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## Emotional Expressiveness and Problematic Behaviors Among Male Juvenile Sexual Offenders, General Offenders, and Nonoffenders

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**EMOTIONAL EXPRESSIVENESS AND PROBLEMATIC BEHAVIORS  
AMONG MALE JUVENILE SEXUAL OFFENDERS,  
GENERAL OFFENDERS, AND NONOFFENDERS**

by

**Carin M. Ness**

**A Dissertation  
Submitted to the  
Faculty of The Graduate College  
in partial fulfillment of the  
requirements for the  
Degree of Doctor of Philosophy  
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and Counseling Psychology**

**Western Michigan University  
Kalamazoo, Michigan  
December 2000**

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AMONG MALE JUVENILE SEXUAL OFFENDERS,  
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Carin M. Ness, Ph.D.

Western Michigan University, 2000

This analytic variable study examined the potential differences that exist among male juvenile sexual offenders (JSOs), general offenders (GOs), and nonoffenders (NOs) on the emotional expressiveness variables of alexithymia and affective orientation, and three problematic behavior variables including self-defeating behavior, risk taking, and reckless behavior. It was hypothesized that JSOs and GOs would be statistically significantly different than NOs on all variables but not different from each other.

Hypotheses were tested by a MANOVA. When statistical significance was indicated, ANOVAs were computed to identify the specific groups and measures, which were statistically significant. The significance level for all analyses was set at the .05 level. Additional analyses were conducted to determine to what extent various clusters of specific descriptors identify group membership for JSOs and GOs, exclusively, utilizing Logistic Regression.

Participants in this study were 47 JSOs and 90 GOs from a large, Midwestern, multi-service, child care organization, and 80 8th- through 12th-grade students (NOs) from a public middle school and high school also located in the Midwest. This study utilized five instruments: the Toronto Alexithymia Scale (TAS-20; Bagby, Taylor, & Parker, 1992), the Affective Orientation Scale (Booth-Butterfield & Booth-Butterfield, 1990), the Self-defeating Personality Scale (Schill,

1990), the Adolescent Risk Taking Scale (Alexander, Kim, Ensminger, Johnson, Smith, & Dolan, 1990), and the Reckless Behavior Questionnaire (Arnett, 1989). Demographic information was collected on all three participant groups.

The findings of this study indicated that there were no statistically significant differences among JSOs, GOs, and NOs on the variables of alexithymia, affective orientation, and self-defeating behavior. On the variable of risk taking, JSOs and GOs were statistically significantly different from NOs but not from each other on the risk taking variable. Results on the reckless behavior variable indicated that all three groups were statistically significantly different from each other. GOs exhibited a higher frequency of reckless behavior than either JSOs and NOs. JSOs exhibited more reckless behavior than NOs. The results of the additional offender demographic analysis indicated that the family problem of drug-alcohol abuse is predictive of GOs and a family problem of sexual abuse issues is predictive of JSOs.

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Carin M. Ness

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## CHAPTER I

### INTRODUCTION

#### Background of Problem

“The word ‘adolescence’ is derived from the Latin verb *adolescere* meaning ‘to grow up’ or ‘to grow into maturity’” [italics in original text] (Muuss, 1975, p. 4). Adolescence has been considered an interim stage of development (Erikson, 1970), a period of transition (Lewin, 1980), a period of separation (Krystal, 1988), a process of emancipation (Bandura, 1980), and a phase of confusion (Lerner & Galambos, 1998). All of these concepts, and others referred to in the literature, address the complexity and uncertainty young people experience during their adolescent years.

Worell and Danner (1989) state adolescence involves making personal decisions, struggling between dependence and autonomy, and finding a place in the world. Lerner and Galambos (1998) offer this summary: “Adolescence is a time of excitement and of anxiety; of happiness and of troubles; of discovery and of bewilderment; and of breaks with the past and of links with the future” (p. 414). It is obvious that adolescence is a challenging phase of life involving many different stages of development and exploration.

#### The Origin of “Adolescence”

Muuss (1980) believed that the term *adolescence* was first used sometime during the 15th century. It was then at the beginning of the 19th century that theories

of adolescent development began to be reported (Miller, 1989). By the beginning of the 20th century, the adolescent developmental period was conceptualized as a distinct period of life with various theories and perspectives surfacing (Muuss, 1975).

G. Stanley Hall wrote the first known book on adolescence, entitled *Adolescence*, in 1916 and is considered to be the father of adolescent psychology (Muuss, 1975). He conceptualized four stages of human development: infancy, childhood, youth, and adolescence. In addition, Hall characterized adolescence as a period of “storm and stress” because of the numerous physical changes adolescents undergo. He also considered adolescence to be a time of “second birth” (Miller, 1989). Prior to Hall, human development theories did not view adolescence as a separate stage in the human developmental process (Muuss, 1975).

Erikson (1963) proposed eight psychosocial stages of the human life cycle with identity versus role confusion as the stage representing adolescence. He conceptualized adolescence as a period of unrest when youth struggle to find their place in their families, amongst their peers, and within society. Erikson (1968) regarded adolescence as being pivotal in the life cycle of development, but he did not conceive of it being greater than the other seven stages of development. The adolescent identity stage is believed to be the stage of self discovery; a new beginning to an individual’s existence. Shaffer (1996) further elaborated on Erikson’s adolescent stage referring to it as the identity versus identity diffusion period when adolescents struggle to resolve the crisis of establishing an individual identity.

Arnett (1999) revisited Hall’s “storm and stress” concept associated with adolescence. He stated that adolescence is considered to be the period of life when an individual is most susceptible to “storm and stress” of varying degrees depending upon each individual’s experiences. Arnett proposed three factors that may negatively

influence an adolescent's development: (1) risk taking behavior, (2) conflict with parents, and (3) mood disruptions.

Krystal (1988) suggested that adolescents usually go through a process of identifying and using their emotions in order to promote self-awareness, self-integration, and self-possession. An adolescent's emotions become a gauge for providing information about "one's reactions to others and readiness to act, which can be heeded or disregarded" (Krueger, 1997, p. 26). Adolescents' emotions appear to influence their behaviors depending upon their respective course of development and vice versa (Krystal, 1988).

The adolescent development process is complex and involves many different components including behaviors and emotions. The quality of the developmental environment coupled with an adolescent's emotional and behavioral reactions to the environment appears to influence the degree to which the adolescent will successfully transition into adulthood (Arnett, 1999; Krueger, 1997). Adolescents may respond to their environment with deficits in emotional expressiveness (Sifneos, Apfel-Savitz, & Frankel, 1977) and/or they may respond effectively with appropriate emotional cues (Booth-Butterfield & Booth-Butterfield, 1990). Behaviorally, adolescents may respond with self-defeating tendencies (Schill, 1990), reckless behaviors (Arnett, 1992), and/or appropriate societal behaviors. The transition into adulthood appears to be experienced on a continuum from optimal level of development to problematic development where the course of healthy development goes awry.

### Problematic Adolescent Development

Problematic adolescent development frequently results in problematic behavior. Jessor and Jessor (as cited in Donovan & Jessor, 1985) define problematic

behavior as “behavior that is socially defined as a problem, a source of concern, or as undesirable by the norms of conventional society . . . and its occurrence usually elicits some kind of social control response” (p. 890). Reckless behavior and risk taking behaviors are associated with the stage of adolescence. These types of behaviors are often viewed by adults as deviant or aberrant while adolescents often view such behavior as appropriate and expected (Alexander et al., 1990; Arnett, 1992). Determining when reckless and risk taking behaviors have crossed the line from “normal” adolescent behavior to deviant behavior appears to be the critical factor in deciding whether to call the behavior delinquent (Stumphauzer, 1985). Stumphauzer (1985) states that at least one time during adolescence, most adolescents are believed to be involved in some delinquent activity while those adolescents continuing to exhibit deviant behaviors, despite punishment, eventually are labeled juvenile delinquents.

Dryfoos (1990) reported four major adolescent risk categories: (1) delinquency, crime, and violence; (2) unsafe sex, teenage pregnancy, and parenting; (3) drug and alcohol use and abuse; and (4) school underachievement, school failure, and dropout. Dryfoos noted there were approximately 23 million adolescents in the United States, in 1990, between the ages of 10 and 17; 10% of them engaged in all of these risk categories, whereas 50% engaged in two or more of the categories. While all four of these risk categories are important, the focus of the present study was on the category of delinquency, crime, and violence.

### Statement of the Problem

The Council on Crime in America (1996) reported there were approximately 7.5 million adolescent males between the ages of 14 and 17. It is predicted this

number will increase by 23% in the year 2005 (Council on Crime, 1996). With an increase in the male adolescent population, it is believed there will be a greater frequency of crimes being committed. These crimes may involve such offenses as sexual assault, theft, murder, destruction of property, and drug-related incidences. Since the literature consistently and pervasively reports that males exhibit more delinquent behavior and engage in more aggressive delinquency activities than females (Dusek, 1991), the focus of this study was on the emotional expressiveness and problematic behaviors of males.

When comparing the delinquent behaviors/offenses of adolescent males, the reporting of sexual offenses is one specific offense that has increased in recent years (Bourke & Donohue, 1996). Society, including law enforcement officials and helping professionals, first believed that sexual offenses were committed only by adults; now studies have begun to indicate that a large percentage of the sexual offender population began their offending behavior during adolescence (e.g., Becker & Hunter, 1997; Coleman, 1997). The reporting of juvenile sexual offending may be increasing, but little is known about this specific population and why they commit sexual offenses (Jacobs, Kennedy, & Meyer, 1997). If delinquency, crime, and violence amongst adolescents is to be reduced through better prevention and intervention programs, studies are needed to learn more about the characteristics of the juvenile offender population. The similarities and differences between nonsexual offenders and sexual offenders, particularly, must be explored.

The present study was designed in order to identify if differences exist in emotional expressiveness and behavior among male juvenile sexual offenders (JSOs), general offenders (GOs), and nonoffenders (NOs). Emotional expressiveness (from ineffective to effective expression) and problematic behaviors (self-defeating

tendencies and risk taking behaviors) are not areas that have been studied extensively with adolescents, although emotion and behavior are important components of adolescent development that may go awry. Interest in these three groups arose out of the increase in the number of JSOs in today's society and the need to distinguish characteristics specific to this particular adolescent group in comparison to other adolescent groups. Past empirical studies have failed to identify distinctions, particularly, between the two offender groups (i.e., Ford & Linney, 1995; Truscott, 1993) due to possible methodological limitations.

Porter (1990) compared JSOs, GOs, and NOs on developmental, psychological, and psychosocial dimensions utilizing self-report questionnaires and projective instruments including: a sexual behavior survey; the Offer Self Image Questionnaire (Offer & Ostrov, 1982); the Thematic Apperception Test (Murray, 1943); and the Kirkendall Sexual Concerns Checklist (Kirkendall, 1952). JSOs differed from both GOs and NOs in that they "demonstrated perceptual distortion of their environment through their use of denial as a defense mechanism, conflicted perceptions of interpersonal relationships, preponderance of fantasized social and sexual situations and a constricted emotional repertoire" (Porter, 1990, p. 66). JSOs also differed from GOs and NOs in attitudes, internalized values, and a false sense of reality. Porter suggested that since JSOs reported extremely high moral values compared to GOs and NOs, they have a distorted view of reality. The overall findings of Porter's study demonstrated that JSOs deny their emotions while GOs narrowly express their feelings identifying primarily with an aggressive, hostile outlook, and NOs utilize a full range of emotional expression.

## Purpose of the Study

The primary purpose of this study was to examine the differences that may exist among three identified adolescent groups on variables of emotional expressiveness and behavior. Another purpose of this study was to further explore Porter's (1990) findings that JSOs more frequently deny their emotions compared to GOs and NOs by utilizing different instruments and examining different constructs of emotional expressiveness, including the awareness and ability to express emotions. In addition, Porter's study was completed with only 10 subjects in each of the identified participant groups. The present study was conducted utilizing larger samples with the hopes of promoting greater generalizability of the findings.

Emotional expressiveness was assessed by two constructs: alexithymia (three-factor structure: inability to express emotions, inability to experience emotions, and externally oriented thinking) and affective orientation (the ability to recognize emotions and use them to guide interactions with others). Three problematic behaviors were assessed: self-defeating behavior, risk taking, and reckless behavior. In addition, demographic variables of age, ethnicity, family system status, abuse history, and offense history were examined to the degree they descriptively characterized these three groups. The following instruments were utilized: the Toronto Alexithymia Scale (Bagby, Taylor, & Parker, 1992); the Affective Orientation Scale (Booth-Butterfield and Booth-Butterfield, 1990); the Self-Defeating Personality Scale (Schill, 1990); the Adolescent Risk Taking Scale (Alexander et al., 1990); and the Reckless Behavior Questionnaire (Arnett, 1989).

## Research Questions

This study was designed to address the following five questions:

1. Does alexithymia, measured by the Twenty-Item Toronto Alexithymia Scale (TAS-20), discriminate between (a) adolescent offenders and adolescent NOs, (b) JSOs and NOs, (c) GOs and NOs, and (d) JSOs and GOs?
2. Does affective orientation, measured by the Affective Orientation Scale (AOS), discriminate between (a) adolescent offenders and adolescent NOs, (b) JSOs and NOs, (c) GOs and NOs, and (d) JSOs and GOs?
3. Does self-defeating behavior, measured by the Self-Defeating Personality Scale (SDPS), discriminate between (a) adolescent offenders and adolescent NOs, (b) JSOs and NOs, (c) GOs and NOs, and (d) JSOs and GOs?
4. Does risk taking behavior, as measured by the Adolescent Risk Taking Scale (ARTS), discriminate between (a) adolescent offenders and adolescent NOs, (b) JSOs and NOs, (c) GOs and NOs, and (d) JSOs and GOs?
5. Does reckless behavior, as measured by the Reckless Behavior Questionnaire (RBQ), discriminate between (a) adolescent offenders and adolescent NOs, (b) JSOs and NOs, (c) GOs and NOs, and (d) JSOs and GOs?

## Definition of Terms

*Juvenile Sexual Offenders (JSOs)*: Male adolescents ages 12–18 who have been adjudicated for sexual offenses.

*General Offenders (GOs)*: Male adolescents ages 12–18 who have been adjudicated for delinquent acts other than sexual offenses (i.e., vandalism, theft, attempted murder).



*Nonoffenders* (NOs): Male adolescents ages 12–18 who are attending public school and have not been previously adjudicated.

### Organization of the Remainder of the Study

A review of the related literature is provided in Chapter II followed by a description of the methods of procedure in Chapter III. Data are analyzed and reported in Chapter IV, and discussion and recommendations are summarized in Chapter V.

## CHAPTER II

### REVIEW OF THE RELATED LITERATURE

The first section of this chapter provides a brief rationale and overview of what is known about the JSO population. Secondly, emotional development is reviewed in order to have a more accurate picture of the importance of emotions and how development may go awry particularly for adolescent offenders. Thirdly, two constructs of emotional expressiveness, alexithymia and affective orientation, are reviewed for their potential role in adolescent expression specifically for adolescent offenders. In addition, self-defeating, risk taking, and reckless behaviors are examined as potential factors of adolescent behavior particularly for adolescent offenders. And, finally, comparative studies conducted with juvenile sexual offenders (JSOs), general offenders (GOs), and nonoffenders (NOs) are explored and discussed to further provide a foundation for the questions of this study.

#### Juvenile Sexual Offenders (JSOs)

Historically, the act of adolescent sexual offending was considered to be a nuisance or experimentation rather than inappropriate or detrimental behavior (Freeman-Longo, 1985). The diagnosis for such behavior was often coded as adolescent adjustment reaction (Freeman-Longo, 1985; Groth & Lored, 1981). It has become more and more obvious that adolescent sexual offending is not simply exploration or sexual curiosity; it is a serious problem with statistics demonstrating an increase in the prevalence rate of adolescent sexual offenses. Bourke and Donohue

(1996) reported that over 60% of sexual offenses committed against children 12 years and under were committed by adolescents. In addition, over 20% of all sexual offenses (for both children and adults) nationwide are committed by adolescents. These rising statistics strongly indicate the importance of studying the JSO population in order to promote effective intervention and prevention (e.g., Coleman, 1997).

Even though the literature on JSOs is limited, there are certain characteristics that are common to this particular population. They are usually male, socially isolated, have poor family relationships, suffer from low esteem, have a history of physical and/or sexual abuse, prefer the company of young children, lack impulse control, struggle with academic difficulties, and exhibit nonsexual delinquency behaviors (e.g., Becker & Hunter, 1997; Bourke & Donohue, 1996; Charles & McDonald, 1997; Kobayashi, Sales, Becker, Figueredo, & Kaplan, 1995; Vizard, Monck, & Misch, 1995). It is not clear, however, whether these characteristics are causes or perhaps consequences of adolescent sexual behavior (Kobayashi et al., 1995).

In reviewing the literature on JSOs, it is apparent that this particular group of adolescents is quite heterogenous, which makes it difficult to generalize the results from research studies (Bourke & Donohue, 1996; Charles & McDonald, 1997; Hunter & Becker, 1994; Vizard et al., 1995). Comorbid conditions usually exist with the diagnosis of adolescent sexual offending (i.e., depression, personality disorders, learning disabilities), which makes it difficult to accurately determine the appropriate classification and treatment of sexual offenders without the use of comprehensive standardized assessments (Becker & Hunter, 1997; Bourke & Donohue, 1996).

Researchers suggest that more empirical research studies are needed to understand JSOs (e.g., Becker & Hunter, 1997) and should include comparisons to nonoffender populations with standardized assessments (Bourke & Donohue, 1996). Freeman-Longo (1985) recommended that JSO research focus on such topics as emotional development, abuse, thinking patterns, sexual development, moral development, social relationships, criminal background, deviant behavior patterns, offender age, treatment, assessment, and values. Although it is not possible to examine all of the aforementioned variables in one study, a review of the adolescent developmental literature, specifically the development or expression of emotion and behavioral components, appears to be an important place to begin investigating the differences that may exist among juvenile offenders and nonoffenders.

All children and adolescents experience a developmental process. Some individuals effectively transition through the various life stages while others struggle due to various factors impacting their environmental context and end up facing numerous trials that cause their developmental process to go awry. Throughout childhood, children are shaped by their experiences and their psychological and biological predispositions (Elliott & Feldman, 1990). The change process accelerates during adolescence, affecting the development of various biological, psychological, and social components (e.g., Dreyfus, 1976; Grossman & August-Frenzel, 1991; Lerner, 1987; Modell & Goodman, 1990; Tubman, Lerner, & Lerner, 1991).

The biological, psychological, and social components are considered primary areas of development with secondary areas including developmental factors such as emotional expressiveness and behavior (e.g., Elliott & Feldman, 1990; Petersen, 1987). Emotional expressiveness and behavior are relevant factors to evaluate and assess when it comes to adolescent development, particularly when development

goes awry as demonstrated by the large number of juvenile offenders. As mentioned previously, emotions and behaviors are affected by an adolescent's developmental context as they are the means by which an adolescent responds to his or her environment (Arnett, 1997; Krueger, 1997). It is important to examine the potential differences in emotional expressiveness and behavior that may exist among various adolescent groups (JSOs vs. GOs vs. NOs) in order to begin to more clearly understand the possible factors that contribute to problematic development.

### Emotional Development

#### Importance of Emotions

There are four component parts to understanding emotion: (1) an experiential part involves what a person is feeling, (2) a regulatory part involves the regulation and control of emotion, (3) an expressive part involves the nonverbal expression of emotion, and, finally, (4) a recognition part involves the ability to identify another person's emotions (Greenberg & Snell, 1997). Understanding emotions is complex, mystifying, and necessary. Emotions are necessary because they are the essence in understanding human behavior (Oatley, as cited in Greenberg, Rice, & Elliott, 1993).

Emotions generally guide people to meet important needs and motivate effective action. . . . It is through becoming aware of and articulating our emotions and needs that we gain knowledge of the significance things have for us. Thus, by being aware of our emotions, we truly get to know ourselves, that is, our appraisals of what is significant to us. (Greenberg et al., 1993, p. viii)

Saarni (1997) reviewed the skills of emotional competence which persons may develop if they are aware of and utilize their emotions to benefit their development. These competencies include an awareness of one's emotions, an awareness of other people's emotions, an ability to express one's emotions, ability to

be sympathetic and empathetic towards others' emotional states, an understanding of how one's emotional expressiveness can affect other people, an ability to demonstrate effective coping strategies, the capacity to understand how one's relationships are impacted by emotional communication, and, finally, the ability to have emotional self-efficacy (Saarni, 1997). This awareness and understanding of one's emotions is a progressive development that takes place as a person grows and matures.

### Influences on Emotional Development

Haviland-Jones, Gebelt, and Stapley (1997) suggest that children are influenced by and associate their intense feelings with family members in family situations, while adolescents are influenced by peers in situations involving peers rather than family members. The influence of others on one's emotional development is variable; no one develops the same set of emotions because of the different social and environmental influences a person experiences (Bridges, 1991).

Young children tend to be influenced by their same-sex parent's emotional expressiveness (Balkwell, Balswick, & Balkwell, 1978). This influence is believed to continue into adolescence as the emotional climate of the family becomes the standard by which adolescents gauge their appropriate level of expressiveness (Balswick & Avertt, 1977; Bronstein, Briones, Brooks, & Cowan, 1996). Saarni (1989) described some specific features of the social environment that influence the emotional development of children:

The social context entails at least the following four features: (a) a relationship with another; (b) the use of emotional-expressive behavior as social information/communication; (c) the response of the other to one's emotional experience, which rapidly leads to negotiation; and (d) the appraisal of meaning, a concept drawn from Lazarus (1984), which is socialized through one's collective social relations over time. (p. 183)

Societal expectations and family emotional climate, therefore, are important influences in the lives of children and adolescents as they seek to identify the appropriate levels of emotions they can express (Bronstein et al., 1996). Having stated the importance of emotions and the influence of family and social factors on a child/adolescent's emotional development, it is important to also review the potential impediments of development that may take place.

### Impediments to Emotional Development

Impediments to emotional development affect young people's ability to develop effective skills of emotional competence. Pollock (1998) noted that boys reduce their level of expressiveness in families by the time they enter elementary school. This reduction is believed to occur because of the presence of shame and the separation process between boys and their mothers. Boys are influenced by society and their male role models to not show their emotions so as not to appear weak or vulnerable (Pollock, 1998). Furthermore, Pollock described how the impact of early separation from their mothers impedes emotional development in boys. Boys are forced to go off to school (as are girls) at a certain chronological age, separating them from their mothers. This separation trauma, in conjunction with societal expectations of masculinity, can greatly impede boys' emotional development. Males, therefore, appear to be somewhat more susceptible to a disruptive emotional developmental process than females due to the aforementioned combination of influences.

