planning / Temporal Skills</td>
</tr>
<tr>
<td>0 1 2 3</td>
<td>Needs considerable help organizing daily tasks</td>
</tr>
<tr>
<td>0 1 2 3</td>
<td>Can not organize time</td>
</tr>
<tr>
<td>0 1 2 3</td>
<td>Does not understand concept of time</td>
</tr>
<tr>
<td>0 1 2 3</td>
<td>Difficulty in carrying out multi-step tasks</td>
</tr>
<tr>
<td>0 1 2 3</td>
<td>Other</td>
</tr>
</tbody>
</table>

|          | Behavioral Regulation / Sensory Motor Integration |
| 0 1 2 3  | Poor management of anger / tantrums |
| 0 1 2 3  | Mood swings |
| 0 1 2 3  | Impulsive |
| 0 1 2 3  | Compulsive |
| 0 1 2 3  | Perseverative |
| 0 1 2 3  | Inattentive |
| 0 1 2 3  | Inappropriately [ high or low ] activity level |
| 0 1 2 3  | Lying / stealing |
| 0 1 2 3  | Unusual [ high or low ] reactivity to [ sound touch light ] |
| 0 1 2 3  | Other |

|          | Abstract Thinking / Judgment |
| 0 1 2 3  | Poor judgment |
| 0 1 2 3  | Cannot be left alone |
| 0 1 2 3  | Concrete, unable to think abstractly |
| 0 1 2 3  | Other |

|          | Memory / Learning / Information Processing |
| 0 1 2 3  | Poor memory, inconsistent retrieval of learned information |
| 0 1 2 3  | Slow to learn new skills |
| 0 1 2 3  | Does not seem to learn from past experiences |
| 0 1 2 3  | Problems recognizing consequences of actions |
| 0 1 2 3  | Problems with information processing speed and accuracy |
| 0 1 2 3  | Other |

|          | Spatial Skills and Spatial Memory |
| 0 1 2 3  | Gets lost easily, has difficulty navigating from point A to point B |
| 0 1 2 3  | Other |

|          | Social Skills and Adaptive Behavior |
| 0 1 2 3  | Behaves at a level notably younger than chronological age |
| 0 1 2 3  | Poor social / adaptive skills |
| 0 1 2 3  | Other |

|          | Motor / Oral Motor Control |
| 0 1 2 3  | Poor / delayed motor skills |
| 0 1 2 3  | Poor balance |
| 0 1 2 3  | Other |

### Step 3: Modify and Adapt

**Possible Strategies to Adapt Teaching/Facilitation:**

- Instructions or explanations should be short, clear, and as specific as possible.
  - Use simplistic language and visual aids
  - Use sequential and repetitive teaching strategies
- When highlighting the key points of discussions, take a step back to check for comprehension
  - Review main topics before and after each session
  - Write down the important concepts after identifying them
  - Exaggerate and repeat main ideas
  - Try to connect the idea to one of his strengths when it is applicable
- Explain instructions in different ways
  - Use verbal and visual aids
- Confirm that he understands the instructions or how to complete the worksheet
  - Ask him to explain the instructions to you
- If possible, adapt worksheets
  - Enlarge font and spacing
  - Reduce the amount of text so that it is as specific as possible
- Slow down the pace
  - Allow time for him to process what is being said and provide extra time to complete worksheets.
- Encourage him to ask for help
- Scribe or complete the worksheets with him
Go over the rules early and frequently throughout programming

- Write the rules down where it is easily visible
- Remind them of the rules frequently - memory impairments can make it difficult for individuals with FASD to remember expectations and rules.
- Keep the rules simple and as specific as possible
- Develop a self-monitoring sheet that focuses on rules or appropriate behaviour
  - This can be used as a visual aid and prompt to address behaviours such as calling out, saying inappropriate comments, or identifying emotions to acknowledge when they are going from green (good) to red (angry, upset, overwhelmed).
  - Another method to remind them of the rules and expectations.

