

TARA EMILY KADISH

The Development and Examination of the Psychometric Properties of the Life-Skills
Development Scale-Juvenile Form
(Under the Direction of BRIAN A. GLASER)

The purpose of this study was to develop a short self-report instrument to assess the level of life-skills development of juvenile offenders. The Life-Skills Development Scale-Juvenile Form (LSDS-JF) is a self-report instrument designed to assess juvenile offenders' perceptions of their own life-skills development. The Life-Skills Model is a comprehensive social competence model based on a developmental rationale in which life-skills are defined as those skills (other than academic skills) which are necessary for effective living.

The LSDS-JF is comprised of four subscales including interpersonal communications/human relations skills, problem-solving/decision-making skills, physical fitness/health maintenance skills, and identity development/purpose-in-life skills.

INDEX WORDS: Juvenile Offenders, Delinquency, Life-Skills, Social Skills, Social Competence

THE DEVELOPMENT AND EXAMINATION OF THE PSYCHOMETRIC
PROPERTIES OF THE LIFE-SKILLS DEVELOPMENT SCALE-JUVENILE FORM

by

TARA EMILY KADISH

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M.Ed., The University of Georgia, 1997

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TARA EMILY KADISH

Approved:

Major Professor: Brian Glaser

Committee: Georgia Calhoun
Pamela Paisley
Earl Ginter
James Calhoun

Electronic Version Approved:

Gordhan L. Patel
Dean of The Graduate School
The University of Georgia
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CHAPTER I

INTRODUCTION

Juvenile delinquency is a problem that continues to plague society. According to the 1997 Office of Juvenile Justice and Delinquency Prevention report, in 1996, 2 million of the 2.9 million arrests of persons under the age of 18 became involved in the juvenile court system. According to the Office of Juvenile Justice and Delinquency Prevention website, in 1998, law enforcement agencies made an estimated 2.6 arrests of persons under the age of 18. Additionally, juveniles were involved in 17% of all violent crime arrests and 33% of all property crime arrests in 1998. According to Borduin et al. (1995), serious juvenile offenders are, by far, at greatest risk for committing additional serious crimes. A juvenile offender is commonly defined as a child or adolescent under the age of 18 whom is caught and convicted of committing an illegal act. The nature of these illegal acts range in severity from shoplifting to drug/alcohol violations, to aggravated battery, and to murder. Depending on the severity of the crime and the youth's criminal history, several steps could be taken by the juvenile justice system. The youth could be mandated to counseling, placed on probation, or detained in a youth detention facility.

Juvenile delinquency has received much attention in both the media and research for more than two decades. It is obvious that despite the attention it has received, delinquency is still a problem that deserves study. Psychologists, social workers, law scholars, and court personnel all have a vested interest in juvenile delinquency research.

Psychologists are interested in the etiological factors of juvenile delinquency as well as the therapeutic factors that come into play when working with juvenile offenders.

Counseling psychologists, in particular, are interested in focusing on strengths of this population and factors that can lead to resiliency. In order to take a strength-based and competency-based perspective, it is important to look at the areas that are typically seen as "deficits" and then build on existing strengths. Interventions designed to strengthen existing skills (which may be underdeveloped) could prevent future delinquency from occurring. A movement towards strength-based approach "requires us to look less at what is wrong with the adolescent and his or her family and more at ways we can exploit their strengths to enable them to eventually exit our juvenile justice system" (Clark, 1997, p.110). Clark (1997) further believes that strength-based practice is based on the belief that all offenders possess talents, abilities, and capacities and past successes that can be discovered and strengthened to enable them to no longer be involved with the court system.

Juvenile offenders tend to possess significantly underdeveloped skills in several areas including life-skills (also referred to as social skills in the literature), academic skills, and drug/alcohol refusal skills. Juveniles with poor social and drug refusal skills often act impulsively in situations, which gets them into trouble. They do not have the type of requisite skill strengths to know how to handle certain interpersonal situations. Such youth often become involved with the juvenile justice system and as a result may be detained which takes them away from their public school environment. This disruption of their normal learning can further be expected to erode existing academic skills.

Although all of these skills (both academic and non-academic) deserve attention in the juvenile offender research literature, the focus of this study will be the area of life-skills.