In addition to gender impediments, developmental barriers may also arise in a child's family environment when there is a lack of emotional support and/or a chronic period of abuse distorting the young person's ability to understand their emotions and

appropriately express them (Saarni, 1997). Krystal (1988) described the damage that trauma can have on the emotional development of children, which can sometimes lead to the fear of emotions because emotions can act as windows to past traumatic experiences. He further explained how childhood trauma can become a major problem in adolescence:

For the most part, adolescents are not aware either of the history of the psychic trauma or of the meanings of their fears; there is a special challenge in explaining to them how their emotions differ from other people's and how they have been reacting to affects. They do not understand the implications of their fears. They fail to recognize the *meaning* of their affects. Frequently, they are not at all aware of the cognitive element of the fears and therefore have no knowledge of the subjective experience of a "feeling." [*italics in original*] (p. 71)

### Summary

The development of emotions is a comprehensive process. In addition to the biological, developmental stage, young people are subject to numerous environmental influences that impact their level and pace of emotional development. The role of emotional experience is critical to how a young person perceives and responds to the world around him. Experiencing emotions depends upon the ease, frequency, and intensity with which each child or adolescent is exposed to the emotional expressiveness of others (Harris, 1994).

Impediments to the emotional development process result in distorted views of healthy emotional expressiveness, particularly for males. Some young people struggle with their experience to express or experience emotions (i.e., alexithymia) (e.g., Taylor, Bagby, & Parker, 1997), while others struggle to be aware of their emotions and know how to use them in order to communicate with others (i.e., affect orientation) (e.g., Booth-Butterfield & Booth-Butterfield, 1994). Many male



adolescent offenders, both JSOs and GOs, appear to suffer from an ineffective emotional developmental process because of the environments they experience, including unhealthy peer influences and inappropriate adult role models.

### Emotional Expressiveness

#### The Construct of Alexithymia

“Alexithymia, a personality trait defined as an affective and cognitive difficulty experiencing and expressing emotions, has been identified as an indicator of individuals’ impoverished interpersonal and intrapersonal skills” (Yelsma, Hovestadt, Nilsson, & Paul, 1998, p. 1). The term *alexithymia* (literally meaning no words for feelings) was coined by Sifneos in 1972 and has been studied in a variety of disciplines and countries including Canada, England, Finland, Italy, Spain, Japan, and the United States (e.g., Codispoti & Codispoti, 1996; Fukunishi, Kawamura, Ishikawa, & Ago, 1997; Linden, Lenz, & Stossel, 1996; Lopez-Ibor, 1979; Lumley, Mader, Gramzo, & Papineau, 1996; Myers, 1995).

Taylor, Bagby, and Parker (1997) reported that:

Although this personality trait has generated interest only recently among emotion theorists and researchers, the construct of alexithymia emerged more than 20 years ago, and has its origins in clinical observations that were made even earlier on both medical and psychiatric patients. (p. 26)

Nemiah (1996) writes that alexithymic individuals “emotionally and cognitively speaking, . . . seem to have little or no private personal internal life” (p. 217). These individuals are unable to accurately identify their feelings and ask others for comfort, because their feelings of emotional distress are ineffectively communicated (Krystal, 1988; Taylor et al., 1997). Taylor et al. (1997) said that alexithymic individuals are limited in their ability to experience positive emotions and

often are described as anhedonic, which means loss of pleasure. These authors also mention that alexithymics tend to avoid people and prefer to be by themselves.

Alexithymic individuals are also believed to be action oriented; they tend to act impulsively without much cognitive consideration for the situation at hand (Sifneos, Apfel-Savitz, & Frankel, 1977). The central problem for people with alexithymia is believed to center around the inability to appropriately regulate emotions (Taylor, 1994). Taylor (1994) believes alexithymia is probably prevalent throughout the general population with a personality risk factor for psychiatric and medical disorders attributable to a high level of alexithymia. It is important to point out that JSOs tend to be socially isolated (Fehrenbach et al., 1986) and have a problem with poor impulse control (Charles & McDonald, 1997), which are features associated with alexithymic individuals.

Salminen, Saarijarvi, and Aarela (1995) state there were approximately 300 articles published on the concept of alexithymia between 1973 and 1993. Since 1973, alexithymia has been found to be related to such factors as childhood abuse and personality disorder (Berenbaum, 1996); psychological traits of patients with eating disorders (Taylor, Parker, Bagby, & Bourke, 1996); and general family pathology (Lumley et al., 1996). Alexithymic individuals have been found to have fewer close friends, less perceived support, and a deficit in social skills (Lumley, Ovies, Stettner, & Wehmer, 1996). They tend to be interpersonally avoidant and show more nonverbal anger (Berenbaum, 1996; Sifneos et al., 1977) and to have lower self-esteem than nonalexithymic individuals (Yelsma, 1995). Salminen et al. (1995) suggest that alexithymia may be the consequence of early childhood trauma or a major catastrophe during adulthood. In the case of a trauma or catastrophe,

alexithymia may be more accurately defined as a coping mechanism rather than as a personality trait.

### Alexithymia and Adolescents

One particular study found that alexithymia occurred more frequently in people from middle and late adulthood than in adolescence and early adulthood (Feiguine, Hulihan, & Kinsman, 1982). Another study found that children and adolescents are unable to express their emotions at the level by which most adults express emotions. The findings of this study led to the conclusion that it may be normal then for children and adolescents to experience some level of alexithymia (Lopez-Ibor, 1979). Thus, there is a debate as to whether alexithymia naturally exists in adolescence or whether it exists only when emotional development goes awry. Alexithymia has not been studied extensively with adolescents.

Only two studies were found in the literature that exclusively examined alexithymia in the adolescent population and this was in regard to health issues. Koski, Holmberg, and Torvinen (1988) found diabetic adolescents are more alexithymic than nondiabetic youth. This finding suggests that the later individuals develop diabetes, the more capable they are of emotionally expressing themselves. Davis and Marsh (1986) reported a case study with two females suffering from bulimia. They concluded, from this small sample, that bulimic individuals are more likely to be alexithymic and more likely to exhibit certain personality disorders (e.g., narcissistic personality disorder). This last study has limited reliability generalization due to its small sample size of only two participants.

No studies were found that examined alexithymia with a juvenile offender population. However, this concept has been studied with adult offenders incarcerated

for sexual offenses and other violent offenses (Keltikangas-Jarvinen, 1982; Kroner & Forth, 1995). Keltikangas-Jarvinen (1982) studied incarcerated violent adult offenders. She concluded that the violent offenders were alexithymic because they were unable to express their emotions and fantasize. The results of this study are questionable, however, due to the qualitative, subjective nature of the instruments used (the Rorschach test and the Thematic Apperception Test). Kroner and Forth (1995) studied alexithymia and its relationship to intelligence, social responses, psychopathy, and psychopathology. Results showed alexithymia was positively correlated to all dimensions of psychopathology, positively correlated to the socially deviant component of psychopathy, and negatively correlated with the denial of negative characteristics.

### Measurement of Alexithymia

The alexithymia construct may be described by five major content areas: (1) impoverished fantasy life and poor dream recall, (2) difficulty distinguishing between feelings and the bodily sensations that accompany emotional arousal, (3) social conformity, (4) difficulty describing feelings, and (5) lack of introspection (Taylor, 1994). There have been a number of instruments developed to measure alexithymia and its various content areas, although most have been developed without regard for the psychometric properties of validity and reliability (Salminen et al., 1995; Taylor, Bagby, & Parker, 1991). At this time, the Twenty-Item Toronto Alexithymia Scale (TAS-20) has been found to be the most reliable and valid instrument for measuring alexithymia (e.g., Parker, Bagby, Taylor, Endler, & Schmitz, 1993).

The TAS-20, used in the present study, has three identified intercorrelated factors: (a) difficulty identifying feelings, (b) difficulty describing feelings, and

(c) externally-oriented thinking. The identified three factors have demonstrated adequate reliability and validity with both nonclinical and clinical sample populations (Parker et al., 1993). Bagby, Taylor, and Parker (1994b) state, "The TAS-20 is related to both a reduced ability to feel pleasurable emotions and a person's susceptibility to experiencing poorly differentiated emotional distress" (p. 38). The TAS-20 will be further discussed in Chapter III.

### The Construct of Affective Orientation

Affective orientation (AO) "is the degree to which people are aware of their emotions, perceive them as important, and actively consider their affective responses in making judgments and interacting with others" (Booth-Butterfield & Booth-Butterfield, 1994, p. 332). Awareness and action appear to be the primary factors of one's affective orientation. Booth-Butterfield and Booth-Butterfield (1994) view this awareness as a critical component of communication behavior. Individuals with high AO more readily evaluate themselves and question the reasons behind their actions; they are sensitive to their interactions with others (Dolin & Booth-Butterfield, 1993).

Booth-Butterfield and Booth-Butterfield (1994) suggest that individuals with low AO have a difficult time with effective interaction and communication. These authors note that low AO individuals tend to rely more on logic and facts and less on emotions when seeking a guide to their behavior. Emotion is considered to be the underlying premise to affective orientation as internal cues are used as a gauge. "Affective orientation constitutes a pattern of thinking about and then implementing emotional information in communication" (Booth-Butterfield & Booth-Butterfield, 1994, p. 332).

In reviewing studies on affective orientation, females were found to have higher AO compared to males, while age showed no major AO discrepancy among young college students and middle-aged adults (Booth-Butterfield & Booth-Butterfield, 1990). When comparing the AO of American and Japanese male and female students, Frymier, Klopf, and Ishii (1990) found Japanese students to be less emotionally communicative than American students. In addition, males were found to be less communicative than females in both cultures. American male and female students were found to be statistically significantly different, while there was no statistically significant difference found between Japanese male and female students.

Booth-Butterfield and Booth-Butterfield (1992/1994) found AO to be closely related to private self-consciousness and affect intensity. Private self-consciousness refers to being aware of one's emotions and internal physical states while affect intensity refers to the strength with which one experiences his or her emotions. These authors also found AO to have a moderately positive relationship to romantic beliefs, extroversion, public self-consciousness, and a monitoring style of information-seeking. Romantic beliefs are ideas and mental representations a person may expect from his or her relationships. An extroverted person seeks out external, social cues. Monitoring style and public self-consciousness both relate to a person's attention to situational, external cues. Therefore, it appears that AO involves both internal and external evaluation.

Affective orientation is a cognitive process, just as alexithymia, involving skills that assess the awareness of emotions or lack of awareness (Taylor et al., 1997). Affective orientation and alexithymia have been found to be statistically significantly negatively correlated (Yelsma, 1996). These two constructs are considered to be at the opposite ends of the emotional regulation continuum (Taylor

et al., 1997) as results usually report participants with low alexithymia scores and high AO scores and vice versa.

### Affective Orientation and Adolescents

In regard to adolescents, AO has been studied only with college student populations as described above. In addition, no studies were found that examined the construct of AO with an offender population, particularly juvenile offenders.

### Measurement of Affective Orientation

Affective orientation is a multidimensional construct including the following four components: (1) affect intensity, (2) affect importance, (3) affect awareness, and (4) use of affect (Booth-Butterfield & Booth-Butterfield, 1992). A 29-item scale was originally developed to study AO; however, after initial analysis, 9 items were deleted resulting in the 20-item Affective Orientation Scale (AOS) (Booth-Butterfield & Booth-Butterfield, 1990). These authors, after extensive analysis, have concluded that the AOS has acceptable validity and reliability. There will be further discussion regarding AOS validity and reliability in Chapter III.

Having reviewed the emotional expressiveness constructs of alexithymia and affective orientation, focus will now turn to behaviors. The emotions that people experience or fail to experience influence the types of action taken (Greenberg et al., 1993). Indeed, Izard (1977) states that “the emotions or patterns of emotions that a person experiences at a given time influence virtually everything that person does—work, study, play” (p. 10). The emotions that people experience, therefore, dictate how they will respond to the world around them.

## Types of Behavior

Behavioral development in children and adolescents involves many different behaviors. It is impossible to discuss each behavior and its presence in the lives of young people; therefore, the specific behaviors of self-defeating, risk taking, and recklessness are discussed and explored because of their potential influence on problematic adolescent development. These behaviors have not been studied with the adolescent offender population; therefore, there is no empirical evidence to support or disprove their possible contributing influence on development.

### Self-defeating Behavior

*Webster's New World Dictionary* (1984) defines *self-defeating* as an adjective "that defeats its own purpose or unwittingly works against itself" (p. 1292). Self-defeating behaviors are those behaviors that can bring harm or defeat to those who exhibit them (Hilton, Darley, & Flemming, 1989). Schill, Beyler, and Morales (1992) view self-defeating behaviors as a detriment to people's well-being because they view themselves as victims in an unjust world through self-critical eyes filled with anger and hopelessness. Individuals who are involved in self-defeating behaviors tend to exhibit a negative affect state (Yelsma, 1993). Self-defeating, in a general sense, means people defeat themselves and don't allow their true, positive self to develop because negative behavior and affect are blocking their positive potential.

A review of the literature found that self-defeating personality has been studied primarily with a college student population (e.g., McCutcheon, 1995; Schill, Beyler, Morales, & Ekstrom, 1991; Viviano & Schill, 1996). Yelsma (1993) compared self-esteem with a self-defeating personality. He concluded that individuals



with low self-esteem also have self-defeating personality characteristics. Schill et al. (1991) studied self-defeating personality and the family environment. Results indicated that individuals who exhibit self-defeating personalities are more likely to view their family environment as unsupportive, unconcerned, and lacking in moral guidance. Self-defeating personality was also examined with anger issues and Rubin and Peplau's (1973) Just World Scale (Schill et al., 1992). This study found that self-defeating individuals tend to greatly internalize their anger and are suspicious and distrustful of others. As mentioned previously, the victimization outlook is often presented by self-defeating individuals (Schill et al., 1992).

Viviano and Schill (1996) studied the correlation between self-defeating personality and sexual abuse. Their results indicated that "sexual abuse may be a significant factor in the development of a pattern of self-defeating behavior" (pp. 616–617). The aforementioned study provides support for the present study in examining self-defeating behavior among juvenile sexual offenders. Sexual abuse is believed to be one of the etiological factors of juvenile sexual offending, as 40 to 80% of the juvenile sexual offender population have been sexually abused (e.g., Becker & Hunter, 1997).

### Definition of Self-defeating Behavior

A self-defeating personality is defined by the following list of eight criteria:

(1) chooses people and situations that lead to disappointment, failure, or mistreatment even when better options are clearly available; (2) rejects or renders ineffective the attempts of others to help him; (3) following positive personal events responds with guilt or behavior that produces pain; (4) incites anger or rejecting responses from others and then feels hurt, defeated or humiliated; (5) rejects opportunities for pleasure or is reluctant to acknowledge enjoying himself; (6) fails to accomplish tasks crucial to his personal objectives despite demonstrated ability to do so; (7) is not interested in or rejects people who consistently treat him well; and (8) engages in

excessive self-sacrifice that is unsolicited by the intended recipient of the sacrifice. (Schill, 1990, p. 1343)

### Measurement of Self-defeating Behavior

The Self-Defeating Personality Scale (SDPS) was designed to measure self-defeating characteristics (Schill, 1990). Items are based on the aforementioned eight criteria which are listed in the *DSM-III-R*. The original version of the scale had 48 items, which have now been reduced to 24 items for the SDPS—short form. Validity and reliability have been established for the SDPS (McCutcheon, 1995; Schill, 1990) and will be further discussed in Chapter III.

### Risk Taking and Reckless Behavior

Adolescence is often considered a time of adventure, thrill seeking, and excessive risk taking (Alexander et al., 1990; Viney, Truneckova, Weekes, & Oades, 1997) as adolescents test the limits of authority and struggle to let go of their childhood and embark on the road of adolescence to adulthood. The developmental period of adolescence is often marked by a high percentage of reckless behavior, yet this behavior isn't necessarily bad (Arnett, 1992). Arnett provided a developmental review of adolescent reckless behavior, pointing out that it may be considered inappropriate only because the behavior is compared against adult standards. Risks can be positive, such as academic challenges and athletic activities (Levitt, Selman, & Richmond, 1991). Risk appears to be a normal part of adolescent development, with the type of risk and frequency determining whether it is a positive or negative reckless/risk taking behavior (Irwin, 1993). One adolescent described risk in this way: "Being a little scared is what makes it fun" (Levitt et al., 1991, p. 355), while another

teenager mentioned that risk taking is a “natural code of teenagers” (Lightfoot, 1997, p. 10). And, finally, another youth stated:

I don't want to say we feel invincible, because we don't; we're very aware that we can die. But by the same token, we're in the prime of our life and we have excellent health. We take more risks because we're getting independence. (Lightfoot, 1997, p. 7)

The choices adolescents make are considered the biggest risk that adolescents face (Levitt et al., 1991). Donovan, Jessor, and Jessor (as cited in Levitt et al., 1991) suggest that the longer adolescents take in deciding whether to be involved in risk taking behaviors, the less likely they are to start or, if they start, the more likely they will stop. “Risk-taking is a way of framing the world” (Lightfoot, 1997, p. 1). It is believed that there is a specific line between those adolescents who exhibit normal risk taking behavior and those who cross the line into problematic adolescent behavior. Lyng (1993) suggested that those adolescents interested in delinquency activities may find appeal in having control over chaos. In other words, the appeal of surviving questionable risk taking activities promotes participation in such activities, i.e., fast driving.

Reckless driving, drug and alcohol use, vandalism, and early sexual activity are some of the terms used to describe risk taking, reckless, problematic adolescent behavior (Alexander et al., 1990; Shaw, Wagner, Arnett, & Aber, 1992). Behaviors such as the ones listed above are often carried out in private where detection is limited (Wilcox, 1993). Impending punishment by parents and/or authorities appears to affect the level at which adolescents may participate in risky behavior, particularly when there is appeal to avoid punishment and continue the behavior (Anderson et al., 1993). Anderson et al. (1993) further state that adolescents can sometimes be more concerned with the risk of exposure than the actual risk involved in the chosen

activity. “The entire enterprise of adolescent risk-taking is quixotic, a struggle for something just out of reach” (Lightfoot, 1997, p. 58).

### Definition of Risk Taking and Reckless Behavior

A comparison of definitions suggests that the terms *risk taking*—“involving risk; hazardous; dangerous” (*Webster’s New World Dictionary*, 1984, p. 1228)—and *reckless*—“careless; heedless; not regarding consequences” (*Webster’s New World Dictionary*, 1984, p. 1186)—are similar in meaning. Viney et al. (1997) further define risk as “self-exposure to lethal consequences, and exposure despite possible traumatic consequences that outweigh by far momentary immediate pleasure, excitement, or relief from frustration” (p. 170). Arnett (1992) discusses the numerous terms that reckless behavior can be referred to as: “problem behavior,” “risk taking,” and “thrill seeking” (p. 340). For the purpose of this study, *risk taking* and *reckless* behavior were used interchangeably.

Researchers have disagreed about the complexity of adolescent risk taking/recklessness behavior. Some researchers support a unidimensional construct (e.g., Donovan & Jessor, 1985), while others support a multidimensional construct (e.g., Thomson & Powell, 1987). Thomson and Powell (1987) provided four factors to account for reckless behavior: (1) attraction to safe or unsafe activities, (2) an orientation toward violence and danger, (3) fast driving and thrill seeking, and (4) an interest in activities involving bravery and adventure; while Clark, Sommerfeldt, Schwarz, Hedeker, and Watel (1990) suggested three factors: (1) smoking, drug use, and association with bad company; (2) an interest in weapons and military dangers; and (3) an involvement with substances and dangerous driving. Jessor (as cited in

Viney et al., 1997) noted there are at least five reasons adolescents engage in risk taking behavior:

- (1) to express opposition to parental-adult authority, (2) to gain admission and identification with a peer group . . . , (3) to confirm personal identity, (4) to enable the adolescent to take some control, and (5) to affirm maturity and signal transmission into adulthood. (p. 170).

The number of factors chosen influences the type of construct, whether unidimensional or multidimensional, utilized (Shaw et al., 1992).

### Measurement of Risk Taking and Reckless Behavior

The focus of this study includes a multidimensional construct of risk taking and reckless behaviors. This multidimensional construct includes the factors of antisocial behaviors and physical feats in the Adolescent Risk Taking Scale (Alexander et al., 1990), and the reckless behavior factors of fast driving, sexual activity, vandalism, and substance use in the Reckless Behavior Questionnaire (Shaw et al., 1992). There will be further elaboration on the respective measures of risk taking and reckless behavior including validity and reliability information in Chapter III.

Alexander et al. (1990) suggest that once adolescents engage in one problem behavior it only increases the chance that they will repeat the behavior again as well as exhibit other problem behaviors. Comorbidity of reckless behaviors is not uncommon among adolescents as can be seen in accident reports describing the use of alcohol and drugs while driving (Dryfoos, 1993; Levitt et al., 1991). The comorbidity of behaviors is usually accompanied by peer influence. "Adolescents who are prone to engage in risky behaviors are characterized by a set of shared attitudes, perceptions, and values about themselves and society" (Alexander et al., 1990,

p. 560). Arnett (1992) described the influence of peers on adolescent behavior, suggesting that adolescents think they are unique and invincible, which is strengthened when peers believe the same thing. A shared history is formed when a group of adolescents engage in the same behavior (Lightfoot, 1997). The focus of this study was on the shared histories among male adolescents involved in sexual offending, those adjudicated for offenses other than sexual offending, and those found in the nonoffender population.

The review of the literature on the selected variables of emotional expressiveness and problematic behaviors provides a foundation for this study. The concepts of alexithymia and affective orientation have not been studied extensively with the adolescent population, particularly the male offender population. More information is needed to determine the level of emotional expressiveness, as measured by the concepts of alexithymia and affective orientation particularly, that male adolescents may exhibit.

Self-defeating behavior, risk taking behavior, and reckless behavior can be behavioral components in the lives of adolescents. As mentioned earlier, people's emotions impact the behaviors they exhibit (Greenberg et al., 1993). Little is known concerning to what extent adolescents, particularly male offenders, partake in risk taking, self-defeating behaviors and how that may coincide with their level of emotional expressiveness. A review of the relevant literature comparing male adolescent populations, JSOs versus GOs versus NOs, is provided in order to substantiate the importance of this study. Studies are lacking that compare these three groups on the developmental factors of emotions and behaviors.

## Review of Comparison Studies

In this section, two different types of comparison studies will be reviewed and discussed: (1) JSOs with GOs, and (2) JSOs and GOs with NOs. These two types of comparison studies were reviewed in order to examine the variables that have been studied with these specific populations. A summary of the various studies is provided along with a discussion of the limitations found in the respective literature review. The summary provides support for this study and promotes the importance of examining the emotional and behavioral components of development among the JSO, GO, and NO male adolescent groups.

