Youth with Fetal Alcohol Spectrum Disorder: Suggestions for Theory-Based Career Practice

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Abstract:
Fetal Alcohol Syndrome Disorder (FASD) in youth is increasingly recognized as a disability that has critical implications for career development. The readiness skills needed for successful transitions to adulthood may be delayed by several years and these youth will require ongoing support. Youth with FASD require modified career counseling services and career interventions. However, there is a clear lack of attention to advancing career theory and practice to persons with disabilities particularly for individuals with neurodevelopmental impairments. The goal of the present article is to encourage practitioners to use Social Cognitive Career Theory (SCCT) as a means to develop appropriate transition planning and career interventions for young people with FASD.

Introduction
Yesterday Eric learned how to tabulate and record the number of items sold at the local craft store where he was employed. Yet today Eric clearly cannot remember the steps involved in completing the task. When his employer gave him notice, Eric seemed unable to understand the consequences of failing his agreed upon duties.

The scenario offered above gives insight into the impact of alcohol use during pregnancy and its complex effect on behavior and cognitive functioning of affected individuals. The continuum of disabilities that are experienced as a result of brain damage caused by prenatal exposure to alcohol is referred to by the umbrella term, Fetal Alcohol Spectrum Disorder (FASD). FASD is a life-long disability that affects approximately 9.1 per 1000 live births in the United States (Chudley et al., 2005). Currently no national statistics are available on the rates of FASD in Canada. The effects of alcohol exposure vary by individual depending on amount, timing, and frequency of exposure (Chudley et al., 2005). FASD is largely invisible disability, characterized by cognitive, neurological, social, and emotional challenges (Streissguth, 1997). The effects of prenatal alcohol exposure carry heavy costs for the individual, their family, and society (Premji, Sorot, Bengtze & Hayden 2004). Youth with FASD and their caregivers require high-quality career counseling services and career interventions. However, there is a clear lack of attention to advancing career theory and practice to persons with disabilities (Cummings, Maddox, & Casey, 2000), particularly those with neurodevelopmental impairments.

Implications of Primary and Secondary Characteristics of LD
In order to fully address student needs, counselors need to be familiar with common characteristics of learning disabilities in general, as well as some specific features of learning disabilities in various areas (e.g. written expression, reading comprehension). In addition, it is helpful for counselors to understand primary (e.g., processing deficits) versus secondary characteristics of learning disabilities (such as low self-esteem), in that secondary characteristics (which develop as sequelae from primary issues) may be effectively addressed with quality programming and identification. This is important to understand, both with respect to individual counseling as well as a framework for understanding students’ context of presenting problems and how best to deal with them from a developmental perspective (NCIIL, 1994; Rosenberg, 1997).

SCCT (Lent & Brown, 1996; Lent et al., 2000) to provide a conceptual framework for understanding how personal attributes, the environment, and over time, behaviors can be encouraged to awaken the potential and strengths that are within the reach of this population. As such, the goal of the present article is to encourage practitioners to use SCCT as a means to develop appropriate transition planning and career interventions for young people with FASD.

FASD: An Invisible Disability
The leading cause of developmental disability among Canadian children is Fetal Alcohol Syndrome (FAS) (Public Health Agency of Canada, 2005). The umbrella term, Fetal Alcohol Spectrum Disorder (FASD), is used to depict a range of disabilities as well as the developmental and prenatal exposure to alcohol including Fetal Alcohol Syndrome (FAS), partial FAS (pFAS), Alcohol-Related Neurodevelopmental Disorders (ARND), and Alcohol-Related Birth Defects (ARBD).

The effect of prenatal alcohol exposure varies greatly among individuals, but the specific neurological impairments all impact abilities related to adapting to daily living as adolescents and adults (Streissguth, 1997).

... affected people exhibit a wide range of expression, from severe growth restriction, intellectual disability, birth defect and characteristic dysmorphic facial features to normal growth, facial features and intellectual abilities but with limited social and language development in domains of brain function (Chudley et al., 2005, SI).

Alcohol-related central nervous system dysfunction includes memory impairment, attention deficits, specific...
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learning difficulties (e.g., mathematics or verbal reasoning), difficulty in abstracting, and difficulty with impulse control, all of which have implications for education and career planning. Difficulty in tasks that involve planning and following through with goal-directed action is a particularly common issue (Olson, Feldman, & Streissguth, 1992).