Significance of Study

There is a paucity of assessment instruments created for use with a juvenile offender population. There is an even greater lack of instruments created to assess social competence in general, and more particularly with this population. A search of the literature (i.e., Coffey & Knoll, 1998) did not yield any instruments created for the express purpose of assessing social competence and/or life-skills in a juvenile offender population. For the sake of consistency, the term life-skills (recognizing that social skills is a term used by some writers to imply an array of skills) will be used for the remaining chapters unless there is a need to distinguish between the two terms. Gerken (1986), for example, states that assessment in the "skills" area is not well advanced even for the general population. This still holds true. The assessment tools that do exist are often not well researched. Most of the studies on these assessment instruments have used univariate measures (e.g., assertiveness skills) to evaluate skill deficits and the effects of the subsequent interventions (e.g., change due to assertiveness training) (LeCroy, 1983; Parker & Asher, 1987).

Since self-report measures are useful in screening large groups of adolescents, particularly juvenile offenders in a youth detention facility, it seems reasonable to assume that a self-report measure could be useful to ascertain the level of life-skill development that detained youth possess. This assessment can then provide a starting place for programming and training in the area of life-skills. As previously mentioned, there have been few self-report assessment measures with adequate psychometric properties that

have been developed with the explicit goal of assessing adolescent social competence (Gresham & Cavell, 1986; Coffey & Knoll, 1998). There are even fewer self-report measures of this type that have been used with juvenile offenders.

Statement of the Purpose

The purpose of the current study was to create a short self-report instrument to assess the level of life-skills development of juvenile offenders. According to Towberman (1992), " a fundamental precept of juvenile justice was, and still is, priority emphasis on individualized treatment as opposed to the punitive orientation of adult criminal justice" (p. 230). Obviously, such an emphasis on rehabilitation requires an identification and examination of specific treatment needs of the youth. The Life-Skills Development Scale-Juvenile Form (LSDS-JF) (Kadish, Glaser, Calhoun, & Ginter, in press) is a short self- report instrument designed to assess juvenile offenders' perceptions of their own life-skills development. The LSDS-JF was created by utilizing and modifying items from Gazda, Ginter, and Darden's (1990) Life-Skills Development Scale--Adolescent Form (LSDS-B) which itself was originated from studies based on the Life-Skills model of Gazda (1982) and Gazda, Childers, and Brooks (1987). The LSDS-B is a 65-item instrument and represents one of several measures based on Gazda's model of life-skills (Ginter, 1999). This self-report instrument is divided into 4 subscales, each one measuring one of the four developmental dimensions to be discussed later. The 65 items comprising the LSDS-B were identified through a series of studies, which began with Brooks' 1984 study. Brook's original study helped to establish the 65 items' validity (along with other items) through a three-round Delphi survey "in which

Brooks obtained a consensus from the panelists...as to the basic life-skills common (generic) to all age groups (i.e., childhood, adolescence, and adulthood and descriptors for each of these). The panel was comprised of developmental specialists. Brooks' 1984 study resulted in a life-skills taxonomy based on 305 descriptors" (p. 144, Darden, Ginter, & Gazda, 1996). Darden pulled out only those descriptors that related to adolescence and then conducted several studies to establish the reliability and validity of the final items comprising the LSDS-B (Darden, 1990a, Darden, 1990b, Darden, 1991, Darden, Ginter et al., 1996).

Ginter (1999) pointed out that all of the various life-skills development instruments constructed since 1984 to measure Gazda's model of life-skills, all measure four life-skills dimensions. These dimensions are defined by Darden (1991) as:

1. Interpersonal Communications/Human Relations Skills (IC/HRS) are those skills necessary for effective communication, leading to ease in establishing relationship, small and large group and community membership participation, and management of interpersonal intimacy.
2. Problem-Solving/Decision-Making Skills (PS/DMS) are those skills necessary for information seeking, assessment and analysis, problem identification, solution implementation and evaluation, goal setting, time management, critical thinking and conflict resolution skills.
3. Physical Fitness/Health Maintenance Skills (PF/HMS) are those skills necessary for motor development and coordination, nutritional maintenance, weight control, physical fitness, athletic participation, psychological aspects of sexuality, stress management, and leisure activity selection.

4. Identity Development/Purpose-in-Life Skills (ID/PILS) are those skills necessary for ongoing development of personal identity and emotional awareness, including self-monitoring, maintenance of self-esteem, manipulating and accommodating one's environment, clarifying values, sex role development, making meaning, morals/values, and various aspects of sexuality. (pp. 136-139)

According to Darden (1991), the Life-Skills Model (LSM) is a comprehensive social competence model based on a developmental rationale. This model is theoretical in nature and has clinical application and empirical influences. It has educational underpinnings and is largely based on developmental theory. The empirical base for the LSM is a Life-Skills taxonomy that was developed by Brooks (1984).