### JSOs vs. GOs

Bischof, Stith, and Wilson (1992 ) studied the family systems of JSOs, nonsex offenders who self-reported committing violent offenses, and nonsex offenders who self-reported committing nonviolent offenses, with the Family Adaptability and Cohesion Evaluation Scale (Olson, Portner, & Lavee, 1985). Results found no distinguishing differences among the groups on the factor of family adaptability. However, on the factor of family cohesion, JSOs viewed their families as more cohesive than the other two groups. Bischof et al. (1995) then studied the same sample with the Family Environment Scale Form-R (Moos & Moos, 1986). Results showed no differences among the offender groups and their perceptions of their family environments.

Moody, Brissie, and Kim (1994) compared the personality characteristics of JSOs and oppositionally defiant adolescents by utilizing Cattell's High School Personality Questionnaire (Cattell, Cattell, & Johns, 1984). Although no significant

differences were found between the two groups, JSOs appear to be more intelligent and display fewer behavioral problems than oppositionally defiant delinquents.

Another comparison study attempted to identify characteristics predictive of sexual offending by studying the differences among juvenile child molesters, juvenile rapists, juvenile status offenders, and juvenile violent nonsexual offenders in terms of intrafamily conflict, child abuse, social adeptness, interpersonal relationships, and self-concept (Ford & Linney, 1995). Status offenders are adolescents adjudicated only on charges of truancy, runaway issues, or incorrigibility. Results indicated that child molesters reported more incidences of sexual and physical abuse and more intrafamily violence. Child molesters differed the most from the other offender groups. However, no differences were found on the variables of family history of criminal offending, assertiveness, self-concept, and social behavior.

Jacobs et al. (1997) compared JSOs and nonsexual offenders on the variables of intelligence, academic achievement, delinquent history, and psychopathy. Their results failed to find any differences between the two groups. The only differences found included: age at first referral, number of prior referrals, number of delinquent acts, and number of treatment groups. JSOs were older at first referral, had fewer prior referrals and delinquent acts, and were assigned to less treatment groups than nonsexual offenders.

Truscott (1993) examined the variables of personality and abuse history. He used the Minnesota Multiphasic Personality Inventory (MMPI) with JSOs, property juvenile offenders, and violent juvenile offenders. Property juvenile offenders are adolescents adjudicated for nonsexual, nonviolent offenses such as forgery or theft. Truscott's findings reported no distinguishable differences among the groups on



personality. The only difference found was in the reporting of childhood sexual abuse, JSOs reported more incidences than the other two groups.

The externalizing and internalizing of problems was examined for differences among JSOs, confrontational sexual offenders, confrontational nonsexual offenders, and nonconfrontational nonsexual offenders by completion of the Child Behavior Checklist (Kempton & Forehand, 1992). Confrontation means offenders that commit offenses such as homicide, armed robbery, assault, and battery. This study focused on observations made by teachers and not on participant self-report. Results concluded that JSOs experience less problems than the other three offender groups. However, internalizing problems may be impossible to ascertain by solely relying on teacher observational report relative to participant self-report.

#### Limitations of JSO and GO Studies

Researchers define *offenders* in many different ways. For instance, the aforementioned comparison studies reveal a wide variety of nonsexual offender populations: property juvenile offenders (Truscott, 1993); confrontational nonsex offenders (Kempton & Forehand, 1992); violent nonsexual offenders; and juvenile status offenders (Ford & Linney, 1995). In this study, GOs include all nonsexual offender populations, including those listed above.

Furthermore, JSOs include all categories of sexual offenders such as juvenile rapists and juvenile child molesters (Ford & Linney, 1995). Because there are varying offender categories published, it becomes very difficult to generalize results, particularly if the main intent of the study is to distinguish characteristics specific to JSOs relative to GOs. Consistent definitions need to be utilized throughout the literature in order to more accurately assess both the JSO and GO population to

determine what characteristics may distinguish these two groups of offenders from each other.

In addition, JSO and GO studies have failed to find a significant number of distinguishable factors separating the two groups. Although, JSOs have been found to (a) have fewer behavioral problems (Moody et al., 1994); (b) be older at the time of their first referral with less referrals and delinquent acts (Jacobs et al., 1997); and (c) have more reported incidences of child sexual abuse than GOs (Ford & Linney, 1995; Truscott, 1993), there have been no surprise discoveries. These studies tend to confirm what has already been established as common knowledge. No studies have been found that specifically studied the emotional expressiveness and behavior differences that may potentially exist between JSOs and GOs using the instruments mentioned in this study.

#### JSOs vs. GOs vs. NOs

Stith and Bischof (1996) studied family communication patterns including the overall quality of communication, open communication, and problems with communication for JSOs, GOs, and NOs. Both JSOs and GOs reported lower overall father-adolescent and mother-adolescent communication than NOs. JSOs and the nonoffender group reported better overall communication and more open communication with their mothers than their fathers than the GO group. Overall communication with fathers was significantly lower for JSOs than NOs.

Valliant and Bergeron (1997) studied the variables of personality, criminal attitudes, and general intelligence with the three groups. Results showed that differences do exist among the three groups in criminal attitudes and personality traits, but not in general intelligence. JSOs and GOs were higher than nonoffenders

on the following factors: self-depreciation, paranoia, antisocial tendencies, thought disturbance, psychopathic deviate, schizophrenia, and chemical abuse. JSOs appeared more resentful, more assaultive, more socially introverted, less thought-disordered, and less indirectly hostile than both GOs and nonoffenders.

Another study compared JSOs to conduct-disordered adolescents (CDs) and NOs by examining the variables of cognitive distortions, problem behaviors, coping skills, and environmental stressors (Hastings, Anderson, & Hemphill, 1997). The results of this study concluded that JSOs and CDs were more similar to each other than NOs. JSOs and CDs listed more cognitive distortions than nonoffenders. Specific differences among JSOs and CDs were reported on the factors of avoidance, socialized aggression, and abuse history. JSOs reported more physical and sexual abuse history, while CDs avoided problems more and had higher levels of socialized aggression. Environmental stressors were not different for any of the three groups.

Assaultive offenders, JSOs, nonviolent offenders, and NOs were studied by Blaske, Borduin, Henggler, and Mann (1989) on the following variables: peer and family relations and individual functioning. JSOs were found to be more anxious than the other groups and to experience more interpersonal isolation. Assaultive offenders (GOs) with assaultive behavioral problems reported the highest level of peer deviancy relations and the lowest level of family cohesion for the four groups.

### Limitations of JSOs vs. GOs vs. NOs Studies

It is apparent that a wide range of variables have been studied with these three comparison groups, including communication (Stith & Bischof, 1996); intelligence (Valliant & Bergeron, 1997); and cognitive distortions (Hastings et al., 1997).

However, no study could be found that looked specifically at emotional expressiveness and behavior exclusively.

Small sample sizes were used in most studies, which affects the generalizability of the results. The smallest sample size included 13 JSOs and GOs and 16 NOs (Valliant & Bergeron, 1997), and the largest sample had 39 JSOs and 66 GOs with an unknown number of NOs represented by normative scores (Stith & Bischof, 1996). Therefore, there is a strong need for sample sizes to be larger in order to generalize results.

Stith and Bischof (1996) mentioned the need for comparative studies to include detailed offender offense history so more descriptive information could be provided on adolescent offender groups. Most studies provided a brief statement on the backgrounds of participants (i.e., Hastings et al., 1997). One study suggested that the placement setting of participants should be controlled (Stith & Bischof, 1996) in order to avoid the possible confounding variables of treatment and setting of offender groups.

### Summary

This review of the related literature illustrates that the specific variables of emotional expressiveness (alexithymia and affective orientation) and behavior (self-defeating, risk taking, and reckless) have not been studied with adolescents, particularly in a JSO, GO, and NO comparison study. Emotional expressiveness has been studied with variables of communication (i.e., Stith & Bischof, 1996) and interpersonal relationships (i.e., Ford & Linney, 1995), but not with alexithymia and affective orientation measures. Specific behaviors were not found to be studied extensively with the adolescent offender population other than with variables such as

problem behaviors and coping skills (Hastings et al., 1997). Therefore, self-defeating behaviors, risk taking, and reckless behaviors have yet to be studied with the adolescent offender population.

Studying specific emotional expressiveness constructs and behavioral characteristics of JSOs, GOs, and NOs would help to expand the existing literature base on these developmental factors. Currently, the knowledge about emotional and behavioral factors in regard to the male adolescent offender population is limited. JSOs are believed to deny their emotions more than GOs, who exhibit limited emotional expression, and NOs, who utilize a full range of emotions (Porter, 1990). Behaviorally, JSOs have been found to exhibit nonsexual delinquent behavior in addition to sexually deviant behaviors (Charles & McDonald, 1997) and to demonstrate poor impulse control (Fehrenbach et al., 1986). GOs have indicated more hostile, aggressive behavior (Hastings et al., 1997; Valliant & Bergeron, 1997) and have been involved in higher levels of peer deviancy relations than JSOs and NOs (Blaske et al., 1989).

## CHAPTER III

### METHODOLOGY

#### Overview

The primary purpose of this study was to examine the potential differences that may exist among male juvenile sexual offenders (JSOs), general offenders (GOs), and nonoffenders (NOs) on the variables of emotional expressiveness and problematic behaviors. The emotional expressiveness variable was studied via the constructs alexithymia and affective orientation. Problematic behaviors were assessed by examining self-defeating behavior, risk taking, and reckless behaviors. It was predicted that both the JSOs and GOs would be different from NOs on the variables of emotional expressiveness and problematic behaviors but would not be different from each other.

#### Participants

Survey packets were distributed to 137 juvenile offenders in a residential treatment center: 47 (34%) were JSOs and 90 (66%) were GOs. In addition, 80 NOs from a public high school and middle school participated in the study. All participants, in the three groups, were male students ranging from the ages of 12 to 18. Students were given the opportunity to volunteer for the study. No attempt was made to persuade or coerce any student to complete the surveys. Students did not

receive any incentives, but were asked to participate as a way of helping other young people like themselves.

### Settings

Starr Commonwealth is a large, Midwestern, multi-service, child care organization with nine sites across Michigan and Ohio. The organization's headquarters is located in Albion, Michigan, which was the site for all residential data collection. Certain core values are emphasized at Starr Commonwealth and are the underlying foundation for the organization's treatment philosophy:

*We believe everyone has the responsibility to help, and no one has the right to hurt, physically or verbally.*

*We believe people can change and problems are solvable opportunities that facilitate growth and development.*

*We believe in recognizing and developing the strengths of all children and families.*

*We believe in the oneness of humankind and will embrace all people as social equals valuing their diversity.*

*We believe all children deserve positive relationships. We believe in the principles of servant leadership and are obligated to help one another reach full potential. We believe all people can be contributing community members with a commitment to social interest and volunteerism.*

*We believe all people are spiritual beings, and in order to reach their full potential, children and families must be given opportunities for spiritual growth.* (Starr Commonwealth, 1998, p. 19) [italics in original text]

Starr Commonwealth offers a residential treatment program for troubled, adolescent males who have a history of delinquent behavior and a residential sexually reactive youth program for adolescent males who have exhibited inappropriate, sexual behavior. Referrals to Starr Commonwealth's residential programs are made by the courts and social services (Starr Commonwealth, 1998). Residential students,

on the Albion campus of Starr Commonwealth, live in 14 cottages. The 14 cottages are divided into three villages: Cedar Village with five cottages, Maple Village with four cottages, and Lakeview Village with five cottages. Four of the 14 cottages are for JSOs, while the remaining 10 cottages are for GOs. Of the four JSO cottages, two are in Cedar Village, one in Maple and one in Lakeview. Each of the 14 cottages consists of approximately 12 students supervised by a multidisciplinary professional team. This team is comprised of helping professionals with bachelor degrees in sociology, psychology, and social work and master's degrees in counseling, social work, and psychology. All residential students were invited to participate in the study.

Cedar Village had 51 (85%) students participate out of a possible 60 students. Maple Village had 38 (79%) students out of a possible 48, and Lakeview had 48 (80%) students out of 60. Therefore, 31 (18%) students chose not to participate in the study out a possible 168 students. The 4 JSO cottages had 47 (98%) participants out of a possible 48, while the 10 GO cottages had 90 (75%) participants out of a possible 120.

Albion Senior High School and Middle School are located in Albion, Michigan. Male students from 8th grade through 12th grade were invited to participate in the study to represent the NO group. The 8th grade is located in Albion Middle School, while 9th through 12th grade are located at Albion Senior High School. The city of Albion has a population of approximately 10,000 people. The majority of Albion's population is Caucasian (63%), with its minority population consisting primarily of African Americans (29%) and secondarily of Hispanics (4%) per the 1990 Census (Albion's Economic Development Office, personal communication, August 3, 2000).



Albion is located an hour away from several large metropolitan cities. Occupations in this small town range from blue collar positions at the local assembly plant to academic positions at the small liberal arts college. The town has four public elementary schools, one public middle school, one public high school and one parochial school (kindergarten through 8th grade).

Ten students (11%) out of a possible 89 (8th grade) students participated in the study at Albion Middle School. At Albion Senior High School, 84 (28%) students out of a possible 252 (9th through 12th grade) students participated in the study. Fourteen (15%) of the surveys were discarded from the 94 public school participant survey packets, because of having a prior offense other than a traffic violation.

### Treatment Philosophy

Starr Commonwealth's treatment philosophy is based on a psychoeducational model emphasizing strength-based interventions and peer group counseling, the foundation of Positive Peer Culture (PPC) (Vorrath & Brendtro, 1974, 1985). In the psychoeducational model, six tenets are incorporated into the total philosophy of treatment: "(a) relationship is primary, (b) assessment is ecological, (c) behavior is holistic, (d) teaching is humanistic, (e) crisis is opportunity, and (f) practice is pragmatic" (Brendtro & Ness, 1983, p. 17).

Residential students participate in peer group meetings where they learn to recognize and "own" their problems by helping one another in a positive environment (Brendtro & Ness, 1983). Therefore, the treatment team focus of each cottage group is on building a caring, responsible culture. Each member participates in group meetings and community service learning projects, and helps to develop his own

individualized academic and treatment program with the assistance of his group members (Starr Commonwealth, 1998).

PPC is a “*total system for building positive youth subcultures*” (Vorrath & Brendtro, 1985, p. xx) [italics in original]. Vorrath and Brendtro (1974, 1985) describe how PPC strives to teach basic values rather than implement rules. The value of the human being is the one basic value that PPC adheres to, and, if PPC were to emphasize rules, the one basic rule would be care for others.

PPC demands responsibility be taken by its members; therefore, students in Starr Commonwealth’s residential treatment program are responsible for one another and must show peer concern towards group members (Vorrath & Brendtro, 1974, 1985). These authors also discuss how the atmosphere for PPC requires openness, trust, and focus on the here and now rather than the past. Problems are seen as opportunities within an environment that demands greatness rather than obedience. The following problem-solving list has been developed as a guide for all participants of a PPC program in order to promote a universal language:

1. Low self-image: has a poor opinion of self; often feels put down or of little worth.
2. Inconsiderate of others: does things that are damaging to others.
3. Inconsiderate of self: does things that are damaging to self.
4. Authority problem: does not want to be managed by anyone.
5. Misleads others: draws others into negative behavior.
6. Easily misled: is drawn into negative behavior by others.
7. Aggravates others: treats people in negative, hostile ways.
8. Easily angered: is often irritated or provoked or has tantrums.
9. Stealing: takes things that belong to others.

10. Alcohol or drug problem: misuses substances that could hurt self.
11. Lying: cannot be trusted to tell the truth.
12. Fronting: puts on an act rather than being real. (Vorrath & Brendtro, 1985, pp. 30–31)

Vorrath and Brendtro (1985) mention that for those problems that do not appear on the list (i.e., sexual problems and family problems), they may still be discussed in the group; they are just discussed in relation to one of the main problems. For instance, a group member with family issues will be urged to look at the problem in regards to how it affects him and others. In summary, PPC is a total treatment system that utilizes peer group counseling in helping individual members to reach their fullest potential.

JSO and GO residential groups both follow the PPC model. In addition, JSOs also take part in treatment that focuses on learning their offense cycle, relapse prevention plan, victim empathy training, and understanding their own issues of abuse (Marquoit & Dobbins, 1998). Meaningful change occurs for JSOs after appropriate values are developed and accepted (Starr Commonwealth, 1998). The JSO offense cycle focuses on trigger events, feelings, fantasies, grooming, assault, and eliminating guilt.

Starr Commonwealth utilizes a strength-based treatment approach when working with JSOs. Marquoit and Dobbins (1998) describe the importance of a strength-based treatment program for JSOs rather than an intrusive intervention program. A strength-based program enlists students as change agents, which helps young men to value themselves and feel worthy of helping and serving others. Young men involved in treatment are expected to help other people throughout their stay at Starr Commonwealth, including their group members, staff, and volunteer contacts

such as nursing home residents. "Learning to give to others is an essential aspect of sexual offender [treatment]" (Marquoit & Dobbins, 1998, p. 42).

### Instruments

The instruments utilized in this study consisted of five self-report, personal-social-emotional assessment instruments (i.e., emotion and behavior) and one demographic form. The two emotional expressiveness constructs (alexithymia and affective orientation) were the two variables of emotion measured by self-report on the Twenty-Item Toronto Alexithymia Scale (TAS-20) (Bagby et al., 1992) and the Affective Orientation Scale (AOS) (Booth-Butterfield & Booth-Butterfield, 1990). The three problematic behaviors were assessed by self-report utilizing the following scales: the Self-Defeating Personality Scale (SDPS) by Schill (1990), the Adolescent Risk Taking Scale (ARTS) by Alexander et al. (1990), and the Reckless Behavior Questionnaire (RBQ) by Arnett (1989). Information reported on the demographic forms provided a description of the participants. All instruments and demographic forms are described below.

#### The Twenty-Item Toronto Alexithymia Scale (TAS-20)

The TAS-20 was designed by Bagby et al. (1992). This scale consists of 20 items (short form) designed to assess a person's ability to express emotions. The scale has a three-factor structure: (1) Difficulty Identifying Feelings, (2) Difficulty Describing Feelings, and (3) Externally Orientated Thinking (Parker et al., 1993; Taylor et al., 1997). All three factors are combined to produce a total score for alexithymia; the total score was the only score used in this study because it was the intent to have a comprehensive overview of a participant's emotional expressiveness

rather than analyze each factor independently. The 20 items are answered on a 5-point Likert scale from strongly disagree (1) to strongly agree (5). A high score indicates a person with alexithymic tendencies. Individuals who are considered alexithymic have scores of 61 or higher, and those who score 51 or less are considered nonalexithymic (Taylor et al., 1997).

### Reliability and Validity

The TAS-20 has demonstrated good internal consistency for various samples of subjects, including college students, psychiatric out-patient adults, and male adult inmates, with coefficient alphas of .81 (Bagby et al., 1994a; Kroner & Forth, 1995; Lumley et al., 1996; Taylor, 1994) and .82 (Yelsma et al., 1999). Bagby et al. (1994a) indicated that the TAS-20 also had good test-retest reliability over a 3-week interval ( $r = .77$ ). In addition, the TAS-20 has demonstrated some evidence of validity with college students and an adult clinical population (Bagby et al., 1994b).

Bagby et al. (1994b) reported concurrent validity by comparing the level of agreement on alexithymia ratings between external observers and adult patient scores on the TAS-20 ( $r = .53$ ;  $p < .01$ ). These authors also indicated convergent validity by correlating scores on the TAS-20 with self-report measures of traits related to alexithymia; for example, in a sample of college students, the TAS-20 negatively correlated with measures of need for cognition ( $r = -.55$ ;  $p < .01$ ) and psychological mindedness ( $r = -.68$ ;  $p < .01$ ). Discriminant validity was suggested by correlating scores on self-report measures of traits unrelated to alexithymia with TAS-20; for example, also in a sample of college students, traits of conscientiousness and agreeableness were found to be nonsignificantly correlated to the TAS-20 (Bagby et al., 1994b).

### The Affective Orientation Scale (AOS)

The AOS was designed by Booth-Butterfield and Booth-Butterfield (1990). This is a 20-item scale that assesses the extent to which individuals are aware of and use their emotions to guide their interactions with others by answering a scale from strongly disagree (1) to strongly agree (5). The higher the score on the AOS, the more aware a person is of his or her emotions. Individuals with scores above 75 are considered to have high affective orientation (AO), below 65 are considered to have low AO, and between 65 and 75 a moderate degree of AO (Frymier et al., 1990).

Originally, the AOS was designed to be a one-factor scale including the dimensions of affect awareness and use of affect (Booth-Butterfield & Booth-Butterfield, 1990). After further study, these same authors (1992) statistically determined that the AOS was a four-factor scale including the following components: (1) Affect Awareness, (2) Use of Affect, (3) Affect Intensity, and (4) Implementation of Affect. These four factors together provide a comprehensive overview of the emotion assessment process; therefore, the total score is used and not the individual factor scores when using the AOS (Booth-Butterfield & Booth-Butterfield, 1992).

### Reliability and Validity

The AOS has been found to be an internally reliable instrument with a split-half reliability (Spearman-Brown correction) of .92 for college students (Booth-Butterfield & Booth-Butterfield, 1990). Another study by Booth-Butterfield and Booth-Butterfield (1992) demonstrated good test-retest reliability for the AOS over a 4-week interval (Spearman Brown = .91; Spearman Brown = .90) and internal consistency ( $\alpha = 0.85$ ;  $\alpha = 0.85$ ) also for college students .

Booth-Butterfield and Booth-Butterfield (1990) also demonstrated some evidence of convergent and divergent validity by correlating scores on the AOS with communication-salient and conceptually related scales for a sample of college students. These authors found the AOS to be moderately correlated to femininity ( $r = .31; p < .05$ ) and conversational sensitivity ( $r = .28; p < .01$ ) and independent of other constructs including masculinity, need for cognition, communication apprehension, and self-monitoring. Dolin and Booth-Butterfield (1993) determined the AOS to be negatively correlated to emotional distancing ( $r = -.21; p < .025$ ) and positively correlated to diversity ( $r = .24; p < .025$ ).

### The Self-Defeating Personality Scale (SDPS)

The SDPS was designed by Schill (1990). The scale consists of 24 items (short form) and measures individuals' behavior towards themselves. Items are based on the criteria for diagnosing Self-defeating Personality Disorder:

which include being drawn to relationships in which one suffers abuse and humiliation, rejecting offers of help from others, rejecting people who treat one well, making others angry and inciting rejection, rejecting opportunities for pleasure, and engaging in self-sacrificing behavior which is not solicited. (Viviano & Schill, 1996, p. 616)

The 24 items of the SDPS are answered by an agree or disagree response (1 = agree, 2 = disagree). The summation of the 24 items results in a total score; the higher the score, the more self-defeating personality characteristics a person exhibits.

### Reliability and Validity

Studies have found the SDPS to be a precise test with internal consistencies ranging from a Cronbach alpha of .68 for college students (Schill, 1990) to a Cronbach alpha of .81 for a nonclinical sample of adults (McCutcheon, 1995). Schill

(1990) also demonstrated good test-retest reliability of the SDPS over a 3-week interval ( $r = .75$  for female college students and  $r = .71$  for male college students).