A considerable range of intellectual dysfunction is found among individuals with FASD. The core damage does create particular cognitive and behavioural issues for individuals with FASD, individuals may have normal IQ scores (Streissguth, 1997). The effects of the brain damage is such that individuals’ ability to access and utilize their intelligence is impaired. Unfortunately, standardized test scores in the normal range may mean that those individuals do not qualify for special educational and vocational services that use mental retardation as their qualifying criterion (Streissguth, 1997).

Impairments that develop or become evident over the course of the individuals’ lifespan are referred to as secondary disabilities. These secondary disabilities associated with FASD may be more debilitating for an individual than the primary disability (Fass & Cory, 2004; Streissguth, 1997). Mental health issues, drug and alcohol addiction, trouble with the law, and difficulty with employment and life management are commonly cited (Famy, Streissguth, & Unis, 1998; Streissguth, Barr, Kogun, & Bookstein, 1997). Early diagnosis of FASD is in itself a protective factor, as this allows the individual to receive appropriate services and support from a young age (Streissguth, 1997).

However, young adults living with the disorder may have no formal diagnosis because they do not meet the cut-off criteria for a formal diagnosis or are unable to access limited diagnostic services (Premji et al., 2004). Those individuals with less severe symptoms are often not offered any secondary services due to lack of understanding of the source of their behavioural problems (Streissguth, 1997). In addition, the morning after effects – mental health issues – may further complicate the presenting situation for these individuals. Comorbid conditions including depression, anxiety, and substance use highlight the need for practitioners to be sensitive to this combination of disability and mental health problems. These clients are not solely organically brain-damaged nor solely emotionally disturbed (Streissguth & O’Malley, 1997).

Given the gaps and limitations of the current FASD career literature, there is a clear need for theory-based career intervention development that will address the unique needs of alcohol-affected individuals. In addition to the challenges that these young adults face, they also have strengths and abilities that are unique to them. These strengths include good visual memory and verbal skills, persistence, commitment, success in low-stress, structured situations, a strong sense of fairness, and success in learning with hands-on tasks (Malbin, 2002). By recognizing and building on these strengths, suitable systemic transition planning can be engaged in for young people with FASD.

Transition to Adulthood

During the period from ages 18 to 25, referred to as emerging adulthood (Arnett, 2001), young people face a multitude of new opportunities and responsibilities that require the addition of new information, knowledge, and skills (Arnett, 2001; Mortimer, Zimmerman, Gammelbeck, Holmes, & Shanahan, 2002). Successful transitions to adulthood appear to rest on a number of reliability factors and include objective and psychological aspects (Phillips, Bluestein, John-Davis, & White, 2002; Solberg, Howard, Bluestein, & Close, 2002). Readiness is acquired objectively by engaging in work-based learning and exploration through the instrumental and emotional support of adults who can orient youth to the world of work. Additionally, readiness is acquired through internal psychological contexts, for example, facilitative attitudes of curiosity and sustained attention, confidence about one’s future, planning, and flexibility in responding to challenges and obstacles (Bluestein & Flum, 1999; Phillips et al., 2002).

FASD is a condition that children do not grow. Biologically and developmentally, and foster parents have noted that raising children with FASD to adulthood is full of uncertainty for a number of reasons. Individuals with FASD lag behind developmentally when compared to other youth their age. Therefore, the readiness skills needed for successful transitions to adulthood may be delayed by several years and these youth will require more support between the ages of 18 and 25 years compared to their counterparts (Malbin, 2002). Additionally, adolescents with FASD are likely to display poor judgment, difficulty in perceiving social cues, and failure to understand the consequences of one’s actions (LaDue, Schacht, Tanner-Halverson, & McGowan, 1999). In the transition to adulthood, antisocial social skills may affect the ability of those with FASD to gain positive work-based learning experiences. However, emotional and instrumental support may be provided by caregivers and professionals. Although the majority of children diagnosed with FASD are being cared for in foster or adoptive homes (Hess & Kenner, 1998), foster and adoptive caregivers tend to be highly committed to providing long-term stable, and nurturing experiences for their children (Streissguth et al., 1997).

Social Cognitive Career Theory and FASD

Traditional career models imply that individuals have the ability to choose a preferred career based on values, interests, and personal skills and implement their choice. For individuals with FASD, this is not the case. However, little is known about how those with FASD interpret and navigate career pathways. In essence, “the people who are in greatest need of assistance with career development are the ones about whom the least is known” (Harmon as cited in Chertand & Rose, 1996). Effective support of alcohol-affected youth requires that practitioners appreciate the impact of social environmental as well as the effects of the brain damage (Streissguth & O’Malley, 1997). Therefore, to develop a career development model must therefore take into account the individual’s abilities and disabilities as well as family, school, and individual socio-cultural factors to gain a contextual frame of reference that would influence the individual’s development up to this point, and may continue to influence education as an attainable goal and not just an opportunity reserved for a privileged few (Dipolo, 2002). The implication is that additional efforts at the college level may need to be made so that there is a chance for individuals to increase access for such students, but more importantly to help them succeed once enrolled (Maddux, Foley, McGuire, & Rubis, 2001).