Modify the environment to help them adjust

- Structure and consistency are important
- Have a daily schedule that is easily visible and organized in sequence of the activities that will take place.
  - Transitions without warning can be hard for individuals with FASD to process
  - Warn them of transitions before proceeding
- Write down the important points to each session before starting
  - Quickly go over the important points that will be highlighted in the session before starting
  - Before proceeding to the next section, check for comprehension
- Sensory issues: lighting, sounds, unfamiliar environments and smells
  - Can be very sensitive to environmental factors which can lead to feeling overwhelmed, distracted, irritated etc.
  - Have minimal visual or auditory distractions if possible
Use a holistic approach

- Consider all areas of functioning
  - Refer to the 10 brain functions: What are their strengths? What are the challenges that they are facing?
  - Focus on all aspects of their life: mental health, substance abuse, adapting to being institutionalized, basic living skills
    - Encourage and help them to use the resources that they may need (mental health, grievance, employment, speaking with their parole officer).
    - Try to be as helpful as possible during this process (Bring forms to them if they keep forgetting, contact their parole officer, give step by step instructions)
  - Set appropriate goals that:
    - Reflect their current level of functioning – achievable, realistic
    - Compliments their strengths and interests – use a strength based approach
    - Specific and understood by the offender

Provide opportunities to practice pro-social behaviour through the use of role-plays

- Frequently modeling and practicing skills is important
- Areas of focus may include skills that address impulse control, conflict resolution, and problem solving.

Include them as much as possible and build trust

- Ask him what would help him learn better
- Ask him if there is anything in the environment that is bothering him
- Ask him what skills he wants to learn
- Be supportive and reinforce his efforts
Chapter IV: 9 Brain Domains Impacted by FASD

1. Academic Achievement (Reading and Writing)

May experience difficulties with:

- Reading and writing
- Comprehension (Understanding the main idea, making inferences, using personal examples)
- Organization (organizing thoughts in general and in written form)
- Understanding figurative language such as sarcasm and other forms of humour

Possible Strategies: (Same strategies listed for adapting facilitation style)

- Instructions or explanations should be short, clear, and as specific as possible.
  - Use simplistic language and visual aids
  - Use sequential and repetitive teaching strategies
- When highlighting the key points of discussions, take a step back to check for comprehension
  - Review main topics before and after each session
  - Write down the important concepts after identifying them
  - Exaggerate and repeat main ideas
  - Try to connect the idea to one of his strengths when it is applicable
- Explain instructions in different ways
  - Use verbal and visual aids
- Confirm that he understands the instructions or how to complete the worksheet
  - Ask him to explain the instructions to you
- If possible, adapt worksheets
  - Enlarge font and spacing
  - Reduce the amount of text so that it is as specific as possible
- Slow down the pace
  - Allow time for him to process what is being said and provide extra time to complete worksheets.
- Encourage him to ask for help
- Scribe or complete the worksheets with him


2. **Attention**: Difficulties maintaining attention is a common characteristic of FASD.

**May experience difficulties with:**
- Sustained attention and maintenance of effort
- Sitting still - hyperactive
- Being easily distracted by environmental factors (sounds, smells, movements, visuals)
- Completing lengthy or complex tasks that require focus
- Shifting from one task to another

**Possible Strategies**
- Remove any possible distractions in the room
- Consequences for inappropriate behaviour need to be immediate.
  - Explain why it is not acceptable using simple language
  - Model what would be appropriate
  - Provide praise when they are demonstrating appropriate behaviours
- Simple “step-by-step” instructions (first you do this, and then you do this).
- Adapt activities to make them shorter or divide tasks
  - Schedule sessions outside the group to complete tasks
- Help them to complete worksheets
  - Use redirection when they become distracted
  - Try to use examples that would spark their interest to keep them engaged
- Give them a short “mental break” before proceeding to the next section
- Reinforce their efforts to complete worksheets
3. Language (expressive and receptive)

May experience difficulties with:

- Language development
- Expressive and receptive language
- Oral motor, linguistic, and semantic skills (understanding and appropriate use of words)
- Following conversations and instructions
- Grasping the overall meaning of conversations or lessons