Schill and Kramer (1991) indicated some evidence of convergent validity for the SDPS with a sample of male college students. These authors found the SDPS to be negatively correlated with self-reinforcement ( $r = -.46; p < .01$ ) and positively correlated with depression ( $r = .44; p < .01$ ). Furthermore, Schill et al. (1991) found a significant negative correlation between the SDPS and family environment cohesiveness for both male and female college students ( $r = -.42$  and  $r = -.33$ , respectively;  $p < .05$ ). Men had negative correlations between the SDPS and the family environment moral-religious emphasis ( $r = -.45; p < .05$ ), expressiveness ( $r = -.28, p < .05$ ) and achievement orientation ( $r = -.35; p < .05$ ) (Schill et al., 1991).

In general, the psychometric properties of the scale appear adequate for research purposes. The scale seems to target individuals who strongly identify with a victim's position and, particularly for men, have several characteristics consistent with those expected of self-defeating personality disorder. (Schill, 1990, pp. 1344–1345)

### The Adolescent Risk Taking Scale (ARTS)

The ARTS was designed by Alexander et al. (1990), who held small, student focus groups and asked them to “describe things that teenagers your age do for excitement or thrills” (p. 562). Student answers were then collapsed into a six-item scale measuring adolescents' risk-taking behaviors. Items were answered using a 3-point format: (a) Never (b) Once or Twice, and (c) Several Times. For this study, items were answered using a 5-point format: (a) Never, (b) Once, (c) 2–5 times, (d) 6–10 times, and (e) More than 10 times. In the present study, the response format was edited to allow for more specific categories and consistency with the RBQ. A high score indicates an adolescent who is involved in several risk-taking behaviors.



### Reliability and Validity

Psychometric evaluation of the ARTS indicated good internal consistency with alpha coefficients of .78 (as eighth graders) and .80 (as ninth graders) (Alexander et al., 1990). Alexander et al. (1990) invited only male and female eighth graders to complete the ARTS and then a year later asked them to complete the ARTS again as ninth graders. Fifty-three to 73% of the students gave the same answers a year later for individual items which was supportive of test-retest reliability.

Preliminary analyses showed the ARTS meets criteria for construct validity (Alexander et al., 1990). The six items on the ARTS were factors analyzed with a five-item anger scale. Results confirmed that the ARTS was a distinct scale from a hostile behavior scale. Predictive validity was also demonstrated with the ARTS by examining eighth grade scores as predictors of ninth grade risk-taking behavior. Alexander et al. (1990) found high eighth grade scores to be predictive of substance use and sexual activity in the ninth grade.

### The Reckless Behavior Questionnaire (RBQ)

The RBQ was developed by Arnett (1989). This is a 10-item questionnaire measuring a person's reckless behavior. Items are answered using a 5-point format: (a) Never, (b) Once, (c) 2–5 times, (d) 6–10 times, and (e) More than 10 times. Behaviors were chosen for the questionnaire based on “the potential for immediate and/or dire negative consequences” (Shaw et al., 1992, p. 308). The higher the score, the more a person is involved in several reckless behaviors.

### Reliability and Validity

The RBQ indicated good internal consistency for a sample of high school students ( $\alpha = .80$ ) and for a sample of college students ( $\alpha = .83$ ) (Shaw et al., 1992). In addition, good test-retest reliability was demonstrated by the college sample at a 3-month interval ( $r = .80$ ).

Shaw et al. (1992) indicated construct validity for the RBQ when scores on the RBQ were found to positively correlate with instruments that assess for reckless behavior including the Zuckerman Sensation Seeking Scale-Form V (Zuckerman, 1984), the Aggression subscale of the Personality Research Form (Jackson, 1967), and the MacAndrew scale of the Minnesota Multiphasic Personality Inventory (MacAndrew, 1965). Furthermore, discriminate validity was shown when the RBQ showed no relation to the Rosenberg Self-Esteem Scale (Rosenberg, 1965).

Shaw and his associates (1992) further explored the construct validity of the RBQ by performing discriminant function analyses on a two-factor model of the RBQ. These authors labeled “Drivevandal” as one factor and “Drugsex” as the other factor. Labels were chosen to reflect the dominance of two types of behavior; for instance, driving fast and vandalism for factor one, and substance use and sexual activity for the other factor (see Shaw et al., 1992, for more extensive discussion on the psychometric qualities of this scale).

### Demographic Form

A demographic form was completed by a research assistant at Starr Commonwealth for the residential students (Appendix A). The form asked for the following information: age, ethnicity, family system status, length of stay at Starr

Commonwealth, abuse history, and offense history. All information was retrieved from student files and an existing computer database by the research assistant.

A demographic form was also completed by public high school and middle school students (Appendix B). However, instead of reporting prior abuse history and offense history, public school students were asked to indicate whether or not they had ever been assigned to a detention, suspension, or to the Reach Program. The Reach Program is an in-house suspension program. Public school students were also asked if they had ever been charged for an offense in court excluding minor traffic violations. If they answered yes to being charged for an offense other than a minor traffic violation, the research packet was discarded from the study. It was the intent of this study to have nonoffenders without criminal offense records in order to maintain a “true” sample of nonoffenders separate from the offender groups.

Public school students completed their own demographic forms while residential students’ forms were completed by the research assistant at Starr Commonwealth based on the extensive information available in student files and/or the database for the ease of data collection. Public school files were not examined due to the purpose of the present study. The primary focus was on the emotion and behavior results from the participant survey packets and the offense/abuse history differences between JSOs and GOs.

### Consent and Approval

#### Starr Commonwealth Approval

Permission to collect the self-report data from the residential students and their student files was granted by Starr Commonwealth staff including the Director of

Evaluation and Planning, Director of Michigan Programs, Directors of the Residential Programs, Program Advisory Council, and the Management Team of Starr Commonwealth. Letters of approval were received on March 31, 1999, and May 14, 1999 (Appendix C).

#### Albion Public School Approval

Permission to collect data from public school students was granted by the superintendent of Albion Public Schools in a letter dated March 31, 1999 (Appendix D). Furthermore, support from the middle school and senior high principals, counselors, and teachers was secured upon approval from the superintendent.

#### Human Subjects Approval

The study involved human subjects; therefore, it was necessary to seek approval from the Western Michigan University Human Subjects Institutional Review Board. Due to the fact all participants were minors and some were in residential treatment, a Full Board review was necessary for the board to critically evaluate the intentions of this study. A favorable response was received on June 16, 1999 (Appendix E).

#### Informed Consent

Residential students were informed about the opportunity to participate in the research study in their respective cottage classrooms. Assent forms were read to all students (Appendix F). Students who volunteered to participate were asked to sign the assent form, after they were informed of the specific kinds of data that were to be collected. No attempt was made at any time to persuade or coerce students into

participating in this study. Starr Commonwealth, as acting custodian of residential students per court delegation, approved this study (Appendix C).

Public school students were informed about the opportunity to voluntarily participate in the research study in their respective classrooms. All students were read the appropriate assent form (Appendix G). Students who volunteered to participate were asked to sign the assent form, after they were informed of the specific kinds of data that were to be collected. No attempt was made at any time to persuade or coerce students into participating in this study. In addition, permission forms were sent home with each student to have his parent/guardian sign, giving the student permission to participate in the present study (Appendix H).

### Procedure

Survey packets were administered to residential students in their respective cottage group classrooms. The assent form was read to all students. After assent had been given, questionnaires were administered to all participating students. Nonparticipating students were asked to sit quietly during data collection. The instructions and survey packet were read aloud to each group by the researcher. Self-assessment data collection took 1 hour per classroom. Data collection was completed at Starr Commonwealth in July of 1999.

Codes were assigned to each student by a Starr Commonwealth research assistant: (a) codes were placed on each student's self-report questionnaire, and (b) codes were placed on each student's demographic form. Residential students were informed of the kinds of information to be collected on their demographic form. Demographic forms were completed by the Starr Commonwealth research assistant

in August of 1999. The master list matching names to codes was destroyed once data collection was complete.

Survey packets were administered to public high school and middle school students in the cafeteria and library, respectively. After permission forms and assent forms were collected, questionnaires were administered to all participating students. The instructions and survey packets were read aloud to each group. Self-assessment data collection took 1 hour per setting. Data collection at the middle school was completed in September of 1999 and in October of 1999 for the high school. Codes for the public school students were assigned by the researcher. The master list matching names to codes was destroyed once data collection was complete.

Throughout the entire process, all students, including those in the residential treatment program and in the public school setting, were informed that their participation was voluntary, and that they could cease their participation at any time without penalty. All student responses were recorded on coded survey packets. No names were listed on demographic forms or survey packets.

### Data Analysis

Descriptive statistics were provided for all three participant groups. Analyses of specific demographic variables were computed by utilizing Logistic Regression Analysis to determine to what extent various clusters of descriptors identify group membership for JSOs and GOs exclusively. To test the hypotheses of this study, an overall MANOVA was computed considering all five measures (i.e., TAS, AOS, SDPS, ARTS, and RBQ) with respect to the three groups (i.e., JSOs, GOs, and NOs). When the MANOVA indicated statistical significance, ANOVAs were computed to identify the specific groups and measures which were statistically

different. Tukey's studentized range (HSD) tests were then computed after ANOVAs for three group comparisons. The statistical significance level for all analyses was set at the .05 level with descriptive trends in the data that were less than the .10 level being considered due to the lack of research available in the juvenile sexual offender field.

## CHAPTER IV

### RESULTS

#### Introduction

This chapter provides data analyses pertaining to the hypothesized differences in emotional expressiveness and behavior that may exist between male juvenile sexual offenders (JSOs), general offenders (GOs), and nonoffenders (NOs). The independent group variable for this study was divided into three levels: (1) JSOs, (2) GOs, and (3) NOs. The five dependent variables were (1) alexithymia (TAS), (2) affective orientation (AOS), (3) self-defeating personality (SDPS), (4) risk taking behavior (ARTS), and (5) reckless behavior (RBQ). It is important to state that there was no intent or ability to account for all potential variables that may have affected group differences. This study was not a treatment study; therefore, variables were not controlled. It was understood from the beginning of the present study that there would be the potential for confounding variables.

The first section of this chapter will provide a description of the three participant groups, including the results of an offender group demographic analysis of select variables. Each dependent measure is then evaluated, including a summary of the psychometric findings for each of the study's instruments. Thirdly, the study's hypotheses are examined including the statistical analyses used.



## Participant Groups

### JSOs vs. GOs vs. NOs

There were a total of 217 participants in this study. A breakdown of the total revealed 47 were JSOs, 90 were GOs, and 80 were NOs. Table 1 provides a summary of the group ages. All three groups ranged from 12 to 18 years of age. Average age was not significantly different across the three participating groups,  $F(2, 214) = 0.15, p < .86$ .

Table 1  
Participant Ages

Group	Descriptive Statistics		
	Mean	Median	Mode
JSOs ( $N = 47$ )	15.32	15	16
GOs ( $N = 90$ )	15.31	15	17
NOs ( $N = 80$ )	15.43	15	15
JSOs + GOs ( $N = 137$ )	15.31	15	16

Of the nine ethnic categories provided in the survey (Caucasian, African/American, Hispanic, American Indian, Asian American, Multiracial, Alaskan Native and Pacific Islander, and Other), no participants indicated Alaskan Native or Pacific Islander heritage. Table 2 below summarizes the distribution of ethnicities across the three groups and compares the low frequency ethnicities combined with the two high frequency ethnic groups.

Table 2  
Participant Ethnicity

Ethnic Group	Group Percentages			$\chi^2$	df	p
	JSO (N = 47)	GO (N = 90)	NO (N = 80)			
Caucasian	66.0	39	52.5	38.6	12	.001
African American	25.5	55.5	22.5			
Hispanic	2.1	3.3	9			
Asian American	0	1.1	1			
American Indian	0	0	2.5			
Multiracial	6.4	1.1	10			
Other	0	0	2.5			
Caucasian	66.0	39	52.5	32.4	4	.001
African American	25.5	55.5	22.5			
All Others	8.5	5.5	25			

Distribution of ethnic heritage was different across the three groups.

Observation of the percentages of ethnic heritages within each group indicated that the GO group had a higher proportion of African Americans relative to the JSO and NO groups and, interestingly, the NO group had a higher proportion of “Other” (meaning not Caucasian or African American) relative to the GO and JSO groups. The JSO group was the most dominant Caucasian group.

There were five family system categories that participants could choose from indicating their current living situation or, in the case of the residential students, the family environment they lived in prior to placement (both biological/adoptive parents present, single biological/adoptive parent, blended family with stepparent or partner, extended family, or nonfamilial custodial arrangement which includes fostercare placement). Table 3 below summarizes the distribution of family system categories across the three groups.

Table 3  
Participant Family System Status

Family System	Group Percentages			$\chi^2$	df	p
	JSO (N = 47)	GO (N = 90)	NO (N = 80)			
Both parents	17	13	49	43.3	8	.001
Single parent	49	63	27.5			
Blended family	19	9	15			
Extended family	11	13	4			
Nonfamilial	4	1	5			

The majority of the JSOs and GOs came from single-parent homes while the majority of NOs lived with both parents. Interestingly, there was a higher proportion of JSOs and NOs that were living in blended families compared to the GO group who had a higher proportion living with extended family members.

#### JSOs vs. GOs

The number of treatment services prior to placement at Starr Commonwealth for JSOs ranged from zero to three with a mean of 1.00 and a standard deviation of .96. The GO group ranged from zero to eight prior treatment services with a mean of 1.61 and a standard deviation of 1.40. The majority of GOs were in zero to five treatment services prior to Starr with actually only one GO reporting eight different placements.

These results imply that JSOs may have been more likely to be sent directly to Starr's residential program while GOs were sent to other placements prior to arriving at Starr. The number of prior treatment services was significantly different across the two offender groups,  $F(1, 135) = 7.23, p < .009$ . When adjusting for the potential

outlier, the GO who had eight different placements, the results are still significantly different across the two offender groups,  $F(1, 135) = 7.48, p < .008$ .

At the time of this study, JSOs and GOs had been in treatment for a specified amount of time (0 to 3 months, 4 to 6 months, 7 to 9 months, 10 to 12 months, 13 to 16 months, or over 16 months). Table 4 below summarizes the distribution of length of treatment across the two offender groups.

Table 4  
Length of Treatment (Tx) for Offender Groups

Length of Tx	Group Percentages		$\chi^2$	<i>df</i>	<i>p</i>
	JSO ( <i>N</i> = 47)	GO ( <i>N</i> = 90)			
0 to 3 months	23	41	14.7	5	.010
4 to 6 months	26	20			
7 to 9 months	13	20			
10 to 12 months	17	10			
13 to 16 months	2	6			
over 16 months	19	3			

Observation of distribution percentages indicated that the GO group had a higher percentage of being in treatment 0 to 3 months relative to the JSO group who reported a higher percentage of being in treatment for over 16 months. There was no difference between the two groups on moderate lengths of treatment (4 to 16 months). Thus, at the time of this study, the JSOs were more likely to have been in treatment a greater length of time compared to the GOs.

The presenting problem checklist utilized by Starr Commonwealth has 186 possible presenting problems. Presenting problems are those problems that each offender experienced prior to placement in Starr Commonwealth's treatment program.

Presenting problems are listed under the following headings: general problems, adolescents, sexual issues, violence, victim from violence, social interactions, family issues, post institution, substance abuse, depression, and medication. Of the 186, 143 (76.9%) are relevant to the adolescent population ages 12 to 18. In the present study, 102 of the 143 (71.3%) possible adolescent presenting problems were identified for the JSO/GO participant groups. Of the 102 participant presenting problems, 33 (32.4%) were statistically significantly different between the JSO and the GO group. All 102 of the presenting problems are summarized in Appendix I. Table 5 summarizes the 33 presenting problems that demonstrated statistically significant differences between the JSO and GO groups and the two presenting problems that were nonsignificant but yielded *p* values less than .10.

Of the 36 general problems, 19.4% (7/36) were statistically significantly different across the JSO and GO groups. Of these 7, 4 involved sexual behaviors or context (i.e., incest, sexual abuse, and prostitution) and were, not surprisingly, observed in higher frequency in the JSO group. The remaining 3 general problems (substance abuse, truancy, and other criminal behavior), were more frequent in the GO group.

Of the 12 adolescents (12–18) problems, 50% (6/12) were statistically significantly different across the JSO and GO groups. Of these 6, 4 were essentially problems with authority issues (i.e., school related, runaway, disobedience, and delinquency) and observed in higher frequency in the GO group. The remaining 2 problems were of higher frequency in the JSO groups (i.e., sibling relationships and fire setting). Fire setting is considered a marker for sexuality issues (Moody et al., 1994).

Table 5  
Summary of Offender Problems

Presenting Problems Within Categories	Percentage With Problem		<i>df</i>	$\chi^2$	<i>p</i>
	JSO ( <i>N</i> = 47)	GO ( <i>N</i> = 90)			
GENERAL PROBLEMS					
Incest between adult and child	10.6	0	1	9.9	.002*
Incest between siblings	10.6	0	1	9.9	.002*
Other sexual abuse	40.4	7.8	1	21.4	.001*
Substance abuse	21.2	43.3	1	6.5	.011*
Truancy from school	25.5	45.6	1	5.219	.022*
Prostitution	4.3	0	1	3.887	.049*
Other criminal behavior	25.5	48.9	1	6.970	.008*
ADOLESCENTS (12–18)					
School related	87.2	97.8	1	6.243	.012*
Runaway	10.6	26.7	1	4.754	.029*
Disobedience, authority problems	74.5	96.7	1	15.605	.001*
Siblings' relationships	51.1	30.0	1	5.862	.015*
Delinquency	63.8	93.3	1	19.239	.001*
Fire setting	12.8	0	1	12.016	.001*
SEXUAL ISSUES					
Masturbation	12.8	1.1	1	8.650	.003*
Homosexuality	4.3	0	1	3.887	.049*
Incest	6.4	0	1	5.873	.015*
Cross dressing	6.4	0	1	5.873	.015*
VIOLENCE					
Child abuser	14.9	1.1	1	10.667	.001*
Sexual abuser	89.4	4.4	1	99.828	.001*
VICTIM FROM VIOLENCE					
Sexually abused	40.4	6.7	1	23.587	.001*
SOCIAL INTERACTIONS					
Peers	57.5	22.2	1	16.999	.001*
Friends	32.0	72.2	1	20.647	.001*
Heterosexual	6.4	0	1	5.873	.015*
Relatives	27.6	7.8	1	9.789	.002*

Table 5—Continued

Presenting Problems Within Categories	Percentage With Problem		df	$\chi^2$	p
	JSO (N = 47)	GO (N = 90)			
FAMILY ISSUES					
Step parents	38.3	17.8	1	6.968	.008*
Adoption	12.8	3.3	1	4.476	.034*
Blended family	4.3	0	1	3.887	.049*
Bereavement	2.1	18.9	1	7.601	.006*
Drug-alcohol abuse	42.6	66.7	1	7.390	.007*
Sexual abuse issues	76.6	11.1	1	59.366	.001*
POST INSTITUTIONALIZATION					
Detention Center	74.5	93.3	1	9.629	.002*
SUBSTANCE ABUSE					
Alcohol	19.2	43.3	1	7.934	.005*
Marijuana	25.5	56.7	1	12.050	.001*
DEPRESSION					
Suicidal	6.4	1.1	1	3.027	.082*
MEDICATION					
Antidepressants	19.2	8.9	1	2.990	.084*

\*Significant at the .05 level.

Of the six sexual issues problems, 66.7% (4/6) were statistically significantly different across the JSO and GO groups. Three of the four problems were observed only in the JSO group (i.e., homosexuality, incest, and cross dressing) while the problem of masturbation was also observed in the GO group at a frequency of 1.1 compared to the 12.8 frequency for the JSOs. It seems obvious that JSOs would experience more problems of a sexual nature compared to GOs due to the character of their offenses.

Of the six violence problems, 33.3% (2/6) were statistically significantly different across the JSO and GO groups. These two problems (i.e., child abuser and sexual abuser) were observed in higher frequency in the JSO group. To be identified with a problem of sexual abuser would appear to be synonymous with classification into the JSO group which 89.4% of the JSOs confirmed.

Of the five victim from violence problems, 2% (1/5) were statistically significantly different across the JSO and GO groups. Not surprisingly, the problem of sexually abused was observed in higher frequency in the JSO group. JSOs are apt to report more incidences of sexual abuse than GOs (e.g., Truscott, 1993).

Of the four social interaction problems, 100% (4/4) were statistically significantly different across the JSO and GO groups. Of these four problems, only one was observed in higher frequency in the GO group (i.e., friends). The remaining three problems (i.e., peers, heterosexual, and relatives) were of higher frequency in the JSO groups. It was expected that the JSO group would be identified with more social interaction problems because this group is often considered to be more socially isolated and experiencing poorer family relationships than the GO group (e.g., Becker & Hunter, 1997).

Of the 13 family issue problems, 46.2% (6/13) were statistically significantly different across the JSO and GO groups. Of these 6, 3 were essentially problems with relating (i.e., stepparents, adoption, and blended family) and observed in higher frequency in the JSO group. Two of the problems were of higher frequency in the GO group (i.e., bereavement and drug-alcohol abuse). The remaining problem of sexual abuse issues was, again, found to have higher frequency within the JSO group compared to the GO group.



Of the six postinstitutionalization problems, 1.7% (1/6) was statistically significantly different between the JSO and GO groups. The problem of detention center was observed in higher frequency in the GO group. GOs tend to have a higher frequency of behavioral problems than JSOs, which would result in more referrals to outside treatment settings (Jacobs et al., 1997).

Of the seven substance abuse problems, 2.9% (2/7) were statistically significantly different across the JSO and GO groups. These two problems (i.e., alcohol and marijuana) were observed in higher frequency in the GO group. Greater frequency of substance abuse has been associated with nonsexual offenders previously (Moody et al., 1994).

In summary, the aforementioned presenting problem categories report a pattern of results that are consistent with what was expected. JSOs appear to have greater difficulty with sexual problems, issues of relating, and fire setting. GOs, on the other hand, experience more problems with authority issues, friends, treatment settings, and substance abuse.

The two presenting problems that showed descriptive differences ( $p < .085$ ), but did not reach traditional levels of statistical significance included the problems of suicide and antidepressants. For both problems, the JSO group was observed with a higher percentage than the GO group.

The offense list utilized by Starr Commonwealth has 71 possible offenses. Of the 71, 32 (45%) were listed as committing offenses for JSOs and GOs. Committing offenses are those criminal offenses that make an adolescent a ward of the state and may lead to placement in a facility such as Starr Commonwealth. The 32 committing offenses are summarized in Table 6.