Stanton and Meyer (1998) discuss the need for evaluative measures for juvenile offender programs. They believe that, "until evaluation efforts move beyond measuring program outcomes such as 'reduced recidivism' and 'weeks incarcerated,' advances in the field will be limited" (p. 220). They further explain that:

If the expectation of treatment outcome goes beyond reducing offenses and advances to maximizing each adolescent's adaptive development, then we may have the potential not only to reduce the number of criminals but also to increase the number of functional and productive members in our communities. (p. 221)

The Life-Skills Development Scale-Juvenile Form has been created in an effort to provide an evaluative measure for life-skills training. This training serves to improve the adaptive skills of youth and to allow them to become productive members of society.

Content Validation and Internal Consistency

The LSDS-JF was derived from the LSDS-B, which was previously validated by Darden (1990). The LSDS-JF was created and tested in a pilot study in 1998 (Kadish et al., in press).

The Cronbach alpha level was calculated and the total alpha level was .83. This pilot study found that the items on the physical fitness/health maintenance skills (PF/HMS) subscale did not hold up as well to factor analytic procedures. This finding was similar to the results found in Darden's original normative study of the LSDS-B in which the PF/HMS subscale did not obtain the same degree of internal consistency and test-retest reliability as the other subscales.

Research Questions

1. Is the LSDS-JF a valid measure of life-skills development in juvenile offenders?
 - a. Do the subscales of the LSDS-JF measure distinct constructs as determined by factor analysis?
 - b. Does the LSDS-JF fall into four factors as theoretically predicted?
 - c. Does cross-validation with other measures (i.e., Behavior Assessment System for Children) support LSDS-JF constructs?

Definition of Terms

1. Factor. According to Child (1970), when a group of variables has, for some reason, a great deal in common a factor may be said to exist. These related variables are discovered using a correlational technique.

2. Factor analysis. According to Hair, Anderson, and Tatham (1987), factor analysis is a class of multivariate statistical methods whose primary purpose is data reduction and summarization. This technique analyses the interrelationships among a large number of variables and condenses that information into a smaller set of common underlying factors. Heppner, Kivlighan, and Wampold, (1992) further state that “the fundamental aim of factor analysis is to search for common dimensions that underlie the original variables.” This method is oftentimes used to develop questionnaires or assessment scales.
3. Juvenile offender. A child or adolescent under the age of 18 whom is convicted of committing an illegal act.
4. Life-skills. All of those skills and knowledge prerequisite to development of the skills in addition to the academic skills that are necessary for effective living (Gazda, Childers, & Brooks, 1997).

Limitations

1. Both detained and adjudicated juvenile offenders were used in this study since the assessment is designed for general use by those working with juvenile offenders (although only a very small sample of adjudicated youth were assessed). There may be some differences between those who are detained and those who are simply adjudicated delinquent.
2. Adolescents in general, and juvenile offenders in particular, are not generally reliable

at predicting or reporting their own behavior. Additionally, many of the youth have been diagnosed with Attention Deficit/Hyperactivity Disorder and cannot sustain their attention for long periods of time. Although the scale is only 40-items in length, fatigue may have set in for some youth towards the end.

3. Data was collected at a detention facility with candy as an incentive. It is therefore not known whether all of the youth read the scale accurately and gave careful consideration to each question.

4. Since the detention facility is all-male, only a few scales were filled out by female youth (adjudicated youth). It is hoped that in the future, data can be collected on more females.

CHAPTER II

REVIEW OF RELATED LITERATURE AND RESEARCH

Juvenile Delinquency

Crime is one of the leading social problems in the United States. According to Siegel and Senna (1997), the crime rate "skyrocketed" between 1960, when about 2.2 million crimes were reported to police agencies, and 1981, when 13.4 million crimes were reported. The crime rate decreased during the next four years and then increased again for the remainder of the 1980's. The 1990's started with a stabilization and decline of the crime rate (about 8% decline between 1990-1995). Walker (1995) noted that the rate of crimes perpetrated by youths has increased at a rate exceeding population increases but directly related to an increase in the portion of adolescents comprising the general population. Adolescents are disproportionately involved in crime and therefore as the portion of adolescents in our population grows, so does the national crime rate.