Years of research have led to the conclusion that learning disabilities are not just school based disorders (Price & Shaw, 2000). They are heterogeneous and longitudinal in nature, with accompanying life-long issues which may require on-going support. Students experience difficulties in important areas of functioning, preventing optimal performance at school and work. Many of these problem areas are exacerbated in adulthood by the need to perform increasingly complex tasks, deal with differential environmental demands, and negotiate critical life transitions (Price & Shaw). Current strategy recommendations were derived from knowledge of career relevant student and parent attributes, as well as common characteristics of the educational environment. An understanding of these characteristics serves as a foundation for effective implementation of specific work related skills training. This article will identify the work related skills that career counselors should focus on to help students with learning disabilities succeed in the area of life. Lastly, it should be noted that the following discussion addresses these issues within the context of American legislation. While there may be parallel issues for counselors from Canada and other countries, our review is couched within the framework of current US policy and statutes, particularly at the federal level.

Author’s Note

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Abstract

This paper is a general review of issues and strategies pertinent to the delivery of career development services to postsecondary students with learning disabilities. The authors explore the literature and offer suggestions from clinical practice. Strategies recommended are derived from knowledge of career relevant student attributes, as well as common characteristics of the school environment. Emphasized are the need to focus on student strengths, and corresponding techniques which address affective, cognitive and behavioral domains.

As a result of several U.S. Federal statutes, a growing number of students diagnosed with learning disabilities (LD) are enrolling in universities, creating unparalleled opportunities for this population of young adults in the area of education. Students with learning disabilities increasingly see college education as an attainable goal and not just an opportunity reserved for privileged few (Dipolo, 2002). The implication is that additional efforts at the college level may need to be made so that there is a chance for individuals to increase access for such students, but more importantly to help them succeed once enrolled (Maddux, Foley, McGuire, & Rubis, 2001).

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Family Factors

Developmentally, late adolescence is a time when young people gain independence from their families, with parents gradually decreasing their involvement in their children’s decision.
the success of any intervention. A life-span approach is also called for, as individuals with FASD will need strategies and support to manage their disability throughout their lifespan.

Social Cognitive Career Theory (SCCT), an evolving model of life-career development, provides a conceptual framework for understanding how individuals develop interests in educational and career areas, make choices, and implement those choices with varying levels of success. SCCT insinuates Bandura's tridisciplinary model of causality which assumes individual characteristics, environmental factors, and social environments influence each other throughout this process. Self-efficacy beliefs, outcome expectations, and personal goals are highlighted within this model of reciprocity and can be conceptualized as a developmental-contextual model made up of environmental layers, where the individual (with her/his personal characteristics) is embedded within their immediate family system, and within consequentially larger layers of context (Lent et al., 2000). Developmental-contextualism emphasizes the dynamic interaction that occurs between individuals and their environments (for example: community, sociocultural context, educational environment, and family situation). In this model, neither contextual factors nor action into situation will likely require support and advocacy on the part of the counsellor. Novick and Streisguth (1996) found that although clients often struggle about their situation as though resolution of problems would be easy to accomplish, “in reality they are often unable to follow through in obtaining services on their own behalf” (p. 21) and “memory problems, attentional problems, and poor organizational skills make these patients difficult on a strong infrastructure” (p. 21). Premji and colleagues (2004) highlight the need for structure and consistency in all areas of life for individuals diagnosed with FASD, particularly in regards to transitions, which should be gradually structured so as to ease anxiety and behavioural problems.
Involving an individual’s family in the career counselling process is an asset as sustaining progress in behaviour change is heavily dependent on the individual’s receipt of adequate understanding and support from their family (Novick & Steisguth, 1996; Premji et al., 2004). The client-focused approach of FASD will have varying abilities and disabilities (Burgess & Steisguth, 1992; Olson, 1994). Rather than expecting the young person to fit the interventions, the intervention should be flexible and adaptable to match the unique and changing needs of the affected youth (Burgess, 1994; 2003). If a client does not identify as having a diagnosis of FASD, the counsellor suspects that this could be an issue, the possibility of diagnostic testing should be discussed (Premji et al., 2004).