Table 6  
Summary of Committing Offenses

Committing Offense	Percentage With Offense		df	$\chi^2$	p
	JSO (N = 47)	GO (N = 90)			
Criminal sexual conduct – 1st degree	17.0	0	1	16.269	.001*
Criminal sexual conduct – 2nd degree	23.4	0	1	22.903	.001*
Criminal sexual conduct – 3rd degree	10.6	1.1	1	6.692	.010*
Criminal sexual conduct – 4th degree	12.8	1.1	1	8.650	.003*
Other sexual offense	8.5	0	1	7.890	.005*
Breaking & entering	0	10.0	1	5.030	.025*
UDAA/No operator's permit	0	8.9	1	4.437	.035*
Parole/Probation violation	10.6	11.1	1	.007	.933
Truancy	8.5	12.2	1	.436	.509
Retail fraud	4.3	10.0	1	1.380	.240
Assault & battery	6.4	7.8	1	.089	.766
Incorrigibility	4.3	8.9	1	.980	.322
Malicious destruction of property	2.1	8.9	1	2.300	.129
Possession of a controlled substance	2.1	7.8	1	1.793	.181
Larceny	4.3	4.4	1	.003	.959
Stolen property	2.1	5.6	1	.866	.352
Home invasion	2.1	5.6	1	.866	.352
Weapons	0	5.6	1	2.710	.100
Felonious assault	2.1	3.3	1	.158	.691
Motor vehicle theft	0	3.3	1	1.602	.206
Other status offense	2.1	1.1	1	.222	.638
Curfew	0	2.2	1	1.060	.303
Fleeing from police with a motor vehicle	0	2.2	1	1.060	.303
Alcohol violations	0	2.2	1	1.060	.303
Entry without permission	0	2.2	1	1.060	.303
Unarmed robbery	0	2.2	1	1.060	.303
Indecent exposure	2.1	0	1	1.929	.165
Gambling	0	1.1	1	.526	.468
Resisting Arrest	0	1.1	1	.526	.468
Other public order offense	0	1.1	1	.526	.468
Other alcohol related offense	0	1.1	1	.526	.468
Assault with intent to do harm	0	1.1	1	.526	.468

\*Significant at the .05 level.

Of the 32 committing offenses, 22.9% (7/32) were statistically significantly different across the JSO and GO groups. Of these 7, 5 were essentially sex-related offenses and reported in higher frequency with the JSO population (i.e., criminal sexual conduct 1st, 2nd, 3rd, 4th degrees and other sexual offense). Note that under the offenses criminal sexual conduct (CSC) 3rd and 4th degree, 1.1% of the GO population were reported to have had a sexually related committing offenses. Initial speculation on this finding suggests that the CSC charge must have been insignificant in relation to the nonsexual related charges the adolescent had also committed. It can be speculated then, that to be placed in the JSO group, an adolescent must have committed other sexually related offenses and more severe CSC degrees (i.e, 1st and 2nd degree). The remaining two problems were of higher frequency in the GO groups (i.e., breaking and entering and UDAA/No operator's permit).

The offenses in Table 6 are clustered from high to low frequency ranges between JSOs and GOs with the last cluster of offenses representing the lowest range frequency. The first cluster represents the seven statistically significantly different offenses mentioned above. The second cluster of six offenses are those with a high frequency range of >10%. The third cluster of six offenses is for the medium frequency range of 10 to 5%. The last cluster of 13 offenses includes the low frequency range of <5%. It is interesting to note that of all the offenses listed, in Clusters 2 through 4, only the offense of indecent exposure has a higher frequency for JSOs than GOs. Otherwise, GOs have a greater percentage for all remaining offenses.

Table 7 lists the previous offense history of both JSOs and GOs. Previous offense history is the criminal record history for offenders that occurred prior to placement at Starr Commonwealth. Previous offenses come from the same offense list used for committing offenses; therefore, the same offenses can occur in both Table 6

and Table 7. Of the 71 offenses, 41 (57.7%) were listed as previous offenses for JSOs and GOs. Table 7 lists the previous offense history of both JSOs and Gos.

Five of the 41 previous offenses were statistically significantly different between the JSO and GO groups. Criminal sexual conduct 3rd degree was statistically significantly higher for the JSO group. The GO group had a greater statistical significance for the following offenses: breaking and entering, stolen property, UDAA/No operator's permit, and assault and battery.

Table 7  
Summary of Previous Offenses

Previous Offenses	Percentage With Offense		df	$\chi^2$	p
	JSO (N = 47)	GO (N = 90)			
Criminal sexual conduct - 3rd degree	4.3	0	1	3.887	.049*
Breaking & entering	8.5	23.3	1	4.547	.033*
Stolen property	0	8.9	1	4.437	.035*
UDAA/No operator's permit	0	12.2	1	6.246	.012*
Assault & battery	8.5	22.2	1	4.017	.045*
Retail fraud	12.8	21.1	1	1.441	.230
Larceny	8.5	15.6	1	1.343	.247
Truancy	12.8	8.9	1	.506	.477
Malicious destruction of property	6.4	13.3	1	1.530	.216
Home invasion	4.3	13.3	1	2.773	.096
Curfew violation	4.3	10.0	1	1.380	.240
Parole/Probation violation	4.3	8.9	11	.980	.322
Felonious assault	6.4	6.7	1	.004	.949
Incorrigibility	8.5	4.4	1	.928	.335
Other status offense	2.1	7.8	1	1.793	.181
Possession of a controlled substance	4.3	3.3	1	.075	.785
Criminal sexual conduct – 2nd degree	6.4	1.1	3	3.027	.082
Criminal sexual conduct – 4th degree	6.4	1.1	21	3.027	.082
Entry without permission	2.1	4.4	1	.471	.492
Weapons	0	5.6	1	2.710	.100

Table 7—Continued

Previous Offenses	Percentage With Offense		<i>df</i>	$\chi^2$	<i>p</i>
	JSO ( <i>N</i> = 47)	GO ( <i>N</i> = 90)			
Other drug related offense	2.1	2.2	1	.001	.971
Resisting arrest	0	3.3	1	1.602	.206
Arson	0	3.3	1	1.602	.206
Motor vehicle theft	0	3.3	1	1.602	.206
Alcohol violations	2.1	1.1	1	.222	.638
Criminal sexual conduct – 1st degree	2.1	1.1	1	.222	.638
Other public order offense	2.1	1.1	1	.222	.638
Trespassing	0	2.2	1	1.060	.303
Assault with intent to rob – unarmed	0	2.2	1	1.060	.303
Uttering and publishing	2.1	0	1	1.929	.165
Other sexual offense	2.1	0	1	1.929	.165
Assault without intent	2.1	0	1	1.929	.165
Possession/purchase/use of alcohol	0	1.1	1	.526	.468
Disorderly conduct	0	1.1	1	.526	.468
Delivery of a controlled substance	0	1.1	1	.526	.468
Check fraud	0	1.1	1	.526	.468
Armed robbery	0	1.1	1	.526	.468
Assault with intent to murder	0	1.1	1	.526	.468
Disturbing the peace	0	1.1	1	.526	.468
Cruelty to animals	0	1.1	1	.526	.468

\*Significant at the .05 level.

Four offenses showed descriptive differences ( $p \leq .100$ ) but did not reach traditional levels of statistical significance. Criminal sexual conduct 2nd and 4th degree were identified with a higher frequency for JSOs, which was expected. Home invasion and weapons were higher for the GO population. The offenses in Table 7, as they were in Table 6, are clustered from high to low frequency ranges between JSOs and GOs with the last cluster of offenses representing the lowest range frequency. The first cluster represents the five statistically significantly different previous offenses. The second cluster of nine offenses are those with a high frequency range of >10%. The

third cluster of six offenses is for the medium frequency range of 10 to 5%. The last cluster of offenses (listed on this page) includes the low frequency range of <5%.

The offenses listed in Clusters 2 through 4 demonstrate that JSOs had a higher frequency than the GOs on only nine offenses. Interestingly, JSOs had a higher percentage on the five previous offenses of truancy, incorrigibility, possession of a controlled substance, alcohol violations, and other public order offense that GOs had reported with higher frequency under committing offenses. The offenses of CSC 1st degree and other sexual offense were reported with higher frequency for JSOs under committing offenses and previous offenses, whereas the previous offenses of uttering and publishing and assault without intent were only reported as offenses on the previous offense table for JSOs.

### Summary of Descriptive Results

The JSO group had an average age of 15, were primarily Caucasian, and came from single parent homes. They had a higher percentage of being in treatment over 16 months, at the time of the study, when compared to the GO group. JSOs indicated numerous sexual problems, issues of relating with others, and fire setting tendencies. This group was primarily committed for treatment on CSC charges. The age of first offense was only recorded for the JSO group; thus, there is no comparison between the two offender groups on this variable. The age of first offense for JSOs ranged from 10 to 16 with a mean of 13.2, a median of 13, and a mode of 14.

The GO group had an average age of 15, were primarily African American, and came from single-parent homes. GOs had a higher percentage of being in treatment 0 (zero) to 3 months at the time of the study, when compared to the JSO group. They experienced more problems with authorities, friends, treatment settings,

and substance abuse than the JSO group. The statistically significant committing offenses for GOs were breaking and entering and UDAA/No operator's permit.

The NOs were also an average age of 15. They were primarily Caucasian and from intact families. Only NOs were asked if they had previously been sent to detention or suspended from school; thus, there is no comparison between the groups on this variable. Eighty percent of the NOs reported being assigned a detention or suspension during their school tenure. Extensive demographic information was not collected for NOs because they were not involved in residential treatment like the offender groups.

### Offender Group Demographic Analysis

Additional analyses were conducted to determine to what extent various clusters of specific descriptors identify group membership for JSOs and GOs, exclusively, utilizing Logistic Regression. A description of Logistic Regression analysis is provided in Appendix J. Specific descriptors were selected based on their relevancy to the JSO literature (i.e., Hanson & Bussiere, 1998) and, furthermore, by the statistical significance identified in Tables 5–7 above. A summary of nine logistic regression models is provided in Appendices K–S with the following variable headings: Demographic Variables, General Criminality (Nonsexual) Variables, Sexual History Variables, Developmental History Variables, and Psychological Maladjustment variables. These same headings were utilized in Hanson and Bussiere's (1998) meta-analytic study reviewing the potential predictive factors for sexual offender relapse. The nine individual models represented the above named variable cluster headings and were analyzed separately. Three of the headings, General Criminality (Nonsexual) Variables, Sexual History Variables, and Developmental History Variables, were

analyzed in two or more individual models due to the number of offenses and/or issues listed.

In Model 1 for Demographic Variables (Appendix K), age was not predictive of group membership. Race, however, was predictive. For the purposes of this model, race was categorized dichotomously into two categories: 0 = Caucasian and 1 = Minority. The Odds Ratio (OR) of .324 was statistically significantly less than 1, indicating that as race moved from 0 (Caucasian) to 1 (Minority), the likelihood of being in the JSO group decreased; therefore, minority status is more predictive of GO rather than JSO group membership.

In Model 2 for General Criminality Nonsexual Variables (Appendix L), breaking and entering and UDAA/No operator's permit were both predictive of group membership. The OR for these nonsexual committing offenses was 0.000, which was statistically significantly less than 1, indicating these offenses are more predictive of GO group membership than JSO group membership. When the OR is extremely high or low, the notion of statistical significance is founded, although strict, classical interpretation is not appropriate. Variables may be predictive due to low incident reporting rather than an accurate reflection, which would affect the reliability and validity of the results. Low incidence can be due to small sample size or to the possibility that there is no occurrence of the predictor for one of the groups, in which case, the statistic may be meaningless.

In Model 3 for additional General Criminality Nonsexual Variables (Appendix M), the previous nonsexual adjudication of breaking and entering was not predictive of group membership. The OR for stolen property and UDAA/ No operator's permit was 0.000, which was statistically significantly less than 1, indicating that these previous offenses are more predictive of GO group membership than JSO group membership.



The OR for assault and battery was .312, which was also statistically significantly less than 1, indicating that this previous offense is more predictive of GO group membership than JSO group membership.

In Model 4 for Sexual History Variables (Appendix N), the committing offenses of CSC 1st and 2nd degree and other sexual offense were not predictive of group membership. The OR was 27.500 for both CSC 3rd and 4th, which is statistically significantly greater than 1, indicating these committing offenses are predictive of JSO group membership.

In Model 5 for additional Sexual History Variables (Appendix O), none of the previous adjudications of sexual history were predictive of group membership for either the JSOs or GOs.

In Model 6 for additional Sexual History Variables (Appendix P), the diverse sexual issues of homosexuality, incest, and cross dressing were not predictive of group membership. Masturbation with an OR of 9.889 was statistically significantly greater than 1, indicating that it is more predictive of JSO group membership than GO group membership.

In Model 7 for Developmental History Variables (Appendix Q), the family issues of drug-alcohol abuse and sexual abuse were both predictive of group membership. The OR for drug-alcohol abuse of .079 was statistically significantly less than 1, indicating that this issue is more predictive of GO group membership. The OR for sexual abuse of 77.023 was statistically significantly greater than 1, indicating that this issue is more predictive of JSO group membership.

In Model 8 for additional Developmental History Variables (Appendix R), all of the developmental history variables were predictive of group membership. The OR of 14.830 for sexually abused was statistically significantly greater than 1, indicating

that this issue is more predictive of JSO group membership. The OR of 5.340 for neglect was also statistically significantly greater than 1, indicating that this issue is more predictive of JSO group membership. The OR of .362 for abandonment was statistically significantly less than 1, indicating that this issue is more predictive of GO group membership. Finally, the OR of .145 for disciplinary problems in school was also statistically significantly less than 1, indicating this issue is more predictive of GO group membership.

In Model 9 for Psychological Maladjustment Variables (Appendix S), both marijuana and antidepressants were predictive of group membership. The OR of .239 for marijuana was statistically significantly less than 1, indicating that this issue is more predictive of GO group membership. The OR of 3.057 for antidepressants was statistically significantly greater than 1, indicating that this issue is more predictive of JSO group membership.

In summary, from the nine models listed above, the committing offenses of CSC 3rd and 4th degree, masturbation, sexual abuse issues in the family, reported sexual abuse and neglect, and use of antidepressants were found to be more predictive of JSO group membership than GO group membership, while minority status, committing offenses of breaking and entering and UDAA/ No operator's permit, previous adjudications of assault and battery; stolen property; and UDAA/ No operator's permit, reported drug-alcohol issues in family, abandonment, disciplinary problems in school, and use of marijuana were found to be more predictive of GO group membership compared to JSOs.

Table 8 below is an overall model including all of the significant predictors from Appendices K–S. Nonsignificant predictors were not included in this final model. In Model 10 (Table 8), the committing offense of breaking and entering, the previous

Table 8  
Summary of Overall Model of Significant Predictors

Model	Predictors	df	Estimate	Odds Ratio <sup>a</sup>	95% CI	
10	Intercept	1	.0025			
	Race	1	-.2876	.750	.142 –	3.985
	COMMITTING OFFENSES					
	CSC 3 <sup>rd</sup> degree	1	2.4932	12.100	.492 –	999.000
	CSC 4 <sup>th</sup> degree	1	2.6208	13.746	.983 –	446.742
	Breaking & Entering	1	-13.9013	0.000	0.000 –	.510
	UDAA/No Operator's Per.	1	-5.9513	0.003	0.000 –	999.000
	PREVIOUS ADJUDICATION					
	Assault & Battery	1	-1.7535	.173	.014 –	1.278
	Stolen Property	1	-11.5923	0.000	0.000 –	16.552
	UDAA/No Operator's Per.	1	-12.5096	0.000	0.000 –	.942
	DIVERSE SEXUAL ISSUE					
	Masturbation	1	15.3075			
	FAMILY ISSUES					
	Drug-alcohol abuse	1	-3.1309	.044	.002 –	.335
	Sexual abuse issues	1	5.1121	166.014	20.774 –	999.000
	DEVELOPMENT. HISTORY					
	Neglect	1	.6156	1.851	.292 –	14.015
	Disciplinary probs. (school)	1	-.5360	.585	.076 –	3.607
	Sexually-abused	1	-.1069	.899	.083 –	9.053
	Abandonment	1	-.6571	.518	.066 –	3.136
	PSYCH. MALADJUSTMENT					
	Antidepressants	1	-.4401	.644	.054 –	7.372
	Marijuana	1	-1.4225	.241	.044 –	1.085
Prob Event	Cut Score	Sens	Spec	PV+	PV–	Delta
.343	.34	87.2	83.3	73.2	92.6	38.9

<sup>a</sup>Odds Ratio not provided for the variable masturbation because it was undefined. The incidence of the predictor was zero for one of the two groups.

adjudication of UDAA/No operator's permit, and the family issues of drug-alcohol abuse and sexual abuse issues were found to be predictive of group membership. The OR for the committing offense of breaking and entering and previous adjudication of UDAA/No operator's permit was 0.000, which was statistically significantly less than 1, indicating these particular offenses are predictive of GO group membership. The OR of .044 for drug-alcohol abuse was statistically significantly less than 1, indicating that this particular issue is also predictive of GO group membership, while the OR of 166.014 for sexual abuse issues was statistically significantly greater than 1, indicating that this issue is highly predictive of JSO group membership.

All of the above listed predictors (in Models 1–9) were statistically significant in their own models, but when placed in the overall model (Model 10), many showed collinearity with other variables. This collinearity finding supports the importance of utilizing Model 10, because this model provided a comprehensive analysis of the previous statistically significant predictors to find all did not uphold statistical significance when analyzed collectively. Thus, the only statistically significant predictors for group membership, in Model 10, fell under the variable headings: General Criminality (Nonsexual) and Developmental History – Family Issues. This means that a committing offense of breaking and entering and a previous adjudication of UDAA/No operator's permit are more predictive of GOs than JSOs. Furthermore, the family problem of drug-alcohol abuse is predictive of a GO, and a family problem of sexual abuse issues is predictive of a JSO.

The most interesting change between the nine individual models and the overall model (Model 10) was found with the variable antidepressants. The use of antidepressants was found to be more predictive of JSOs in the individual model, Model 9, (Appendix S) because the OR was statistically significantly greater than 1.

Then, in the overall model, Model 10 (Table 8), antidepressants had an OR less than 1, which is was more predictive of the GO group although not significantly. In conclusion, the results suggested that most of the statistically significant predictors were highly interrelated when they were combined in an overall model decreasing the number of statistically significant predictors.

### Dependent Measures

#### Twenty-Item Toronto Alexithymia Scale (TAS)

Each of the 20 items on the TAS was answered on a 5-point Likert scale of agreement (1 = Strongly Agree, 2 = Moderately Agree, 3 = Neither Agree or Disagree, 4 = Moderately Agree, and 5 = Strongly Agree). Each item had the full range of responses.

The overall range of the scores was 24 to 85, where the theoretical range would be 20 to 100. Across all subjects, the TAS mean and standard deviation was 52.44 and 11.97, respectively. The overall coefficient alpha internal consistency estimate of reliability was .79, which was consistent with past studies using the TAS that reported coefficient alphas ranging from .76 to .84. The individual group coefficient alphas for the TAS were .74 (JSOs), .80 (GOs), and .83 (NOs). Comparing item to total correlations, Item 5 was the only item that negatively correlated with the total score ( $r = -.24$ ) for all three groups. The item content, which states “I prefer to analyze problems rather than just describe them,” was considered and no obvious reason for the negative correlation observed in this population was suggested nor was it an item distribution problem.

### Affective Orientation Scale (AOS)

Each of the 20 items on the AOS was answered on the same 5-point Likert scale as the TAS. Each item had the full range of responses. The overall range of the scores was 36 to 92, where the theoretical range would be 20 to 100. Across all subjects, the AOS mean and standard deviation were 69.00 and 9.08, respectively. The coefficient alpha internal consistency estimate of reliability was .70, which was less than past studies using the AOS that reported coefficient alphas ranging from .78 to .86. The individual group coefficient alphas for the AOS were .83 (JSOs), .52 (GOs), and .65 (NOs). Comparing item to total correlations, Item 17 was the only item that negatively correlated with the total score ( $r = -.06$ ) for all three groups. The item content, which states, "My feelings interfere with my behavior," was considered and no obvious reason for the negative correlation observed in this population was suggested nor was it an item distribution problem.

### Self-Defeating Personality Scale (SDPS)

Each of the 24 items on the SDPS was answered on a 2-point scale of agreement (1 = Agree, 2 = Disagree). Each item had the full range of responses. The overall range of the scores was 0 to 22, where the theoretical range would be 0 to 24. Across all subjects, the SDPS mean and standard deviation were 7.82 and 4.50, respectively. The coefficient alpha internal consistency estimate of reliability was .79, which was consistent with past studies using the SDPS that reported coefficient alphas ranging from .68 to .81. The individual group coefficient alphas for the SDPS were .79 (JSOs), .76 (GOs), and .82 (NOs). No items negatively correlated with the total score on the SDPS.

### Adolescent Risk Taking Scale (ARTS)

Each of the six items on the ARTS was answered on a 5-point scale of agreement (1 = Never, 2 = Once, 3 = 2–5 times, 4 = 6–10 times, and 5 = More than 10 times). Each item had the full range of responses. The overall range of scores was 6 to 30. Across all subjects, the ARTS mean and standard deviation were 21.28 and 6.11, respectively. The coefficient alpha internal consistency estimate of reliability was .74, which was less than past studies using the ARTS that reported coefficient alphas ranging from .78 to .80. The individual group coefficient alphas for the ARTS were .73 (JSOs), .70 (GOs), and .65 (NOs). No items negatively correlated with the total score on the ARTS.

### Reckless Behavior Questionnaire (RBQ)

Each of the 10 items on the RBQ was answered on the same 5-point scale as the ARTS. Each item had the full range of responses. The overall range of scores was 10 to 50, which was equal to the theoretical range. Across all subjects, the RBQ mean and standard deviation were 25.65 and 10.44, respectively. The coefficient alpha internal consistency estimate of reliability was .87, which was larger than a past study using the RBQ that reported a coefficient alpha of .80. In the present study, the coefficient alpha was higher due to the range of responses and the greater frequency of reckless behavior by the offender groups. The individual group coefficient alphas for the RBQ were .86 (JSOs), .78 (GOs), and .88 (NOs). No items negatively correlated with the total score on the RBQ.

Table 9 summarizes the interrelationships among the five instruments (TAS, AOS, SDPS, ARTS, and the RBQ). The TAS, AOS and SDPS were statistically

significantly correlated. All correlations indicate a direct relationship even though scores were scaled in the opposite direction, as is the case with the AOS compared to the TAS and SDPS. The ARTS and RBQ were statistically significantly correlated; however, these individual instruments were not statistically significantly related to the TAS, AOS, or SDPS. It is also important to note that the ARTS and RBQ correlation was the same as the internal consistency estimated for the ARTS, which suggests that these two scales are very similar.