History

The problem of juvenile delinquency, or criminal violent and non-violent acts committed by youth between the ages of 12 and 18, has been a part of society for centuries. According to Eddy and Gribskov (1998), delinquency ascended to social-problem status during the Industrial Revolution. In New York City, the first institution of juvenile justice was soon created. During the 1800's, for example, youth were sent to rural group houses, also known as refuge houses, to remove them from the "bad"

environments that had caused them to turn to criminal and violent behavior. Waegel (1989) cites the fact that the refuge house was to function "as an instrument for compelling lower-class children to conform to middle-class standards of behavior" (p. 10). By the mid-19th century, 40,000 youth were held in more than 20 refuge houses throughout the United States. As more youth were sent to these facilities, problems arose including youth violence within the houses (Eddy & Gribskov, 1998). These refuge houses became warehouses for these youth much as the mental hospitals of the time had become for the mentally ill (Davidson, Redner, Amdur, & Mitchell, 1990).

The Chicago Women's Club was dissatisfied with the refuge house conditions and in 1885, they drafted legislation to create a separate juvenile justice system. This system was designed to provide both a legal and a social service to the community (Davidson et al., 1990). For the first time, delinquency was looked at as a problem involving the family, the youth, and society. The idea was also that the misbehavior of youth would be looked upon as childish misconduct rather than as a crime (Davidson et al., 1990). Most states modeled their juvenile court legislation after the Illinois Juvenile Court Act of 1899, but there was a lot of variability in the actual practices of these newly formed courts. By 1920, for example, only 16% of juvenile courts actually held separate hearings for children or had official juvenile probation services (Eddy & Gribskov, 1998).

Until the late 1960's, the juvenile justice system dealt with juvenile offenders under the parens patriae doctrine. Under this doctrine, juveniles relinquished their legal rights in exchange for the parental protection of the courts (White, 1989). Also, as late as the 1960's federal government surveys showed that there was no uniform procedure

across the country in terms of juvenile court procedures and operations (Eddy & Gribskov, 1998). The first major federal act that targeted delinquency was the Juvenile Delinquency and Youth Offenses Control Act of 1961. This act made competitive funds available for efforts in the community to increase opportunities for youth to succeed in conventional society. Programs that were encouraged included those that were intended to focus on family problems, prevent school dropout, or help youth in preparing for and finding employment (Eddy & Gribskov, 1998). In 1967, the Commission on Law Enforcement and Administration of Justice produced a landmark report on youth crime. Instead of highlighting individual psychopathology, the primary cause of delinquency was placed on the structure of society. The report also cited numerous problems of the juvenile justice system, its ineffectiveness in rehabilitating youth and the stigma of the label "delinquent" (Eddy & Gribskov, 1998).

The 1970's and 1980's brought a movement from state training schools for delinquents to smaller, community-based institutions and programs. The late 1980's and 1990's have brought the idea of boot camps and shock units to the forefront as a way of handling juvenile offenders. The last decade or two have brought a greater concern with protecting the public. According to White (1989), almost every state has passed laws making it easier for people over the age of 15 to be tried as adults for violent crimes.

Youth violence and aggression is actually no more prevalent today than it was 20 years ago, but it is more visible than it has ever been before because of media attention. The rate of violent crime by youth, however, has grown much more quickly than adult violent crime, and the peak age for violent crime arrests has dropped to age 17 (Cornell, Peterson, & Richards, 1999). It is not clear based on self-report and victimization data

whether youths are fighting more than in the past, but it is clear that their fighting is resulting in more injury and death largely due to the availability and use of firearms (Rosenberg, 1995).

Adolescent Development

Adolescence is a time that has been characterized as a time of conflict and crisis. According to Needs (1997), adolescence is a period of elevated social demands and tasks. Furthermore, "exploration of issues such as identity, autonomy, expansion and realignment of social contracts, new roles and feelings takes place against a background of physical changes and expectations of increased responsibility as preparation for adulthood" (Needs, 1997, p. 94). At this stage of development, adolescents are highly influenced by peers and struggle to individuate from their parents.

According to Reppucci (1999), adolescence seems to be a 20th century invention resulting from the industrialization of the United States along with such structural changes as:

- a) the rise of a biologically stable small family system in which the role of children was transformed from that of useful economic assets to that of priceless love objects,
- b) vast population increases, c) the movement of adolescents from the workplace to the school, and d) the increased dependence of adolescents on their parents. (p.309)

In the eyes of the courts, adolescents have been classified with younger children as minors and have been denied legal rights and privileges accorded to adults. Reppucci (1999) argues that traditional paternalistic attitudes that have been used to rationalize the exclusion of children from adult courts may not be as applicable to adolescents. He explains that:

While some observers have suggested that adolescents' legal treatment is too restrictive and that they should be granted more of adults' rights and privileges, others, alarmed by the increases in juvenile crime, have argued that adolescents are protected excessively from the consequences of their behavior and that they should be held equally as responsible for their crimes as adults. (p.308)

Adolescents are generally presumed to be less independent in their decision making than are adults and are more likely to be influenced by both their parents and peers. Influence by peers occurs through social comparison and social conformity. Through social comparison, adolescents use others' behavior as a measure of their own behavior. Social conformity, on the other hand, results in adolescents adapting their behavior and attitudes to those of their peers (Reppucci, 1999). Adolescents are far more likely than adults to engage in risk-taking behavior. Adolescents are less likely than adults to consider the future and are more likely to act based on short-term rather than long-term goals and consequences.

National and Georgia Statistics

The National Center for Juvenile Justice indicated that in 1994 there were 898,300 arrests of persons under the age of 18. Included in this number are 150,200 whom were arrested for violent crimes, which include murder, rape, robbery, and aggravated assault. A national survey in 1994 reported that approximately 20% of all adolescents reported having engaged in one violent act prior to the age of 18 and 5% reported engaging in multiple violent incidents (Earls, 1994). More recently, The Office of Juvenile Justice and Delinquency Prevention reported that in 1996, law enforcement agencies in the United States made 2.9 million arrests of persons under the age of 18

(U.S. Department of Justice, 1997). In 1998, law enforcement agencies made an estimated 2.6 million arrests of persons under the age of 18. Additionally, persons under the age of 25 make up nearly half of all victims of serious violent crimes (The Institute for Youth Development, 1998). In 1994, for example, 8,116 youths between the ages of 15 and 24 years were victims of homicide. Of all homicide victims in that year, 38% were younger than 24 years of age. The Center for Disease Control reported in 1996 that homicide is the second leading cause of death for youths between the ages of 15 and 24 in the United States and is the leading cause of death for African-American and Hispanic-American youth within this age group

There are differences in prevalence rates for delinquency and violent offenses between gender and ethnic groups. According to Rapp and Wodarski (1997), at the age of 17, 36% of African Americans and 25% of White males reported at least one or more serious violent offenses. At the ages of 15 or 16, nearly one African American female in 5 and one White female in 10 reported committing at least one serious violent offense (Elliott, 1994).

Speirs (1988) found that 69% of youth referred to juvenile court two times before the age of 15 continued their criminal activity, 80% referred three times committed additional offenses, and 93% with eight referrals were arrested again. These national statistics are consonant with those statistics found in the community in which this study was conducted. From 1987 to 1996, for example, the number of youth served in case management increased from 235 to 795, and in detention admissions from 265 to 303 (unpublished Georgia Department of Children and Youth Services data, 1997).

According to Athens/Clarke County Juvenile Court records, approximately

60% of the youth involved with the juvenile court have committed drug-related offenses. Thirty-five percent of those youth arrested in Clarke County in 1994 were repeat offenders. The average age of a juvenile offender in Clarke County was 15 ½ years of age. Seventy percent were males and sixty-five percent were African-American (Shearer, 1996).

Additionally, the youth detention centers in Georgia are becoming increasingly overcrowded. Of late, these detention centers have been filled to 40-60% beyond capacity. Juvenile probation officers in Georgia currently have caseloads of 100-150 youth, 150-200% above the recommended caseload. Clarke County is no exception. As of November of 1999, the Athens Regional Youth Detention Center was at full capacity.

Besides the manpower needed to staff these youth detention centers and to manage these caseloads, the burden of paying to care for these detained youth is placed upon the citizens of Georgia. Dahlberg (1998) comments that "the economic cost to society associated with violence-related illness, disability, and premature death is estimated to be in the billions of dollars each year" (p. 259). Kashani, Jones, Brumby, and Thomas (1999) report that it has also been estimated that more than \$60 billion is spent annually on victim's medical treatment and lost work productivity, as well as on direct costs to the criminal justice system. Those youth who reoffend often become involved in the adult prison system. In 1992, the average annual cost of housing an adult prison inmate was approximately \$18,000. In 1994, almost \$5 billion was spent to construct new prisons in the United States (Borduin & Schaeffer, 1998).