Possible Strategies

- Avoid using figures of speech- abstract language is very difficult for individuals with FASD to understand
- Use simple and repetitive language with specific examples
- Limit the amount of questions that you ask and keep it simple
- Give instructions one step at a time and repeat when it is needed
  - You will likely have to re-teach the information multiple times
- Break large tasks into smaller steps
- Use different strategies to convey the message
  - Social stories
  - Visuals
### 4. Memory

#### May have difficulties with:

- Long-term, short-term, and working memory
- Learning
- Recalling information even after multiple incidents of reminding them
  - May appear to be lying when in reality they are trying to fill in the blanks
- Visual and verbal memory skills
- Remembering to attend appointments or other obligations
- Accessing, selecting and organizing information when needed

#### Possible Strategies

- Sequencing, categorizing, and organizing information
- Routine, structure, and repetition
- Hands-on activities
- Presenting new material gradually and continuously referring to previously learnt material to enhance memory
- Pre-teaching, post-teaching and reminders
- Teach how to find information rather than memorize
- Utilize mnemonic memory strategies (giving worksheets that use patterns of letters, ideas, or associations that will help them to remember; acronyms, visual diagrams)
### 5. Cognition

**May experience difficulties with:**

- Thinking and reasoning skills (verbal and non-verbal)
- Processing speed (ability to process environmental information)
- Intellectual functioning (ranges from severe to average)

**Possible Strategies**

- Repetition
- Visual cues
- Re-teaching in a variety of settings
- Modelling and guided learning
- One on one teaching
- Short and simple verbal instructions

### 6. Executive Functioning

**May experience difficulties with:**

- Control of emotions (difficulty managing stress or staying calm when faced with minor conflicts)
- Cause and effect reasoning (difficulty learning from mistakes)
- Flexibility/shifting (changing plans and/or behaviours)
- Control of behaviour
- Planning (ability to create and follow through with goals)
- Self-monitoring
- Working memory (ability to retain important information)

**Possible Strategies**

- Consistency in consequences (immediate and specific)
- Using consequences as a way of correcting not punishing
- Short and concrete consequences (applied in context)
- Clear and consistent routine
- Guidance and reminders pertaining to multistep daily tasks
- Assistance breaking down tasks
- Utilizing schedules
- Make efforts to keep clients engaged
- Allowing client to de-escalate in a safe place
- Anticipate and prevent conflict through close supervision
- Teach strategies in order to decrease impulsive behaviour
Chapter IV: 9 Brain Domains Impacted by FASD

7. Adaptive Behaviour, Social Skills, or Social Communication

May experience difficulties with:

- Table manners
- Performing basic hygiene routines (bathing, brushing teeth, grooming, etc.)
- Sense of direction
- Managing finances (saving, budgeting, banking, shopping, etc.)
- Literacy skills (reading, speaking, and spelling)
- Taking care of possessions
- Being on time

Possible Strategies

- Modeling and role-playing
- Guided practice
- Use of consistent language
- Re-teaching
- Immediate, direct feedback
- Include client in the process of developing solutions to conflict
- Set limits (stay consistent)
- Encourage positive self-talk
- Develop consistent routines
- Review and demonstrate rules regularly
- Encourage clients to help with tasks (assists in clients feeling valued)
- Be aware that unwanted behaviour is often a cue that some element of the environment requires adjustment
## 8. Sensory Processing Skills

### May experience difficulties with:
- Interpreting sensory information (touch, sight, sound, movement and smell)
- Environments where there are many things to see, movements to observe, sounds to hear, things to smell, and things to feel (accidental bumps, feeling of clothing on skin, etc.)
- Ability to remain calm
- Ability to organize oneself
- Body awareness (may stand too close to others or touch others)

### Possible Strategies
- Providing a calming space
- Reduce amount of information on walls
- Use visuals in order to encourage daily routine
- Maintaining organization within the environment
- Use of noise reducing materials when possible
9. Motor Skills

May experience difficulties with:

- Gross motor skills
  - Poor co-ordination (including eye-hand co-ordination)
  - Abnormal muscle tone
  - Poor body awareness
- Fine motor skills
  - Immature grasp and manipulation patterns
  - Decreased hand strength
  - Fine motor tremor
  - Poor bilateral hand use (using one hand for movement and the other for assistance)
  - No established hand dominance

Possible Strategies

- Ensure that clients have supportive seating (feet on floor, hips and back supported by chair)
- Allot extra time for writing
- Reduce amount of copying required (provide photocopies when possible)
- Encourage development of keyboarding skills (for word processing)
- Provide extra practice in handwriting and printing
- Implement hand strengthening activities
- Use a multisensory approach to teaching printing and handwriting (incorporate visual, tactile and kinesthetic senses)
- Perform structured fine motor activities prior to fine motor activities
- Implement activities to improve balance and co-ordination skills
- Increase upper body strength
Helpful Worksheets

Using and identifying their strengths
# Strengths Exploration

Those who know their strengths and use them frequently tend to have more success in several areas. They feel happier, have better self-esteem, and are more likely to accomplish their goals.

To use your strengths effectively, it's important to have a clear idea of what they are, and how they can be used. Some of your greatest strengths might be easy to recognize, while others go unnoticed because they feel ordinary to you (even if they aren't).

**In this worksheet you will identify your strengths and ways in which you are already using them. Additionally, you will explore new ways to use your strengths to your advantage.**

<table>
<thead>
<tr>
<th>Circle your strengths from the choices below, or add your own at the bottom.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wisdom</td>
</tr>
<tr>
<td>Empathy</td>
</tr>
<tr>
<td>Enthusiasm</td>
</tr>
<tr>
<td>Fairness</td>
</tr>
<tr>
<td>Modesty</td>
</tr>
<tr>
<td>Gratitude</td>
</tr>
<tr>
<td>Ambition</td>
</tr>
<tr>
<td>Athleticism</td>
</tr>
<tr>
<td>Optimism</td>
</tr>
</tbody>
</table>
Strengths Exploration

Relationships
romantic relationships, friendships, and family

List the strengths you possess that help you in your relationships.

Describe a specific time your strengths were able to help you in a relationship.

Describe two new ways you could use your strengths in relationships.

1

2
Strengths Exploration

Profession
past or present work, school, or other professional endeavors

List the strengths you possess that help you in your profession.

Describe a specific time your strengths were able to help in your profession.

Describe two new ways you could use your strengths in your professional life.

1

2
Strengths Exploration

Personal Fulfillment
hobbies, interests, and pleasurable activities

List the strengths you possess that help you achieve personal fulfillment.

Describe a specific time your strengths were able to help you with personal fulfillment.

Describe two new ways you could use your strengths for personal fulfillment.
1

2
Helpful Worksheets

Setting goals
Goal Exploration

Meaningful goals can give direction to your life, highlight your most important values, and give a sense of purpose. In this activity, you will think about your goals in seven different areas. Begin by writing a 5-year goal, followed by more specific 1-year and 1-month goals.

- Write goals that are measurable. For example, instead of "get healthy" make a goal of "exercising 5 days a week and eating vegetables with every meal".

- Choose goals that are within your control. For example, "get a promotion at work" requires others to act. However, "take courses to improve my professional skills" is in your control.

- When thinking of 5-year goals, ask yourself how you would like your life to look in 5 years. Then, think of your 1-year and 1-month goals as stepping stones to that 5-year goal.

Social | Career | Physical | Family | Leisure | Personality | Other

Social

Social goals may include devoting time to friendships, participating in social activities, or building a social support network.

My 5-year goal:

My 1-year goal:

My 1-month goal:
# Goal Exploration

## Career

Career goals may include advancing in your current career, furthering education, starting a business, retiring, or switching careers.

**My 5-year goal:**

**My 1-year goal:**

**My 1-month goal:**

## Physical

Physical goals may include exercising regularly, developing healthy habits (e.g. diet and sleep), losing weight, or participating in a sport.