In summary, all instrument items held up with reasonable internal consistencies. Only two items (one from the TAS and one from the AOS) were negatively correlated with the total score; otherwise, all other items were positively correlated to the total score. Interscale correlations are evidence of the validity of these scales in being used together for the purposes of this study except for the ARTS and RBQ, which were very similar, therefore indicating one or the other should be used not both. Because these two instruments were part of the study's hypotheses, both of them were included in the analyses; however, caution needs to be used when interpreting results because they were measuring the same type of items. When scales are highly correlated, as is the case with the ARTS and RBQ, they are not considered to measure separate constructs but rather the same construct. In the present study then, there were five instruments measuring four constructs: alexithymia (TAS), affective orientation (AOS), self-defeating behavior (SDPS), and risk taking/reckless behavior (ARTS and RBQ).

Table 9 below summarizes the interrelationships among the five instruments.



Table 9

## Internal Consistency Estimates and Intercorrelations of the Instruments

Instruments	Scaling <sup>a</sup>	TAS	AOS	SDPS	ARTS	RBQ
TAS	Negative	.79 <sup>b</sup>	.19	.50*	.07	-.04
AOS	Positive		.70 <sup>b</sup>	-.22*	-.03	-.04
SDPS	Negative			.79 <sup>b</sup>	.06 <sup>b</sup>	.03
ARTS	Negative				.74 <sup>b</sup>	.74*
RBQ	Negative					.87 <sup>b</sup>

Note.  $N = 217$ .

<sup>a</sup>Scaling: Negative indicates that larger values are associated with negative attributes. Positive indicated that larger values are associated with positive attributes.

<sup>b</sup>Diagonal values are instrument internal consistency estimates.

\*Correlations that are statistically significant at  $p < .006$ . All other correlations did not reach statistical significance at  $p < .05$ .

## Hypotheses

A primary goal of this study was to see if the three defined groups differed in their emotional expressiveness and behaviors, as measured by the TAS, AOS, SDPS, ARTS and RBQ. An overall multivariate analysis of variance (MANOVA) considering all five measures simultaneously with respect to each group was statistically significant, Wilks' Lambda,  $F(10, 420) = 9.97, p < .0001$ . Follow-up univariate analyses of variance (ANOVAs) for each dependent variable are summarized in Tables 10 and 11. Tukey's studentized range (HSD) tests were computed after ANOVAs for three group comparisons. The 10 hypotheses of the study are provided below. The other five hypotheses predicted there would be differences between offenders and nonoffenders on the five measures (Tables 10 and 11). In the additional five

hypotheses, it was predicted there would be no differences between the two offender groups (JSOs and GOs) on the five measures (Table 11).

Table 10

Summary of Analysis of Variance: Comparison of the Nonoffender Group and Combined Offender Groups on the Five Dependent Measures

Statistical Results							
Dependent Measure	Group	Mean	SD	df	F	p	Diff <sup>a</sup>
TAS ( <i>N</i> = 80) ( <i>N</i> = 137)	NOs	51.63	10.20	1,215	.58	.447	A
	Offenders	52.92	12.91				A
AOS	NOs	69.20	10.70	1,215	.06	.801	A
	Offenders	68.88	8.03				A
SDPS	NOs	7.12	4.50	1,215	3.07	.081	A
	Offenders	8.22	4.47				A
ARTS	NOs	17.85	5.80	1,215	48.88	.000	A
	Offenders	23.29	5.36				B
RBQ	NOs	18.42	8.48	1,215	84.15	.000	A
	Offenders	29.87	9.09				B

<sup>a</sup>Means with the same letter are not statistically significantly different by Tukey's studentized range (HSD) test.

Hypothesis 1 stated that participants' self-reported alexithymia, as measured by the TAS, will discriminate between (a) adolescent offenders and adolescent NOs, (b) JSOs and NOs, and (c) GOs and NOs. Hypothesis 2 stated participants' self-reported alexithymia will not discriminate between JSOs and GOs. The lack of any statistically

Table 11

Summary of Analysis of Variance: Comparison of the Three Participant Groups  
on the Five Dependent Measures

Dependent Measure	Group	Statistical Results					
		Mean	SD	df	F	p	Diff <sup>a</sup>
TAS ( <i>N</i> = 47) ( <i>N</i> = 90) ( <i>N</i> = 80)	JSO	54.64	12.87	2,214	1.04	.356	A
	GO	52.01	12.91				A
	NO	51.63	10.20				A
AOS	GO	69.39	7.84	2,214	.45	.640	A
	NO	69.20	10.70				A
	JSO	67.89	8.37				A
SDPS	JSO	8.47	4.92	2,214	1.64	.197	A
	GO	8.09	4.23				A
	NO	7.12	4.50				A
ARTS	GO	23.56	5.42	2,214	24.73	.000	A
	JSO	22.76	5.26				A
	NO	17.85	5.80				B
RBQ	GO	31.67	8.56	2,214	49.76	.000	A
	JSO	26.42	9.15				B
	NO	18.42	8.48				C

<sup>a</sup>Means with the same letter are not statistically significantly different by Tukey's studentized range (HSD) test.

significant results indicated that no reliable differences on TAS scores were observed between the NO, GO, and JSO groups,  $F(1, 215) = .58, p < .447$ , for Part (a), and  $F(2, 214) = 1.04, p < .356$ , for Parts (b) and (c). Thus, Hypothesis 1 was not

supported. Hypothesis 2 was supported, but only to the extent that the null hypothesis on no differences between these two groups was retained.

Hypothesis 3 stated participants' self-reported affective orientation, as measured by the AOS, will discriminate between (a) adolescent offenders and adolescent NOs, (b) JSOs and NOs, and (c) GOs and NOs. Hypothesis 4 stated participants' self-reported affective orientation will not discriminate between JSOs and GOs. The lack of any statistically significant result indicated that no reliable differences on AOS scores were observed between the NO, GO and JSO groups,  $F(1, 215) = .06$ ,  $p < .801$ , for Part (a), and  $F(2, 214) = .45$ ,  $p < .640$  for Parts (b) and (c). Thus, Hypothesis 3, was not supported. Again, Hypothesis 4 was supported, but only to the extent that the null hypothesis on no differences between these two groups was retained.

Hypothesis 5 stated participants' self-reported self-defeating behavior, as measured by the SDPS, will discriminate between (a) adolescent offenders and adolescent NOs, (b) JSOs and NOs, and (c) GOs and NOs. Hypothesis 6 stated participants' self-reported self-defeating behavior will not discriminate between JSOs and GOs. The lack of any statistically significant result indicated that no reliable differences on SDPS scores were observed among the NO, GO, and JSO groups,  $F(1, 215) = .58$ ,  $p < .447$  for part (a),  $F(2, 214) = 1.64$ ,  $p < .20$  for parts (b) and (c). Thus, Hypothesis 5 was not supported. Again, Hypothesis 6 was supported, but only to the extent that the null hypothesis on no differences between these two groups was retained.

Hypothesis 7 stated participants' self-reported risk-taking behavior, as measured by the ARTS, will discriminate between (a) adolescent offenders and adolescent NOs, (b) JSOs and NOs, and (c) GOs and NOs. Hypothesis 8 stated participants' self-reported risk-taking behavior will not discriminate between JSOs and GOs. There was a statistically significant difference on the ARTS between the offender and the NO groups,  $F(1, 215) = 48.88, p < .000$  for Part (a), and  $F(2, 214) = 24.73, p < .000$ , for Parts (b) and (c). Thus, Hypothesis 7 was supported. Again, Hypothesis 8 was supported, but only to the extent that the null hypothesis on no differences between these two groups was retained.

Hypothesis 9 stated participants' self-reported reckless behavior, as measured by the RBQ, will discriminate between (a) adolescent offenders and adolescent NOs, (b) JSOs and NOs, and (c) GOs and NOs. Hypothesis 10 stated participants' self-reported reckless behavior will not discriminate between JSOs and GOs. There were statistically significant differences on the RBQ between the offender and the NO groups,  $F(1, 215) = 84.15, p < .000$ , for Part (a), and  $F(2, 214) = 49.76, p < .000$ , for Parts (b) and (c). Thus, Hypothesis 9 was supported. There was also a statistically significant difference between the JSOs and GOs; therefore, Hypothesis 10 was not supported,  $F(2, 214) = 49.76, p < .000$ .

Overall, the results show that for the TAS, AOS, and the SDPS there was no statistically significant differences found among the three groups. On the ARTS, the NOs scored statistically significantly lower than the GOs and the JSOs. On the RBQ, a statistically significant difference was found among all three groups. GOs scored

statistically significantly higher than JSOs and NOs, and JSOs scored statistically significantly higher than NOs.

## CHAPTER V

### SUMMARY, DISCUSSION, AND RECOMMENDATIONS

This chapter is divided into four sections. The first section consists of a summary of the study including demographic information for each group and hypothesis results. The second section provides a discussion of the limitations. The third section discusses the findings of the study. Finally, recommendations for future research are provided.

#### Summary

The primary purpose of this study was to examine the differences that may exist among three identified male adolescent groups (JSOs, GOs, and NOs) on the variables of emotional expressiveness (TAS and AOS) and behavior (SDPS, ARTS, and RBQ). Porter's (1990) finding that JSOs more frequently deny their emotions compared to GOs and NOs was further explored but with different constructs of emotional expressiveness. In the present study, emotional expressiveness was assessed by two constructs: alexithymia (three-factor structure: inability to express emotions, inability to experience emotions, and externally oriented thinking) and affective orientation (the ability to recognize emotions and use them to guide interactions with others). As provided in previous chapters, JSOs are juvenile sexual offenders, GOs are general offenders, and NOs are nonoffenders. The TAS is the Twenty-Item Toronto

Alexithymia Scale, AOS is the Affective Orientation Scale, SDPS is the Self-Defeating Personality Scale, ARTS is the Adolescent Risk Taking Scale, and RBQ is the Reckless Behavior Questionnaire.

Forty-seven JSOs and 90 GOs from Starr Commonwealth, a multi-service child care organization in Albion, Michigan, represented the offender group, while 80 male students from Albion Public Schools, also in Albion, Michigan, represented the NOs. Survey packets comprised of the five instruments (TAS, AOS, SDPS, ARTS, and RBQ) were administered to all participants in 1-hour settings. All instructions and items were verbally read to participants. In addition, demographic forms were completed by a Starr Commonwealth research assistant for the offender groups and individually by each NO. Demographic forms for the offender groups included more extensive history including offense listings; thus, for ease of data collection, forms were completed by a research assistant.

This was an analytic variable study. Descriptive statistics were provided for all three participant groups. Analyses of specific demographic variables were computed by utilizing Logistic Regression Analysis to determine to what extent various clusters of descriptors identify group membership for JSOs and GOs exclusively. Hypotheses 1 through 10 were tested by a MANOVA. When statistical significance was indicated, ANOVAs were computed to identify the specific groups and measures, which were statistically significant. Tukey's studentized range (HSD) tests were computed after ANOVAs for three group comparisons. The significance level for all analyses was set at the .05 level with descriptive trends in the data that



were less than the .10 level being considered due to the lack of research available in the juvenile sexual offender field.

Demographics for the three groups and the results of the offender group demographic analysis are provided to accurately detail the participant groups of this study. Ten hypotheses were developed to examine the potential differences between the three identified male adolescent groups on the specific variables of emotional expressiveness and behavior. The findings of these hypotheses are also summarized in this section.

### Demographic Summary

All three groups ranged in ages from 12 to 18. JSOs were primarily Caucasian (66%), GOs were primarily African-American (55%), and NOs were primarily Caucasian (52.5%). The majority of the JSOs (49%) and the GOs (63%) were from single-parent homes, with the majority of the NOs (49%) being from intact family homes. Compared to the literature, offenders have a tendency to come from single-parent homes (e.g., Ford & Linney, 1995). In the present study, racial background results indicated a higher percentage of Caucasians for the JSO group (66%) and African Americans for the GO group (55.5%). Racial composition tends to vary across juvenile offender studies, although most studies have the highest percentage of participants being Caucasian and African American (Ford & Linney, 1995; Hastings, et al., 1997; Stith & Bischof, 1996).

Additional information collected on the offender groups included: number of prior treatment settings, length of treatment at Starr Commonwealth, presenting problems, committing offenses, and previous offense history. JSOs had zero to three prior treatment settings, while GOs had zero to five treatment settings prior to being placed in Starr Commonwealth's treatment program. Results of the present study suggest that GOs tend to have a higher number of prior treatment placements, which is consistent with other studies (e.g., Jacobs et al., 1997).

At the time of this study, JSOs had a higher percentage of being in treatment over 16 months (19%), while GOs had a higher percentage of being in treatment 0 to 3 months (41%). It appears that JSOs are in treatment longer than GOs, which is supported by Starr Commonwealth's 1999 statistics, which indicated an average length of 18.7 months for JSOs and 13.6 months for GOs (R. Davis, personal communication, June 20, 2000). Research literature has fluctuated on the conclusion that JSOs are more chronic and require longer treatment (Jacobs et al., 1997; Moody et al., 1994). The results of this study appear to support the conclusion that JSOs experience more severe pathology and require longer treatment.

JSOs presented for treatment with a higher percentage of problems with fire setting (12.8%); sexual issues (masturbation 12.8%, homosexuality 4.3%, incest 6.4%, cross dressing 6.4%); and problems with relating (peers 57%, heterosexual social interactions 6.4%, relatives 27.6%) than GOs. GOs, on the other hand, experienced a higher percentage of problems with substance abuse (alcohol 43.3%, marijuana 56.7%); treatment settings (93.3%); friends (72.2%); and authority issues

(96.7%). (Starr Commonwealth's presenting problems list separates peers and friends into two different categories.)

The statistically significant committing offenses for JSOs were sex-related (CSC 1st degree, 17%; 2nd degree, 23.4%; 3rd degree, 10.6%; and 4th degree, 12.8%; other sexual offense, 8.5%). GOs' statistically significant committing offenses were breaking and entering (10%) and UDAA/No operator's permit (8.9%). The statistically significant previous offense for JSOs was CSC 3rd degree (4.3%). The statistically significant previous offenses for GOs were breaking and entering (23.3%), stolen property (8.9%), UDAA/No operator's permit (12.2%), and assault and battery (22.2%). In general, JSOs are associated with sex-related issues and offenses, while GOs are associated with nonsexual issues and offenses.

#### Offender Group Summary

Additional analyses were conducted on specific, descriptive, variable clusters comparing JSOs and GOs for potential differences. Nine individual models were initially analyzed for their potential differences under the headings of Demographic Variables, General Criminality (Nonsexual) Variables, Sexual History Variables, Developmental History Variables, and Psychological Maladjustment Variables. The results of these nine models indicated that the committing offenses of CSC 3rd and 4th degree, masturbation, sexual abuse issues in the family, reported sexual abuse and neglect, and use of antidepressants were found to be more predictive of JSO group membership than GO group membership. Minority status, two committing offenses

(breaking and entering and UDAA/ No operator's permit), three previous adjudications (assault and battery, stolen property, and UDAA/No operator's permit), reported drug-alcohol issues in the family, abandonment, disciplinary problems in school, and use of marijuana were found to be more predictive of GO group membership compared to JSOs.

An overall model including all of these statistically significant predictors was then analyzed to determine which of these variables are predictive of JSO or GO group membership. The results of this analysis indicated that the family issues of drug-alcohol abuse and sexual abuse, the committing offense of breaking and entering, and the previous offense of UDAA/No operator's permit were found to be predictive of group membership. Drug-alcohol issues in the family were found to be more predictive of GOs, while family sexual abuse issues were more predictive of JSOs. Both the committing offense and the previous offense were found to be predictive of GO group membership. Again, JSOs were found to be associated with sex-related issues and GOs with nonsexual issues.

### Hypothesis Summary

Hypotheses 2, 4, 6, 7, 8, and 9 were supported. Hypotheses 2, 4, 6, and 8 predicted there would be no statistically significant difference between offender groups (JSOs and GOs) on the TAS, AOS, SDPS, and ARTS, respectively. Hypotheses 7 and 9 predicted there would be a statistically significant difference between offenders and nonoffenders on the ARTS and RBQ, respectively.

Hypotheses 1, 3, 5, and 10 were not supported. Hypotheses 1, 3, and 5 predicted there would be statistically significant differences between offenders and nonoffenders on the TAS, AOS, and SDPS, respectively, while Hypothesis 10 predicted there would be no statistically significant difference between offender groups on the RBQ.

### Limitations

The design of this study involved only males, which may be limiting when generalizing to a normal sample of adolescents including both males and females. In addition, female peers did not influence the male residential students, while the public school students had daily, female peer contact, which may also influence generalizability in some unknown way.

Due to the fact that the JSOs and GOs who participated in this study are from the same residential treatment program, there may be a bias to a specific type of treatment affecting students' emotional expressiveness. Therefore, generalizability to other populations of juvenile delinquents may not be warranted.

Another limitation of this study was the sole use of self-report instruments. Self-report measures are susceptible to dishonest or fake responses. Finally, demographic forms completed by a single research assistant at Starr Commonwealth may be inaccurate due to the complexity involved in assessing offender demographic history. For instance, offenders may have been involved in multiple, prior treatment programs and have several past history reports making it difficult to accurately

determine their complete demographic history. In addition, there was no interrater reliability utilized to verify the consistency and objective determination used in completing the demographic forms. In view of the aforementioned limitations, results of this study may be limited to the sample studied and may not be relevant to all male adolescents in residential treatment settings and public school settings.

### Discussion

Results from this study failed to identify any additional, distinct characteristics of the male JSO population in relation to the GO and NO male population on the specific variables of emotional expressiveness and problematic behaviors other than what has already been stated in the literature, nor did the study provide any further insight into Porter's (1990) finding that JSOs deny their emotions more than GOs and NOs. Therefore, the findings from this study have left many unanswered questions as to what specific emotional expressiveness and problematic behavior characteristics may distinguish JSOs from GOs other than reckless behavior. As Jacobs et al. (1997) suggest, "If researchers are able to find characteristics distinctive to sexual offenders, further studies could then examine how these differences influence the sexual offenders to act as they do" (p. 214).

As noted earlier, the results of the present study were consistent with past research in identifying few distinct demographic characteristics that distinguish JSOs from the GO population. As noted earlier, JSOs are more likely to be involved with problems of fire setting, relating to others, and sexual issues while GOs are more

likely to be identified with problems involving authority issues, such as disobedience at home and in school, problems in detention centers, problems with friends, and substance abuse problems. Additional offender demographic analysis indicated that drug-alcohol abuse in the family is predictive of GOs and sexual abuse in the family is predictive of JSOs. Although no studies were found that have studied drug and alcohol issues in the family exclusively, past studies have reported more issues with drugs and alcohol for GOs than JSOs (e.g., Moody et al., 1994; Valliant & Bergeron, 1997). It would seem logical that the family environment of the GO population would be more exposed to the misuse and abuse of drugs and alcohol, if GOs report a higher frequency of substance abuse than JSOs.

In regard to families of JSOs being identified with sexual abuse issues, JSOs have repeatedly been found to report more family history of sexual abuse than GOs (i.e., Ford & Linney, 1995; Truscott, 1993). The findings of this study confirm that key family issues, such as drug and alcohol abuse and sexual abuse, appear to support the child and adolescent development literature which states that children and adolescents are influenced by the environmental context in which they are raised (Arnett, 1999; Elliott & Feldman, 1990). Therefore, treatment provides a place where troubled youth can work to “undo” their maladaptive tendencies, which may have been promoted and influenced by their respective environments, and replace them with positive, adaptive behaviors.

Past studies examining the potential differences between JSOs and GOs have failed to provide an extensive, detailed history of problems and offenses (Hastings

et al., 1997; Stith & Bischof, 1996). The present study made an effort to gather information on JSOs and GOs, detailing their presenting problems and summarizing their respective offense histories, yet it is still likely there is an underreporting of incidences. Offenders often experience a variety of problems and offenses and, furthermore, a variety of different treatment settings, which makes assessment a complex process. The literature on the JSO population supports this assumption by suggesting that JSOs, as a group, are quite heterogenous and usually have comorbid diagnoses, which means they are given more than one diagnosis (e.g., Becker & Hunter, 1997; Bourke & Donohue, 1996).

In this study, 102 out of a possible 143 (71.3%) presenting problems were identified for the JSO/GO participant groups. It seems unlikely that any database could totally represent the accurate history for each JSO/GO based on the complexity of their treatment history and demographic background. Therefore, the reporting of some presenting problems for offenders may not have been comprehensively reflective of the offender population. For example, masturbation was reported as a statistically significant problem for JSOs (12.8%) when compared to GOs (1.1%). It was unclear, though, what makes masturbation a problem and how that issue was accounted for when an offender was assessed, because masturbation could be considered a typical male adolescent behavior. It is possible there may have been a bias in recording specific problems as more likely a JSO problem than a GO problem or vice versa.



There were no statistically significant differences found to exist among JSOs, GOs, and NOs on the variables of alexithymia and affect orientation. It is interesting, however, to note the order in which the three groups were ranked after analysis was complete. The TAS (alexithymia) comparison showed the order of JSOs, GOs, and NOs representing most alexithymic to least. This comparison order meant JSOs were more alexithymic than both GOs and NOs, and GOs were more alexithymic than NOs, although none of these comparisons was statistically significant. The AOS (affect orientation) comparison showed the order of GOs, NOs, and JSOs representing the most to the least awareness of one's emotions. This comparison order meant GOs were more affectively oriented than NOs and JSOs, and NOs were more affectively oriented than JSOs, yet not statistically significantly. Surprisingly, GOs reported higher affect orientation than NOs though, again, not statistically significantly.

The nonsignificant TAS comparison results appear to support the claim that adolescents may naturally experience some level of alexithymia (Lopez-Ibor, 1979). The TAS mean scores were 54.64 for JSOs, 52.01 for GOs, and 51.63 for NOs. A score of 51 and below is considered nonalexithymic, while a score of 60 and above is considered alexithymic; therefore, the present study scores indicated an elevated score for alexithymia but not enough to be identified as having high alexithymic tendencies. It seems likely that all three groups were demonstrating some alexithymic tendencies which, again, may be natural for adolescents (Lopez-Ibor, 1979).

The AOS comparison results may suggest that all adolescents, including offenders and nonoffenders, have the ability to be aware of their emotions and use them in their interactions with others as indicated by the similar mean scores. The scores were 69.39 for GOs, 69.20 for NOs, and 67.89 for JSOs. It was expected that offenders would be statistically significantly different from NOs on the TAS and AOS, primarily for the reason that it would seem likely that offenders would experience greater difficulty with emotional expressiveness than NOs as predicted in past studies (i.e., Keltikangas-Jarvinen, 1982) but that was not the case in this study.