Media attention in recent years has heightened the concern of the public about violence in the nation's schools as well. A major shift has occurred in the perception of

the public about the seriousness of violence. In 1982, only 3% of adults in a national poll identified crime and violence as the most important problem facing this country; by August 1994, more than half identified this as a major problem. In 1994, violence was also identified as the largest problem facing the nation's public schools (Elliott, Hamburg, and Williams, 1998). According to Lawrence (1998), the level of violence and the use of firearms among school children is on the increase in the United States in both rural and urban areas. Lawrence (1998) reports that:

According to a 1993 survey of 16,000 students by the national Centers for Disease Control and Prevention, more than one in ten (11.8 percent) of high school students reported that they had carried a weapon on school property; 24 percent said they were offered, sold, or given drugs on campus; about 7.3 percent said they were threatened or injured with a weapon in school; and 4.4 percent said they had skipped school at least one day in the previous month because they felt unsafe. (pp. 2-3).

Victimization in schools is a very real possibility for many youth. For example, in 1991, more than half (56%) of juvenile victimizations occurred at school or on school grounds. Few of these youth (20%) reported their victimization to the police, and less than half reported the victimization to either the police or school officials (Elliott, et al., 1998).

Risk Factors

The juvenile delinquency and juvenile violence literature cite a variety of risk factors for the development of antisocial behavior. Ineffective parenting, which can be defined as either too strict and unyielding or too lax or chaotic, has been cited as one of the most important factors in the development of violent behavior (Rapp & Wodarski, 1997). It has been found that parenting styles that are too lax or relaxed can be more

problematic than overly strict parenting. Rapp and Wodarski (1997) report that children from families with this parenting style have a delinquency rate of more than seven times that of families that are classified as strict. Further, Loeber and Stouthamer-Loeber (1986) concluded that lack of parental supervision was one of the strongest predictors of the development of delinquency and violent behavior in children.

Poor parental bonding is another type of family dysfunction that can contribute to the development of delinquency in children. Research on emotional attachment and bonding shows that there is a greater risk for aggressive and/or antisocial behavior in children who experience neglect, rejection, or indifference from their parents (Dahlberg, 1997). One aspect of parental bonding is how the parent and child perceive each other. Rapp and Wodarski (1997) report that "mothers of conduct-disordered children had a higher rate of reporting that they perceived their children as maladjusted compared to mothers of non conduct-disordered children" (p. 7). These negative perceptions clearly affect parental affection and bonding and leave the children at-risk for developing delinquent behaviors. Earlier involvement in delinquent behavior has a tendency to further reduce levels of attachment to parents and to school (Dahlberg, 1997). Seydlitz and Jenkins (1998) report that attachment to parents tends to reduce general delinquency and is also a powerful "family-related predictor of persistent, serious delinquency" (p. 55). Attachment to parents, they believe, can not only reduce delinquency directly, but can also decrease the youth's exposure to delinquent peers and therefore reduce delinquency. Those who are attached to their parents tend to spend more time with their family and therefore have less of an opportunity to associate with delinquent peers. This type of positive attachment to parents also helps to inhibit substance abuse in youth.

Family violence is especially damaging to children and can highly influence their development of violent behaviors. Children learn through imitation and are highly influenced by the behaviors modeled by adults, especially adults who are as influential in their lives as parents are. In 1994, Burman and Allen-Meares explained that children who are exposed to domestic violence have a greater tendency to use externalizing behaviors like aggression or delinquent behaviors. Siegel and Senna (1997) discuss the fact that "contemporary studies have also found that children who grow up in maladapted homes and who witness discord and/or violence later exhibit patterns of emotional disturbance, behavioral problems, and social conflict" (p. 283).

Child abuse is also identified as a potential risk factor for delinquent and aggressive behavior. According to Rapp and Wodarski (1997), researchers have found that physically abused children tend to be more aggressive toward peers and adults, to be less compliant, and to have poorer impulse control than those children that have not been abused. Abused children also tend to have fewer positive interactions with peers, are less well liked, and are more likely to have disturbed social interactions (Siegel & Senna, 1997). Smith and Thornberry (1995) conducted a study in which they found that a history of childhood maltreatment significantly increases the likelihood of later juvenile involvement in moderately serious, serious, and violent delinquency, but not minor delinquency. Maltreatment was also found to increase the chances of being arrested and the frequency of arrests. Smith and Thornberry (1995) concluded that "having a history of childhood maltreatment serious enough to warrant official intervention by child protective services is a significant risk factor for later involvement in serious delinquency" (p. 469).