**My 5-year goal:**

**My 1-year goal:**

**My 1-month goal:**
## Goal Exploration

<table>
<thead>
<tr>
<th>Heart</th>
<th>Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family goals may include spending more time with children, rekindling relationships with extended family members, trying new family activities, or improving communication.</td>
<td></td>
</tr>
<tr>
<td>My 5-year goal:</td>
<td></td>
</tr>
<tr>
<td>My 1-year goal:</td>
<td></td>
</tr>
<tr>
<td>My 1-month goal:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Guitar</th>
<th>Leisure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leisure goals may include finding a new hobby, setting aside time to practice a current hobby, trying new things you enjoy, or finding time to relax.</td>
<td></td>
</tr>
<tr>
<td>My 5-year goal:</td>
<td></td>
</tr>
<tr>
<td>My 1-year goal:</td>
<td></td>
</tr>
<tr>
<td>My 1-month goal:</td>
<td></td>
</tr>
</tbody>
</table>
Goal Exploration

 Personality

Personality goals may include improving your attitude, increasing self-esteem, or reducing unwanted behaviors (e.g. anger outbursts).

My 5-year goal:

My 1-year goal:

My 1-month goal:

 Other

Other goals may be anything that did not fit in another category.

My 5-year goal:

My 1-year goal:

My 1-month goal:
Helpful Worksheets

Coping
Healthy vs. Unhealthy Coping Strategies

Coping strategies are actions we take–consciously or unconsciously–to deal with stress, problems, or uncomfortable emotions. Unhealthy coping strategies tend to feel good in the moment, but have long-term negative consequences. Healthy coping strategies may not provide instant gratification, but they lead to long-lasting positive outcomes.

<table>
<thead>
<tr>
<th>Examples of unhealthy coping strategies:</th>
<th>Examples of healthy coping strategies:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Drug or alcohol use</td>
<td>• Exercise</td>
</tr>
<tr>
<td>• Overeating</td>
<td>• Talking about your problem</td>
</tr>
<tr>
<td>• Procrastination</td>
<td>• Healthy eating</td>
</tr>
<tr>
<td>• Sleeping too much or too little</td>
<td>• Seeking professional help</td>
</tr>
<tr>
<td>• Social withdrawal</td>
<td>• Relaxation techniques (e.g. deep breathing)</td>
</tr>
<tr>
<td>• Self-harm</td>
<td>• Using social support</td>
</tr>
<tr>
<td>• Aggression</td>
<td>• Problem-solving techniques</td>
</tr>
</tbody>
</table>

Example Scenarios

Noelle has a research paper due in one of her classes. Because the paper will require so much work, Noelle feels anxious every time she thinks about it. When Noelle distracting herself with other activities, she feels better. Noelle uses the coping strategy of procrastination to avoid her feelings of anxiety. This helps her feel better now, but will cause problems in the long run.

Juan feels jealous whenever his wife spends time with her friends. To control the situation, Juan uses insults to put down his wife's friends, and he demands that his wife stay home. When Juan's wife caves to his demands, he feels a sense of relief. Juan uses the coping strategy of aggression to avoid the discomfort of jealousy.

Rebecca is angry about being passed over for a promotion at work. Rather than discussing the situation with her boss and trying to improve her work performance, she holds onto her anger. Rebecca has learned to manage her anger by drinking alcohol. Drinking numbs Rebecca's anger temporarily, but the problems at work remain unresolved.

Scenario Discussion Questions

• What consequences might result from this individual's unhealthy coping strategy?
• What healthy coping strategies could be helpful for the individual?
• What barriers might be preventing the individual from using healthy coping strategies?
# Healthy vs. Unhealthy Coping Strategies

Describe a problem you are currently dealing with:

<table>
<thead>
<tr>
<th>My unhealthy coping strategies</th>
<th>Consequences of unhealthy coping strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Healthy coping strategies I use, or could use</th>
<th>Expected outcomes of healthy coping strategies</th>
<th>Barriers to using healthy coping strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
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<tr>
<td>3</td>
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</tbody>
</table>
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