It does not appear the AOS has been administered to adolescents before this study. The results of internal consistency for the present study were not good (JSOs = .83, GOs = .52, NOs = .65), particularly for the GOs and the NOs. Thus, the reliability of this instrument is questionable for this population. Results should be read with caution. The results of the AOS lead to further speculation that all adolescents may have the ability to be aware of their emotions yet struggle on identifying their “true” emotions and appropriately expressing them, particularly when interacting with other people. For example, an adolescent offender could be angry yet state he is sad, and then he proceeds to act out that unidentified anger by acting violently towards another person. He may be unaware of where the anger comes from and how to appropriately express his anger without hurting others.

Results of the specific behavior comparisons were found to be both nonsignificant and significant among the JSOs, GOs, and NOs. On the SDPS, no statistically significant difference was found to exist among the three groups.

Interestingly, the JSOs were identified as having more self-defeating behavior than the GOs, although not statistically significantly. It was expected that offenders would be statistically significantly different from NOs on the SDPS due to the previously stated definition of self-defeating behavior (Schill, 1990) and the nature of their offender criminal histories. This result is surprising and leads to the question of validity and reliability for this instrument, since it did not pick up any differences between offenders and nonoffenders. The individual group coefficient alphas for the SDPS were .79 (JSOs), .76 (GOs), and .82 (NOs), which seems to support reliability of this instrument with this population but, again, the results are questionable for validity since no statistical significance was found. Or, perhaps, could all adolescents experience some degree of self-defeating behaviors during their development? No literature could be found that addressed this specific issue.

On the ARTS, a statistically significant difference was found between the offender groups and the nonoffender group. On the RBQ, all three groups were statistically significantly different from each other. The results of the ARTS and RBQ group comparisons in the present study were consistent with past research which reported that JSOs and GOs tend to exhibit more problem behaviors than NOs (e.g., Hastings et al., 1997). Furthermore, for the RBQ, GOs were identified as having more reckless behavior than JSOs, which is also supported by the literature (e.g., Moody et al., 1994).

Given the number of studies that have been inconclusive in finding statistically significant differences between JSOs and GOs, perhaps it is time to conclude that

JSOs and GOs are not that different. Their differences may exist on a continuum, meaning their characteristics overlap depending upon the severity and frequency of the behavior and the influence of their respective family/peer environments. Jacobs et al.'s (1997) study supports this same conclusion: "The salient results to consider in such work are the data that indicate how similar sexual offenders are to other offenders" (p. 216). It may be time to study the characteristics that are similar instead of continuing to search for possible differences. If there is a focus on similarities, then there could be more emphasis placed on treatment of offenders and what aspects may be specific to each offender population and each individual offender relative to their respective environmental influences.

For instance, in the present study, length of treatment was a difference found between JSOs and GOs. If JSOs do require longer treatment, what additional components might they need to experience in addition to general GO treatment? The aspect of treatment that was not taken into consideration, in the present study, was examining how long GOs stayed in their prior treatment settings in addition to placement at Starr Commonwealth. GOs and JSOs may have had similar lengths of treatment, just not in the same setting, considering GOs may be referred to more treatment settings than JSOs (Jacobs et al., 1997). As mentioned previously, in this study, GOs were involved in zero to five prior treatment settings, while JSOs were involved in zero to three previous placements.

Thus, not only current length of treatment but also the lengths of past treatment settings may have affected offenders' responses to the emotional

expressiveness and problematic behavior surveys. JSOs could have been even more alexithymic and less affectively oriented if they had been in treatment a shorter amount of time, although considering the similar results, it does not appear to be likely. It appears that the nature of JSO offenses tends to place them more quickly in a residential setting, like Starr Commonwealth, even though they may have a smaller number of reported offenses than GOs. GOs, on the other hand, seem to experience more treatment settings and may have longer offense listings.

Another focus that becomes clearer in confirming the similarities that exist between JSOs and GOs is the powerful influence family environments have on adolescents' emotional and behavioral development. Thus, it is important to consider what prevention programs and early intervention strategies could be implemented to decrease the amount of abuse (i.e., alcohol, drug, and sexual) that occurs in families. It seems imperative that both prevention and intervention programs include the family members of troubled adolescents when attempting to treat adolescent offender problems. This study lends further support for continued research on the family and community environmental context that influences adolescents and, ultimately, impacts their emotions and behaviors.

There are a variety of prevention and intervention programs that may be beneficial to families. Prevention programs could educate families on effective coping skills, including anger and stress management techniques, appropriate emotional expressiveness outlets, and available public resources. In addition, psychoeducational programs could be offered that provide families with parenting information

concerning appropriate discipline techniques, sexual education materials, and the importance of promoting a drug-alcohol free environment. The aforementioned prevention programs could also be offered to families already struggling with such issues. By intervening with families, helping professionals could provide role-modeling for parents, which is the focus of many home-based treatment programs that allow troubled youth to remain in their families.

In conclusion, the present study attempted to address the limitations noted in past comparison studies (JSOs vs. GOs vs. NOs) and provided a more detailed picture of the problems and offenses that are associated with the offender population. This study utilized a larger sample compared to previous studies and also included offenders from the same treatment setting to avoid a possible confounding variable. A developmental psychology perspective was taken for this study, which is different from other studies, allowing for a more conceptually driven examination of the specific developmental factors of emotional expressiveness and behavior within the context of adolescent development.

Even though the detailed offense history failed to identify any additional differences that may exist between JSOs and GOs other than the obvious (i.e., sexual abuse history = JSOs, and drug-alcohol abuse = GOs), it confirmed many of the findings reported in previous studies. In addition, the results from the emotional expressiveness and problematic behavior instruments also confirmed past research which supports the claim that more similarities than differences seem to exist between JSOs and GOs. Given the numerous similarities between JSOs and GOs, it would

appear that promoting the research of prevention, intervention, and treatment of adolescent offenders and their families is a more meaningful focus to pursue than a continued search for possible differences.

### **Recommendations for Future Research**

The results of this study led to the following recommendations:

1. Future studies should be conducted with offenders from several different treatment settings and from various regions of the country to enhance the generalizability of results.
2. Observational reports from teachers, residential staff, or parents would also be important to include in future studies to support self-report data.
3. A future study should include an investigation into treatment centers' history forms to assess if universal forms are being used in order to support generalizability of demographic findings. In addition, it is suggested that an evaluation be done on the coding of history forms to determine the consistency used in reporting history information.
4. The length of treatment should be studied more comprehensively and include the amount of time GOs and JSOs spend in each treatment facility. The treatment focus should also be explored in order to conclude what impact treatment may have on offenders' responses to specific research questions.
5. Future research should further explore the family and peer environmental influence on offenders' level of emotional expressiveness and behavior.

**Appendix A**  
**Demographic Form for Starr Commonwealth Students**



**STUDENT DEMOGRAPHIC QUESTIONNAIRE**

[To be filled out by Starr Commonwealth Research Assistant from database and files]

CODE: \_\_\_\_\_

1. Age: \_\_\_\_\_
2. Length of time at Starr:
  - a) 0 to 3 months
  - b) 4 to 6 months
  - c) 7 to 9 months
  - d) 10 to 12 months
  - e) 13 to 16 months
  - f) over 16 months
3. Ethnicity: (self-identified)
  - a) African American
  - b) Alaskan Native
  - c) American Indian
  - d) Asian-American
  - e) Caucasian
  - f) Hispanic
  - g) Multiracial
  - h) Pacific Islander
  - i) Other: \_\_\_\_\_
4. Family System Status:
  - a) both biological parents present
  - b) single biological parent
  - c) blended family (step parents or LTP)
  - d) extended family: \_\_\_\_\_
  - e) non-familial custodial arrangement
5. Presenting Problem (including abuse history): \_\_\_\_\_  
(see Listing for Presenting Problems)
6. Committing Offenses: \_\_\_\_\_  
(see Listing for Committing Offenses and Adjudications)
7. Previous Adjudication(s) Other than Committing Offenses(s):  
(see Listing for Committing Offenses and Adjudications)
8. Age of 1st offense, if known: \_\_\_\_\_ (for JSOs only)
9. Total Number of Treatment Services prior to Starr placement: \_\_\_\_\_

**Appendix B**  
**Demographic Form for Public School Students**

**STUDENT DEMOGRAPHIC FORM**

Identification Code: \_\_\_\_\_

1. Age: \_\_\_\_\_

PLEASE CIRCLE YOUR ANSWERS FOR THE FOLLOWING ITEMS:

2. Ethnicity:

- |                     |                     |
|---------------------|---------------------|
| a) African American | b) Alaskan Native   |
| c) American Indian  | d) Asian American   |
| e) Caucasian        | f) Hispanic         |
| g) Multiracial      | h) Pacific Islander |
| i) Other: _____     |                     |

3. Family System Status:

- a) I live with both parents
- b) I live with one of my parents
- c) I live in a blended family (one parent and a stepparent or my parent's long-term partner)
- d) I live with a relative (i.e., grandmother, grandfather, cousin, aunt, uncle): \_\_\_\_\_
- e) I live with an adult non-family member (i.e., neighbor, family friend, foster care home): \_\_\_\_\_

4. At least one time, I have been assigned to a detention, suspension, or to the Reach Program. Yes    No

5. I have been legally charged for an offense in court (excluding minor traffic violations such as a speeding ticket). Yes    No

**Appendix C**  
**Starr Commonwealth Approval**



*Albion, Battle Creek, Benton Harbor, Detroit, Hillsdale, Jackson, and Three Rivers, Michigan & Columbus and Van Wert, Ohio*

## ***Starr Commonwealth***

Serving children & families since 1915

*Albion, Battle Creek, Benton Harbor, Detroit, Hillsdale, Jackson, and Three Rivers, Michigan & Columbus and Van Wert, Ohio*

March 31, 1999

Ms. Carin Ness  
2028 Colgrove Avenue #313  
Kalamazoo, MI 49001

Dear Carin,

Your persistence and dedication to this research study seems to be paying off. I have received your dissertation proposal and reviewed it with our Vice President of Programs and the Director of Michigan Programs. We are very anxious to move forward with this project. Certainly, studying the differences in emotional expressiveness and risk-taking behavior among our sex offenders and non-sex offenders is an important project that has great potential for our treatment staff.

As we have discussed over the past year, Starr Commonwealth has the permission of its constituents to use the data obtained from our clients for research purposes. We participate in applied research studies to learn more about the clients we serve and to advance the quality of service we provide. Starr Commonwealth has the authority to allow external researchers access to this client data, as long as client confidentiality is strictly enforced.

The use of our own internal evaluation technician to code the client information before giving you access to this data is an effective way of protecting the identity of our clients. We appreciate your efforts in support of this.

You, and Peter Rausch, have met the requirements for approval by Starr Commonwealth to proceed with your research study.

Sincerely,

Randall K. Davis, MA, LPC  
Director of Research and Evaluation

James Longhurst, Ed.D.  
Director of Michigan Programs

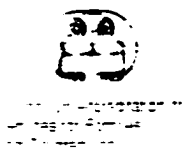
Martin L. Mitchell, Ed. D  
Vice President of Programs



13725 Starr Commonwealth Rd.  
Albion, Michigan 49224-9580

(517) 629-5591  
Fax: (517) 629-2317  
website: [www.starr.org](http://www.starr.org)

FORM 00000001



*Starr Commonwealth*  
Serving children & families since 1913

*Albion, Battle Creek, Benton Harbor and Detroit, Michigan & Columbus and Van Wert, Ohio*

May 14, 1999

Dr. Alan Hovestadt  
Ms. Carin Ness  
Mr. Peter Rausch  
CECP Department  
3102 Sangren Hall  
Western Michigan University  
Kalamazoo, MI 49008-5195

Dear Alan, Carin, and Peter:

On April 22, 1999, you informed us that the Western Michigan University HSIRB had some question about Starr Commonwealth's authority to grant permission to conduct your proposed research with access to our clients. After consulting with Starr's senior management team, I am writing this letter that will serve to verify that Starr Commonwealth has the authority to grant internal and external researchers access to both clients and client data.

All the youth in our residential treatment program are state or county wards of the court and are court-ordered to be here. Thus, each court has custody which, in turn, is delegated to Starr Commonwealth, the contracted service provider for the court. Starr Commonwealth is authorized to decide what the children experience while in care, and we are bound by state licensing, national accreditation, and professional ethics. It has long been understood that Starr is responsible for the protection of the clients' rights to privacy and confidentiality, and that Starr will decide whether a study is non-intrusive and in the best interest of the children we serve. Due to the fact that the courts have delegated custody to Starr Commonwealth, there is no parental consent form specific to the youth participating in applied research studies in our system.

The Western Michigan University HSIRB may be interested in knowing that Starr Commonwealth has recently granted permission for other research projects to be conducted by researchers from Michigan State University and the Peak Learning Center. We have also authorized numerous studies conducted by our staff for their own undergraduate and graduate research projects developed at several Mid-western universities.

As stated in our previous letter dated 3/31/99, you have met the requirements for approval by Starr Commonwealth to proceed with your research study.

Sincerely,

Randall K. Davis, MA, LPC  
Director of Research and Evaluation

**Appendix D**  
**Albion Public Schools Approval**

# Albion Public Schools

**JUDYTH L. DOBBERT**  
SUPERINTENDENT

**GWENDOLYN P. TABB**  
ASSISTANT SUPERINTENDENT

**JAMES H. BEHLING**  
DIRECTOR OF ADMINISTRATIVE SERVICES

CENTRAL ADMINISTRATION OFFICES  
401 EAST MICHIGAN AVENUE  
ALBION, MICHIGAN 49224-1898  
(517) 629-9166

## BOARD OF EDUCATION

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TRUSTEE

**KAREN NEAL**  
TRUSTEE

March 31, 1999

Ms. Carin Ness  
2028 Colgrove Ave., #313  
Kalamazoo, MI 49001

Dear Carin:

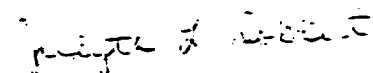
Please consider this as a letter of support indicating approval for you to conduct a study in the Albion Public Schools, with parental and student consent, as a part of your doctoral dissertation in the fall of 1999. We will certainly look forward to working with you.

I am returning copies of the two forms you have developed with some suggestions. My one general concern is that the language used on both forms may be somewhat difficult for some of our parents and students to comprehend. You may want to try and rework it a little to appeal more to an 8<sup>th</sup> grade reading level.

I have made a few more specific suggestions on the documents. I hope you can read my scribbles! I do understand that you have certain requirements you must meet and that you may not be able to accommodate all of my suggestions.

Let me know if you would like me to review any rewrites you make. I would be glad to do so.

Sincerely,



Judyth L. Dobbert  
Superintendent

JLD/sa



**Appendix E**  
**Human Subjects Institutional Review Board**  
**Letter of Approval**

Human Subjects Institutional Review Board

Kalamazoo, Michigan 49008-3899  
516 387-8293

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 WESTERN MICHIGAN UNIVERSITY
 

---

Date: 16 June 1999

To: Alan Hoevestadt, Principal Investigator  
 Carin Ness, Student Investigator for dissertation  
 Peter Rausch, Student Investigator for dissertation

From: Sylvia Culp, Chair *Conde Peterson for Sylvia Culp*

Re: HSIRB Project Number 99-04-07

This letter will serve as confirmation that your research project entitled "The Differences in Emotional Expressiveness and Behavior Among Male Juvenile Sexual Offenders, General Offenders, and Nonoffenders" has been **approved** under the full category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note that you may **only** conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: 16 June 2000

**Appendix F**  
**Assent Form for Starr Commonwealth Students**

College of Education  
Counselor Education and Counseling Psychology

## WESTERN MICHIGAN UNIVERSITY

### PERMISSION FORM -- Starr Commonwealth

Principal Investigator: Alan Hovestadt and Student Investigators: Carin Ness and Peter Rausch

I have been asked to participate in a research project that is in fulfillment of dissertation requirements for Ms. Carin Ness and Mr. Peter Rausch. The differences in emotional expressiveness and behavior among groups of male students will be compared. The purpose of the study is to explore young people's expression of emotions and their risk taking behaviors. This study is being conducted with the support of the research staff at Starr Commonwealth.

The information I provide will help in the prevention and treatment of young people like myself who are struggling with some of the same issues that brought me to Starr Commonwealth. In addition, this information will help researchers and helping professionals to better understand some of the struggles young people are facing today.

I will be given five questionnaires during two, one hour, time periods in June or July. I will not get any extra credit, and if I don't wish to participate, there will be no effect on my school grades. Even if I agree today to participate by signing this form, I can change my mind at any time. The researchers would like to compare my answers on the questionnaires with my personal history and listing of legal charges in my case file. If I sign below, I am agreeing that a Starr Commonwealth staff member may provide information from my case file to the researchers.

My name will not be on any of the forms. The researchers will use a code number instead. The Starr Commonwealth staff member will keep a list of names and code numbers that will be destroyed once the researchers have collected all of their information. None of my forms will be seen by staff at Starr Commonwealth other than the research assistant. The only risk anticipated are minor discomforts typically experienced by young people when they are given questionnaires (e.g., boredom). As in all research, there may be unforeseen risks. If an accidental injury occurs, appropriate emergency measures will be taken; however, no compensation or treatment will be made available to me except as otherwise specified in this permission form.

If I have any questions or concerns about this study, I may contact my cottage counselor or Dr. James Longhurst, Psychologist, at any time. I may also ask my cottage counselor to help me contact either Dr. Alan Hovestadt, Ms. Carin Ness, Mr. Peter Rausch, or Western Michigan University's Human Subjects Institutional Review Board and/or Vice President of Research, if I have further questions.

This consent document has been approved for use for one year by the Human Subjects Institutional Review Board as indicated by the stamped date and signature of the board chair in the upper right corner. Subjects should not sign this document if the corner does not have a stamped date and signature.

My signature below indicates that I agree to be given the five questionnaires and I agree that the Starr Commonwealth staff member can provide information from my case file to the researchers.

\_\_\_\_\_  
Print name here

\_\_\_\_\_  
Sign name here

\_\_\_\_\_  
Date

Permission obtained by: \_\_\_\_\_

\_\_\_\_\_  
Initials of researcher

\_\_\_\_\_  
Date

APPROVED FOR USE FOR ONE YEAR FROM THIS DATE:  
JUN 16 1999  
H. S. I. R. B.  
HSIRB Chair

**Appendix G**  
**Assent Form for Public School Students**

College of Education  
Counselor Education and Counseling Psychology

## WESTERN MICHIGAN UNIVERSITY

### PERMISSION FORM -- Albion Public Schools

Principal Investigator: Dr. Alan Hovestadt and Research Associate: Carin M. Ness

I have been asked to participate in a research project that is in fulfillment of dissertation requirements for Ms. Carin Ness. The differences in emotional expressiveness and behavior among groups of male students will be compared. The purpose of the study is to explore young people's expression of emotions and their risk taking behaviors. This study is being conducted with the approval of the my school counselor, principal, and superintendent. However, since this is not a school project, data collected from this study will not be used in any way by the schools.

The information I provide will help in the prevention and treatment of young people who are struggling with the some of the same issues I may have but instead these young people have been placed in a residential treatment program. In addition, this information will help researchers and helping professionals to better understand some of the struggles young people, like myself, are facing today.

I will be given five questionnaires and a demographic form during one class period in September or October. I will not get any extra credit, and if I don't wish to participate, there will be no effect on my school grades. Even if I agree today to participate by signing this form, I can change my mind at any time.

My name will not be on any of the forms. The researchers will use a code number instead. The researchers will keep a list of names and code numbers that will be destroyed once the researchers have collected all of their information. No other person will know my answers or identification number. The only risk anticipated are minor discomforts typically experienced by young people when they are given questionnaires (e.g., boredom). As in all research, there may be unforeseen risks. If an accidental injury occurs, appropriate emergency measures will be taken; however, no compensation or treatment will be made available to me except as otherwise specified in this permission form.

If I have any questions or concerns about this study, I may contact either Ms. Carin Ness at 616-387-5100 or Dr. Alan Hovestadt at 616-387-5117. I may also contact the chair of the Human Subjects Institutional Review Board at 616-387-8293 or the Vice President of Research at 616-387-9298 with any concerns that I have.

This consent document has been approved for use for one year by the Human Subjects Institutional Review Board as indicated by the stamped date and signature of the board chair in the upper right corner. Subjects should not sign this document if the corner does not have a stamped date and signature.

My signature below indicates that I agree to be given the five questionnaires and demographic form.

\_\_\_\_\_  
Print name here

\_\_\_\_\_  
Sign name here

\_\_\_\_\_  
Date

\_\_\_\_\_  
Permission obtained by:

\_\_\_\_\_  
Initials of researcher

\_\_\_\_\_  
Date

WESTERN MICHIGAN UNIVERSITY  
Kalamazoo, MI 49008-5195  
616-387-5100  
Approved for use for one year from this date:  
JUN 16 1999  
Dr. S. I. R. B.  
HSIRB Chair

**Appendix H**  
**Consent Form for Public School Parents**

College of Education  
Counselor Education and Counseling Psychology

Kalamazoo, Michigan 49008-5195  
616-387-5100

## WESTERN MICHIGAN UNIVERSITY

### Permission Form - Public School Parent or Guardian

Principal Investigator: Dr. Alan J. Hovestadt and Research Associate: Ms. Carin M. Ness

My son has been invited to participate in a research project studying the differences in emotional expressiveness and behavior among groups of male students. The purpose of the study is to examine the differences in emotional expressiveness and behavior that may exist between juvenile offenders and a normal sample of male adolescents. This project is being conducted to fulfill Carin Ness' doctoral dissertation requirement with the support of Ms. Judyth Dobbert, Albion Public School Superintendent; and your son's school counselor. However, since this is not a school project, data collected from this study will not be used in any way by the schools.

My permission for my son to participate in this project means that my son will be given five questionnaires, asking questions about his emotions and behaviors, and a demographic form. The questionnaires and demographic form will be given during one class period in September or October. My son will be free at any time - - even during the class period - - to choose not to participate. If my son refuses or quits, there will be no negative effect on his academic record. Although there may be no immediate benefits to my son for participating, there may eventually be benefits to help researchers and helping professionals to better understand some of the struggles young people are facing today.

All information will remain confidential. That means that my son's name will be omitted from all questionnaires and the demographic form and a code number will be attached. The researchers will keep a separate master list with the names of the young men and the corresponding code numbers. Once all information is collected and analyzed, the master list will be destroyed. All other forms will be retained for three years in a locked file in researcher Hovestadt's office. No names will be used if the results are published or reported at a professional meeting.

The only risk anticipated are minor discomforts typically experienced by young people when they are given questionnaires (e.g., boredom). As in all research, there may be unforeseen risks to my son. If an accidental injury occurs, appropriate emergency measures will be taken; however, no compensation or treatment will be made available to me or my son except as otherwise specified in this permission form.