Parental criminal behavior has also been found to be a risk factor for juvenile delinquency and violent behavior. Young (1999) believes that parental uninvolved and parental criminality "raise the odds against an adolescent who has begun a pattern of antisocial behavior"(p. 105). The child in the home of a criminal parent learns inappropriate skills and problem-solving techniques. This child learns antisocial behavior rather than socially acceptable behaviors and extends these behaviors to situations outside of the home (Rapp & Wodarski, 1997). Howell (1997) reports that studies have shown that criminal, antisocial, and alcoholic parents tend to have delinquent sons. Some evidence also exists that deviant siblings may have an significant influence on behavior. Siegel and Senna (1997) discuss a study which found that, "siblings who maintained a close relationship also had similar rates of drug abuse and delinquency" (p.287).

Parental alcoholism and/or substance abuse is another risk factor for development of delinquency and violence in youth. Bramblett, Wodarski, and Thayer (1991), for example, identified alcoholism as a predisposing factor in a child's risk for antisocial behavior. Alcoholism is found in many abusive, chaotic families and therefore should be viewed as a multidimensional problem. Rapp and Wodarski (1997) point out that besides bringing chaos into the household, parental alcoholism tends to model poor coping skills, aggressive responses to children, and poor expression of feelings. A study by Early and Poertner (1993) found that males who were diagnosed with conduct disorder had mothers and fathers with higher rates of alcoholism than did the parents of children in the control group.

Children who are disruptive at a young age are more likely to develop delinquent behaviors in adolescence and adulthood than children who are not disruptive early on are. Longitudinal research shows that aggression is stable over time and across generations (Dahlberg, 1998). According to Kazdin (1995), behavioral problems are among the best predictors of antisocial behavior at age 11. Behavioral problems as early as 5 years of age can be predictive of future conduct problems. The earlier that disruptive behavior begins, the more likely it is to become ingrained in the youth's behavioral repertoire. According to Rapp and Wodarski (1997), "a learned pattern of violent responses and coping strategies is soon developed and the child is then considered at risk" (p. 8). Dahlberg (1997) comments that "researchers using social-cognitive models have found an empirical link between aggression and hostile attributional biases, normative beliefs supportive of aggression, and social problem-solving skill deficits" (p. 262).

Kazdin (1995) explains that academic deficits have been found to significantly correlated with violent behavior in adolescents. It has generally been found that lower IQ, school achievement, grades, and poor school discipline records are correlated with delinquent behavior (Seydlitz & Jenkins, 1998; Rapp & Wodarski, 1997). Academic failure can lead to the development of a poor attitude towards school, teachers, and learning in general. In Athens-Clarke County, GA, 60% of youth involved with the juvenile justice system are reading more than three years below their chronological age. Cernkovich and Giordano (1996) point out that several authors have noted that there is considerable research showing that school failure is a stronger predictor of delinquency than socioeconomic status, race and ethnic background, and peer relations. Furthermore, school failure is predictive of delinquency for all socioeconomic levels.

Additionally, there are characteristics within youth, which tend to be associated with delinquent or antisocial behavior. Impulsivity is one of these characteristics. Youth with impulse control problems are less able to monitor their own behavior and tend to act without thinking of the possible consequences of their behavior. Rapp and Wodarski (1997) report that violent youths are much more impulsive than youths who commit minor acts of delinquency. According to Young (1999), "ADHD, particularly when it includes hyperactivity, is a risk factor for the development of antisocial behavior" (p. 153). Additionally, about half or more of children with ADHD develop oppositional defiant disorder (ODD), and of those with ODD, many develop conduct disorder. Those youth with ADHD and all of the risk factors that go along with it, are therefore more at-risk for the development of antisocial behaviors than those without the disorder (Young, 1999).

Another risk factor for the development of delinquent behavior is association with delinquent peers. In general, adolescence is a time of distancing oneself from parental authority, trying on new roles, and figuring out what one wants to become. Dahlberg (1997) explains that research on delinquency shows that associating with delinquent peers increases the risk of serious delinquency and involvement in criminal activity to a large degree. Within delinquent peer groups, negative behaviors are encouraged and rewarded. According to Wilson and Howell (1996), research on the causes and correlates of delinquency confirms that associating with delinquent, drug-using peers is strongly correlated with delinquency and drug use. Violent or delinquent people tend to have difficulty integrating with prosocial peer groups (Rapp and Wodarski, 1997). Those children with who display delinquent behavior tend to be rejected by youth who do not

engage in such behavior. The only peers that are available to them are therefore other youth who engage in delinquent behavior as well. Gangs are often a result of such groupings. According to Rapp and Wodarski (1997), "rejection by peers can reduce prosocial attachments and, therefore, social competence" (p.9). They further explain that:

A strong reciprocal relationship seems to be present between antisocial behaviors in children and negative peer groups. A child's poor social skills or disruptive behavior encourages him/her to be rejected by the positive peer group. The child then forms attachments with a negative, antisocial group. This group supports participation in delinquent acts and the child's antisocial behavior is, therefore, reinforced and his/her prosocial attachments are further diminished. Consequently, a pattern is developed. (p. 9).