Although testing can be expensive and difficult to access, for individuals with more severe symptoms on the spectrum, obtaining an accurate diagnosis may help individuals access available services. Particularly helpful would be an individual support worker who can help to co-ordinate the various supports that the individual may need, for example, ongoing therapy, housing, job coaching, transportation, and financial assistance (Novick & Steisguth, 1996). Although an individual’s IQ may fall within the average range, other features associated with alcohol-related birth disorders may affect the individual’s ability to function at that level (Burgess, 1994; Premji et al., 2004). While superficially youth with FASD may present as more competent than they actually are, when expectations are too high, they may show signs of disintegration (Coox, Riley, Loney, Willemse, & Hageman, 2001; Dyer, Alberts, & Nicomb, 1997).}

**REFERENCES**


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Youth with FASD encounter specific obstacles in their career development that are often due to a lack of awareness regarding the educational, vocational, and rehabilitative needs of youth with FASD. Challenges that youth with FASD face include difficulties in transitioning to adulthood, lack of social skills, and limited access to educational and vocational opportunities. These factors can lead to lower self-esteem, increased risk of delinquency, and higher likelihood of unemployment. Therefore, it is crucial to develop effective intervention strategies to address these issues and support the career development of youth with FASD. This can be achieved through collaborative efforts between educators, vocational and educational therapists, and social workers. Additionally, the involvement of family members and community stakeholders in the intervention process is essential to provide a comprehensive support system for youth with FASD.

The relationship between self-efficacy and academic performance is well-documented. In a study by Novick and Streisguth (1996), intercultural variations were observed in the relationship between self-efficacy and academic performance, with youth from non-white ethnic backgrounds reporting higher self-efficacy than their white counterparts. These findings highlight the importance of considering cultural and social differences in the development of effective intervention strategies. Furthermore, the role of social support in enhancing self-efficacy and academic performance cannot be underestimated. Support from family, peers, and mentors can significantly influence youth's academic achievement.

In conclusion, youth with FASD require tailored intervention strategies that address their unique needs and challenges. Collaboration among educators, vocational and educational therapists, social workers, and family members is essential to develop effective intervention programs. By addressing the root causes of their challenges and providing targeted support, youth with FASD can develop the skills and confidence needed to succeed academically and professionally. Additionally, increased awareness and support for youth with FASD can help reduce the stigma associated with FASD, promoting a more inclusive and understanding society.
ties, which must be understood within that individual's life context. A thorough neurobehavioural assessment can guide the client as to what strategies may be effective in the long term. Medications such as buspirone are useful in the short term. Psychological interventions may also be beneficial. Cognitive-behavioural therapy (CBT) is effective in increasing the ability of children and adolescents to cope with stress. CBT can help children to develop more adaptive ways of thinking about and responding to stressful situations. The use of relaxation techniques, such as deep breathing and progressive muscle relaxation, can also be helpful in reducing anxiety and improving sleep. Additionally, social skills training can be beneficial for children who struggle with social interactions.

References

ing a science career was about 50% higher for males than females in the final model. Senior students were just about twice as likely to have scientific career aspirations than juniors.

**DISCUSSION**

This study examined the impact of person input, family, and self-cognitions on the scientific career aspirations of Canadian adolescents. The primary goal was to explore the differential utility of the Lent et al. (1994) theoretical constructs in explaining career choice after adjustment for personal characteristics. Results indicated that family background, scientific learning experiences, self-efficacy measures, outcome expectancies, and scientific interests contributed unique variance to the prediction of scientific career choice. These findings are consistent with the career choice model (Lent et al., 1994) and other work in the area of scientific educational/vocational outcomes (e.g., Borger & Gilroy, 1994; Fry et al., 2000; Froud & Smith, 1996; Lee, 1998; Lent et al., 1993; Nausa & Epperson, 2003; Post et al., 1991; Wang & Stover, 2001). A number of constructs (e.g., context, self-cognitions) were integrated and examined within one theoretical framework. Important, is the generality of the theoretical presuppositions to domain-related areas—namely the science domain in this study.

Findings from the addition of person-input factors to the logistic regression analyses demonstrated the impact of gender, grade-level, and students’ primary language on career aspirations. Adolescents wanting a career in the sciences were more likely male, senior-level students, and those with English as their first language. The gender and grade effects held, even after the addition of contextual and experiential influences. These results accord with prior findings (e.g., Froud & Smith, 1996; Fry et al., 2000; Schoon, 2001). Males have traditionally been socialized, or encouraged more than females to pursue science-related majors and occupations (Hines & Wallace, 2002; Gadalla, 2001). Lent et al. (1994) refer to this as one component of the structure of opportunity that may drive sex differences in career-related behaviour. The under-represent-