I may also withdraw my son from this study at any time without any negative effect to my son. If I have any questions or concerns about this study, I may contact either Ms. Carin Ness at 616-387-5100 or Dr. Alan Hovestadt at 616-387-5117. I may also contact the chair of the Human Subjects Institutional Review Board at 616-387-8293 or the Vice President of Research at 616-387-9298 with any concerns that I have. This permission document has been approved for use for one year by the Human Subjects Institutional Review Board as indicated by the stamped date and signature of the board chair in the upper right corner. Subjects should not sign this document if the corner does not have a stamped date and signature.

My signature below indicates that I, as parent or guardian, can and do give my permission for \_\_\_\_\_ to be given the five questionnaires and demographic form.  
(print son's name)

\_\_\_\_\_  
Print your name here

\_\_\_\_\_  
Sign your name here

\_\_\_\_\_  
Date

Permission obtained by:

\_\_\_\_\_  
Initials of researcher

\_\_\_\_\_  
Date

WESTERN MICHIGAN UNIVERSITY  
H. S. I. R. B.  
Approved for use for one year from this date.  
JUN 16 1999  
Chair



**Appendix I**  
**Offender Presenting Problems**

## Summary of Offender Problems

Presenting Problems Within Categories	Percentage With Problem		df	$\chi^2$	p
	JSO (N = 47)	GO (N = 90)			
GENERAL PROBLEMS					
Neglect	44.7	38.9	1	.43	.520
Physical Abuse	27.7	22.2	1	.50	.500
Incest between adult and child	10.6	0	1	9.9	.002*
Incest between siblings	10.6	0	1	9.9	.002*
Other sexual abuse	40.4	7.8	1	21.4	.001*
Substance abuse	21.2	43.3	1	6.5	.011*
Emotional abuse	23.4	21.1	1	.095	.758
Selling drugs	4.3	1.1	1	.327	.568
Suicide ideation	4.3	1.1	1	1.425	.233
Hospitalization	12.8	15.6	1	.193	.661
Outpatient counseling placement	17.0	13.3	1	.337	.562
Residential placement	12.8	13.3	1	.009	.926
Foster care placement	6.4	11.1	1	.804	.370
Relative placement	14.9	15.6	1	.010	.919
Stays in day treatment/alternative education	0	1.1	1	.526	.468
Group home placement	0	2.2	1	1.060	.303
Youth home placement	42.6	42.2	1	.001	.970
Stays in shelters	2.1	1.1	1	.222	.638
Failed adoption placement	2.1	1.1	1	.222	.638
Intensive probation placement	12.8	23.3	1	2.179	.140
Other placement	0	3.3	1	1.602	.206
Child services	21.3	13.3	1	1.445	.229
Court involvement	48.9	50.0	1	.014	.906
Special education	21.3	15.6	1	.70	.403
Truancy from school	25.5	45.6	1	5.219	.022*
Disciplinary problems in school	31.9	45.6	1	2.377	.123
Medication to control behavior	17.0	11.1	1	.945	.331
Death of family member	2.1	8.9	1	2.300	.129
Gang involvement	4.3	8.9	1	.980	.322
Incarceration	2.1	10.0	1	2.828	.093
Prostitution	4.3	0	1	3.887	.049*
Other criminal behavior	25.5	48.9	1	6.970	.008*
Chronic employment problems	4.3	11.1	1	1.816	.178
Physical problems; illness, limitations	4.3	1.1	1	1.425	.233
Multiple relationships, partners	6.4	3.3	1	.686	.408
Abandonment	27.7	24.4	1	.168	.682

\*Significant at the .05 level.

## Appendix I—Continued

Presenting Problems Within Categories	Percentage With Problem		df	$\chi^2$	p
	JSO (N = 47)	GO (N = 90)			
ADOLESCENTS (12-18)					
Bed wetting	4.3	1.1	1	1.425	.233
School related	87.2	97.8	1	6.243	.012*
Job related	2.1	1.1	1	.222	.638
Runaway	10.6	26.7	1	4.754	.029*
Disobedience, authority problems	74.5	96.7	1	15.605	.001*
Parent-child relationships	93.6	90.0	1	.505	.477
Siblings' relationships	51.1	30.0	1	5.862	.015*
Delinquency	63.8	93.3	1	19.239	.001*
Hyperactivity	17.0	18.9	1	.072	.788
Poor self-esteem	66.0	54.4	1	1.685	.194
Learning problems	34.0	34.4	1	.002	.962
Fire setting	12.8	0	1	12.016	.001*
SEXUAL ISSUES					
Masturbation	12.8	1.1	1	8.650	.003*
Homosexuality	4.3	0	1	3.887	.049*
Incest	6.4	0	1	5.873	.015*
Prostitution	2.1	0	1	1.929	.165
Cross dressing	6.4	0	1	5.873	.015*
Rape	2.1	0	1	1.929	.165
VIOLENCE					
Verbal abuser	19.2	31.1	1	2.241	.134
Physical abuser	38.3	46.7	1	.879	.349
Child abuser	14.9	1.1	1	10.667	.001*
Sexual abuser	89.4	4.4	1	99.828	.001*
Property abuser	17.0	20.0	1	.178	.673
Neglect	2.1	1.1	1	.222	.638
VICTIM FROM VIOLENCE					
Verbally abused	34.0	26.7	1	.813	.367
Physically abused	38.3	26.7	1	1.965	.161
Sexually abused	40.4	6.7	1	23.587	.001*
Self-abused	4.3	1.1	1	1.425	.233
Neglect victim	70.2	74.4	1	.280	.596

\*Significant at the .05 level.

## Appendix I—Continued

Presenting Problems Within Categories	Percentage With Problem		<i>df</i>	$\chi^2$	<i>p</i>
	JSO ( <i>N</i> = 47)	GO ( <i>N</i> = 90)			
<b>DEPRESSION</b>					
Sadness, withdrawal	19.2	28.9	1	1.540	.215
Suicidal	6.4	1.1	1	3.027	.082
<b>EXCESSIVE ACTIVITY</b>					
Compulsive	2.1	0	1	1.929	.165
<b>SOCIAL INTERACTIONS</b>					
Peers	57.5	22.2	1	16.999	.001*
Friends	32.0	72.2	1	20.647	.001*
Heterosexual	6.4	0	1	5.873	.015*
Relatives	27.6	7.8	1	9.789	.002*
<b>FAMILY ISSUES</b>					
Cross cultural adjustment	0	1.11	1	.526	.468
Single parent	70.2	76.7	1	.676	.411
Separation related	2.1	1.1	1	.222	.638
Divorce adjustment	27.7	26.7	1	.015	.901
Extended family related	21.3	25.6	1	.309	.578
Step parents	38.3	17.8	1	6.968	.008*
Adoption	12.8	3.3	1	4.476	.034*
Blended family	4.3	0	1	3.887	.049*
Bereavement	2.1	18.9	1	7.601	.006*
Drug-alcohol system	42.6	66.7	1	7.390	.007*
Parenting issues	78.7	78.9	1	.001	.982
Sexual abuse issues	76.6	11.1	1	59.366	.001*
Abandonment	42.6	53.3	1	1.435	.231
<b>POST INSTITUTIONALIZATION</b>					
Psychiatric hospital	19.2	13.3	1	.805	.370
Residential treatment	8.5	18.9	1	2.562	.109
Incarceration	0	2.2	1	1.060	.303
Detention center	74.5	93.3	1	9.629	.002*
Foster placement	10.6	17.8	1	1.213	.271
Other	4.3	6.7	1	.327	.568

\*Significant at the .05 level.

## Appendix I—Continued

Presenting Problems Within Categories	Percentage With Problem		<i>df</i>	$\chi^2$	<i>p</i>
	JSO ( <i>N</i> = 47)	GO ( <i>N</i> = 90)			
MEDICATION					
Tranquilizers	4.3	1.1	1	1.425	.233
Antidepressants	19.2	8.9	1	2.990	.084
Stimulants (Ritalin)	25.5	15.6	1	1.999	.157
MEDICAL PROBLEM					
Chronic illness	2.3	1.1	1	.222	.638
SUBSTANCE ABUSE					
Tobacco	12.8	22.2	1	1.796	.180
Alcohol	19.2	43.3	1	7.934	.005*
Marijuana	25.5	56.7	1	12.050	.001*
Other psychotropics	0	1.1	1	.526	.468
Organic solvents	0	1.1	1	.526	.468
Controlled substance	2.1	3.3	1	.158	.691
Hallucinogens	0	1.1	1	.526	.468

\*Significant at the .05 level.

**Appendix J**  
**Description of Logistic Regression Analysis**

### Logistic Regression Analysis Summary

Logistic regression is a statistical technique typically used to model a binary variable (0/1) from a set of predictors. These predictors can be dichotomous such as race or continuous such as age. The output of a logistic regression is a score, *phat*, from which a classification of a group membership (0/1) is derived. The cut score used to classify the obtained *phat* is determined by considering the probability of the group in the population being sampled and the consequences of misclassification. The cut score (probability level) for this study was .34. The probability of the group was .343 from 47 (number of JSOs) divided by 137 (total number of offenders).

Logistic regression was utilized in the present study because it allowed examination of multiple predictors simultaneously in exploratory analysis rather than Chi Square analysis which is bivariate. The logistic regression done in this study attempted to predict a participant's membership in the JSO group. This outcome was coded 1 for JSO and 0 for GO groups. The following  $2 \times 2$  contingency table below describes the decision making process and defines the concepts of sensitivity, specificity, false-positive, and false-negative rates.

From the table, Sensitivity is the probability that a decision of JSO will be made when in fact the true state of affairs is that the participant is a JSO. Specificity is the probability that a decision of GO will be made when the true state of affairs is that the participant is a GO. Sensitivity, Specificity, False Positive and False Negative are examples of conditional probabilities (i.e., examples of the likelihood of an event given knowledge about some circumstances associated with the event). Positive Predictive Value (PV+) is the conditional probability that a participant is a JSO given that that test is positive and Negative Predictive Value (PV-) is the conditional probability that a participant is a GO given that the test is negative.

Contingency Table

Decision/Classification	True State		
	JSO	GO	
JSO	a Sensitivity (PV+)	b False Positive (Wrong group)	a + b
GO	c False Negative (Wrong group)	d Specificity (PV-)	c + d
	a + c	b + d	

The concepts of Odds and Odds Ratios are also important in Logistic Regression. Odds is defined as “the odds of membership in the target group [JSOs] are equal to the probability of membership in the target group [JSOs] divided by the probability of membership in the other group [GO]” (Wright, 1995, p. 222). Odds Ratio is the “change in the odds of membership in the target group [JSOs] for a one-unit increase in the predictor” (Wright, 1995, p. 223).

In analyzing predictors in a Logistic Regression model, the odds ratio associated with each predictor reflects the unique contribution of that predictor. The 95% confidence interval, for the odds ratio associated with each predictor, is considered first. If the number one is included in the confidence interval, the variable is not considered to be a statistically significant predictor. If the confidence interval around the odds ratio does not include the number one, then the odds ratio is considered statistically significant and the associated predictor is considered to provide a unique contribution in predicting the target group.

If the odds ratio is less than one, the variable is said to be inversely predictive (or protective) of the target group, meaning that an incremental increase in the



predictor is associated with a lower odds of being in the targeted group. For example, an odds ratio of .4 when both the predictor and outcome have two levels is interpreted as meaning that the odds of being in the targeted group is 2.5 times ( $10/4$ ) less likely when the predictor is present (coded 1) than when the predictor is not present (coded 0). If the odds ratio is greater than one, the variable is directly predictive of the target group (JSOs), meaning that an increment in the predictor is associated with a higher odds of being in the target groups. For example, an odds ratio of 3.0 when both the predictor and outcome have two levels is interpreted as meaning that the odds of being in the targeted group is 3 times more likely when the predictor is present (coded 1) than when not present (coded 0).

Summary adapted from the following sources:

K. F. Spratt (personal communication, July 10, 1996).

K. F. Spratt (personal communication, May 2000).

Wright, R. E. (1995). Logistic regression. In L. G. Grimm & P. R. Yarnold (Eds.), Reading and understanding multivariate statistics (pp. 217–244).

Washington, DC: American Psychological Association.

**Appendix K**  
**Logistic Regression Model 1**

## Summary of Logistic Regression Model 1

Model	Predictors	<i>df</i>	Estimate	Odds Ratio	95% CI	
1	DEMOGRAPHIC VARIABLES					
	Intercept	1	.516			
	Age	1	-.0412	.960	0.735	- 1.252
	Race	1	-1.1266	.324	0.151	- 0.673
Prob Event	Cut Score	Sens	Spec	PV+	PV-	Delta
.343	.34	66.3	61.1	47.0	77.5	12.7

**Sensitivity (Sens)** = The probability the model is at or above the cut score given that the respondent is a JSO.

**Specificity (Spec)** = The probability the model is below the cut score given that the respondent is a GO.

**Positive Predictive Value (PV+)** = The probability of being a JSO given that the model score is at or above the cut score.

**Negative Predictive Value (PV-)** = The probability of being a GO given that the model score is below the cut score.

**Delta:** The difference between the Probability of the Event (Prob Event) and Positive Predictive Value (PV+) which is improvement in prediction above chance. In other words, Delta is the improvement the model provides over chance.

**Appendix L**  
**Logistic Regression Model 2**

## Summary of Logistic Regression Model 2

Model	Predictors	df	Estimate	Odds Ratio	95% CI	
2	GENERAL CRIMINALITY NONSEXUAL —Committing Offenses					
	Intercept	1	-.4539			
	Breaking & Entering	1	-13.6998	0.000	0.000 – .440	
	UDAA/No Operator's Permit	1	-13.6742	0.000	0.000 – .512	
Prob Event	Cut Score	Sens	Spec	PV+	PV–	Delta
.343	.34	100.0	17.8	38.8	100.0	4.5

**Sensitivity (Sens)** =The probability the model is at or above the cut score given that the respondent is a JSO.

**Specificity (Spec)** = The probability the model is below the cut score given that the respondent is a GO.

**Positive Predictive Value (PV+)** =The probability of being a JSO given that the model score is at or above the cut score.

**Negative Predictive Value (PV–)** =The probability of being a GO given that the model score is below the cut score.

**Delta:** The difference between the Probability of the Event (Prob Event) and Positive Predictive Value (PV+) which is improvement in prediction above chance. In other words, Delta is the improvement the model provides over chance.

**Appendix M**  
**Logistic Regression Model 3**

## Summary of Logistic Regression Model 3

Model	Predictors	df	Estimate	Odds Ratio	95% CI
3	GENERAL CRIMINALITY NONSEXUAL VARIABLES —Previous Adjudications				
	Intercept	1	-.1673		
	Breaking & Entering	1	-.6190	0.538	0.140 – 1.743
	Stolen Property	1	-13.4424	0.000	0.000 – .667
	UDAA/No Operator's Permit	1	-13.755	0.000	0.000 – .348
	Assault & Battery	1	-1.1658	0.312	.084 – .932
	Prob Event				
	.343				
	Cut Score				
	.34				
	Sens				
	85.1				
	Spec				
	47.8				
	PV+				
	46.0				
	PV–				
	86.0				
	Delta				
	11.7				

**Sensitivity (Sens)** = The probability the model is at or above the cut score given that the respondent is a JSO.

**Specificity (Spec)** = The probability the model is below the cut score given that the respondent is a GO.

**Positive Predictive Value (PV+)** = The probability of being a JSO given that the model score is at or above the cut score.

**Negative Predictive Value (PV–)** = The probability of being a GO given that the model score is below the cut score.

**Delta:** The difference between the Probability of the Event (Prob Event) and Positive Predictive Value (PV+) which is improvement in prediction above chance. In other words, Delta is the improvement the model provides over chance.

**Appendix N**  
**Logistic Regression Model 4**



## Summary of Logistic Regression Model 4

Model	Predictors	df	Estimate	Odds Ratio*	95% CI	
4	SEXUAL HISTORY —Committing Offenses					
	Intercept	1	−1.7047			
	Criminal sexual conduct (CSC)					
	1st Degree	1	15.4751			
	2nd Degree	1	15.6733			
	3rd Degree	1	3.3142	27.500	4.091 – 545.496	
	4th Degree	1	3.3142	27.500	4.091 – 545.496	
	Other Sexual Offense	1	15.5812			
Prob Event	Cut Score	Sens	Spec	PV+	PV−	Delta
.343	.34	66.3	61.1	47.0	77.5	12.7

\* Odds Ratio not provided for some variables because it was undefined. The incidence of the predictor was zero for one of the two groups.

Sensitivity (Sens) = The probability the model is at or above the cut score given that the respondent is a JSO.

Specificity (Spec) = The probability the model is below the cut score given that the respondent is a GO.

Positive Predictive Value (PV+) = The probability of being a JSO given that the model score is at or above the cut score.

Negative Predictive Value (PV–) = The probability of being a GO given that the model score is below the cut score.

Delta: The difference between the Probability of the Event (Prob Event) and Positive Predictive Value (PV+) which is improvement in prediction above chance. In other words, Delta is the improvement the model provides over chance.

**Appendix O**  
**Logistic Regression Model 5**

## Summary of Logistic Regression Model 5

Model	Predictors	df	Estimate	Odds Ratio*	95% CI	
5	SEXUAL HISTORY					
	—Previous Adjudications					
	Intercept	1	−0.8023			
	1st Degree CSC	1	0.8023	2.231	.087 – 57.337	
	2nd Degree CSC	1	1.4955	4.462	.416 – 97.615	
	3rd Degree CSC	1	14.2251			
	4th Degree CSC	1	1.9010	6.692	.828 – 137.607	
	Other Sexual Offense	1	−1.4955			
Prob Event	Cut Score	Sens	Spec	PV+	PV−	Delta
.343	.34	14.9	96.7	70.0	68.5	35.7

\* Odds Ratio not provided for some variables because it was undefined. The incidence of the predictor was zero for one of the two groups.

Sensitivity (Sens) = The probability the model is at or above the cut score given that the respondent is a JSO.

Specificity (Spec) = The probability the model is below the cut score given that the respondent is a GO.

Positive Predictive Value (PV+) = The probability of being a JSO given that the model score is at or above the cut score.

Negative Predictive Value (PV−) = The probability of being a GO given that the model score is below the cut score.

Delta: The difference between the Probability of the Event (Prob Event) and Positive Predictive Value (PV+) which is improvement in prediction above chance. In other words, Delta is the improvement the model provides over chance.

**Appendix P**  
**Logistic Regression Model 6**

## Summary of Logistic Regression Model 6

Model	Predictors	<i>df</i>	Estimate	Odds Ratio*	95% CI	
6	SEXUAL HISTORY					
	—Diverse sexual issues					
	Intercept	1	−0.9051			
	Masturbation	1	2.2914	9.889	1.404 – 96.898	
	Homosexuality	1	14.3185			
	Incest	1	14.7755			
	Cross dressing	1	14.0072			
Prob Event	Cut Score	Sens	Spec	PV+	PV−	Delta
.343	.34	21.3	98.9	90.9	70.6	56.6

\* Odds Ratio not provided for some variables because it was undefined. The incidence of the predictor was zero for one of the two groups.

**Sensitivity (Sens) =** The probability the model is at or above the cut score given that the respondent is a JSO.

**Specificity (Spec) =** The probability the model is below the cut score given that the respondent is a GO.

**Positive Predictive Value (PV+) =** The probability of being a JSO given that the model score is at or above the cut score.

**Negative Predictive Value (PV−) =** The probability of being a GO given that the model score is below the cut score.

**Delta:** The difference between the Probability of the Event (Prob Event) and Positive Predictive Value (PV+) which is improvement in prediction above chance. In other words, Delta is the improvement the model provides over chance.

**Appendix Q**  
**Logistic Regression Model 7**

## Summary of Logistic Regression Model 7

Model	Predictors	df	Estimate	Odds Ratio	95% CI	
7	DEVELOPMENTAL HISTORY					
	—Family issues					
	Intercept	1	–1.1081			
	Drug-alcohol system	1	–2.5406	.079	.012 – .291	
	Sexual abuse issues	1	4.3441	77.023	20.851 – 504.163	
<hr/>						
Prob Event	Cut Score	Sens	Spec	PV+	PV–	Delta
.343	.34	76.0	88.9	78.3	87.9	44.0

**Sensitivity (Sens) =** The probability the model is at or above the cut score given that the respondent is a JSO.

**Specificity (Spec) =** The probability the model is below the cut score given that the respondent is a GO.

**Positive Predictive Value (PV+) =** The probability of being a JSO given that the model score is at or above the cut score.

**Negative Predictive Value (PV–) =** The probability of being a GO given that the model score is below the cut score.

**Delta:** The difference between the Probability of the Event (Prob Event) and Positive Predictive Value (PV+) which is improvement in prediction above chance. In other words, Delta is the improvement the model provides over chance.

**Appendix R**  
**Logistic Regression Model 8**



## Summary of Logistic Regression Model 8

Model	Predictors	df	Estimate	Odds Ratio	95% CI	
8	DEVELOPMENTAL HISTORY					
	Intercept	1	-0.6899			
	Sexually abused	1	2.6967	14.830	5.071 – 50.694	
	Neglect	1	1.6769	5.349	1.467 – 26.090	
	Abandonment	1	-1.0153	.362	.137 – .881	
	Disciplinary problems in school	1	-1.9280	.145	.028 – .553	
Prob Event	Cut Score	Sens	Spec	PV+	PV–	Delta
.343	.34	53.2	91.1	75.8	78.9	41.5

**Sensitivity (Sens) =** The probability the model is at or above the cut score given that the respondent is a JSO.

**Specificity (Spec) =** The probability the model is below the cut score given that the respondent is a GO.

**Positive Predictive Value (PV+) =** The probability of being a JSO given that the model score is at or above the cut score.

**Negative Predictive Value (PV–) =** The probability of being a GO given that the model score is below the cut score.

**Delta:** The difference between the Probability of the Event (Prob Event) and Positive Predictive Value (PV+) which is improvement in prediction above chance. In other words, Delta is the improvement the model provides over chance.

**Appendix S**  
**Logistic Regression Model 9**

## Summary of Logistic Regression Model 9

Model	Predictors	df	Estimate	Odds Ratio	95% CI	
9	PSYCHOLOGICAL MALADJUSTMENT					
	Intercept	1	-.2238			
	Marijuana	1	-1.4293	.239	.103 –	.521
	Antidepressants	1	1.1175	3.057	1.015 –	9.592
Prob Event	Cut Score	Sens	Spec	PV+	PV–	Delta
.343	.34	74.5	50.0	43.7	79.0	9.4

**Sensitivity (Sens)** = The probability the model is at or above the cut score given that the respondent is a JSO.

**Specificity (Spec)** = The probability the model is below the cut score given that the respondent is a GO.

**Positive Predictive Value (PV+)** = The probability of being a JSO given that the model score is at or above the cut score.

**Negative Predictive Value (PV–)** = The probability of being a GO given that the model score is below the cut score.

**Delta:** The difference between the Probability of the Event (Prob Event) and Positive Predictive Value (PV+) which is improvement in prediction above chance. In other words, Delta is the improvement the model provides over chance.

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