Early negative peer relations tend to be predictive of later delinquent behavior. These negative peer relations, in conjunction with the other risk factors for delinquency, worsen the children's prognosis and increase the risk for later violent behavior.

Children who live in high-crime neighborhoods are also more at risk for developing delinquent behaviors. Dahlberg (1997) reports that in 1995, children under the age of 18 made up 40% of the nation's poor and had a rate of poverty (20.8) well above the national rate (13.8). Poverty, overcrowding, street or gang violence, drug dealers, unemployment, and unsafe schools are several of the factors that can increase the risk for the development of antisocial and/or violent behavior (Rapp & Wodarski, 1997). Living in an economically impoverished environment can serve to increase intrafamilial stress and conflict. Youth who live in violent neighborhoods are more likely to witness violence which can further serve to reinforce their own violent behavior. Those youth

who do not have prosocial role models, tend to imitate behaviors that they see. These youth tend to see fewer positive role models, have little hope for future employment, and experience fear and frustration (Rapp & Wodarski, 1997). Juvenile offenders tend to know where to acquire guns. Howell, Krisberg, and Jones (1995) report, for example, that in 1992, more than 85% of youth homicide victims were killed with firearms. They further found that in a 1991 national survey, 20% of high school students had carried a firearm to school in the past month. The youth further reported that the guns had been easily accessible to them.

Social Skills/Life-Skills

Social Skills

According to Elliott and Gresham (1993), social skills may be defined as "socially acceptable learned behaviors that enable a person to interact with others in ways that elicit positive responses and assist in avoiding negative responses" (p. 287). Deficient social skills can be a result of a lack of knowledge, insufficient practice or feedback, absence of cues or opportunities for performing socially acceptable behaviors, lack of reinforcement for these prosocial behaviors, and the presence of problems that interfere with performance of prosocial behaviors (Elliott & Gresham, 1993). Children and adolescents who have difficulties in social interactions are at risk for emotional, behavioral, and academic problems (Parker & Asher, 1987).

Different authors have different ideas about the areas that compose social skills; areas that are important to consider when working with those with social skills deficits. Elliott and Gresham (1993), for example, identified five major classes of social skills that are important for child and adult interactions. These classes include cooperation,

assertion, responsibility, empathy, and self-control. These classes include behaviors such as helping and sharing with others, initiating behaviors, ability to communicate with others, behaviors that show a concern for others, and appropriate behaviors when faced with conflict. Jenson and Howard (1990), believe that social skills include behaviors that "are necessary to ensure successful social interaction such as the ability to initiate conversation, make requests from others, or express approval or disapproval in interpersonal situations" (p. 214). LeCroy (1983) defines social skills as "a complex set of skills which allows the adolescent the ability to successfully mediate interactions between peers, parents, teachers, and other adults" (p. 92).

Gresham (1986) believes that social skills problems can be delineated into four types including skill deficits, performance deficits, self-control skill deficits, and self-control performance deficits. He defines children with social skills deficits as those who "do not have the necessary social skills to interact appropriately with peers or they do not know a critical step in the performance of the skill" (p. 152). He points to the fact that a barometer of whether or not a child has a skill deficit is based on the child's knowledge or past performance of a skill. If the child does not know how to perform a skill or has never been observed to perform the skill, then a skills deficit probably exists. Gresham (1986) discusses the fact that most social skills deficits are remediated through modeling, direct instruction, coaching, or behavioral rehearsal.

Christopher, Nangle, and Hansen (1993) discuss the fact that it is important for a youth to be socially involved with peers in order to facilitate the development of social skills including a sense of fitting in with peers. They list a number of reasons that social interactions may be critical for an adolescent's adjustment including: "establishing

support systems for emotional and social needs, improving or maintaining self-esteem, promoting interpersonal competence and adult-like social behavior, enhancing status within the peer group, and courtship and mate selection" (Christopher, et al., p. 315). They explain that the recognition that social interaction problems in childhood and adolescents have future implications has led to a great deal of research in the area of social deficits. This research has traditionally been conducted with children although more recent research on all ages has begun.

Social skills are thought to be the most malleable component of a broader component known as social competence, which can be defined as global efficacy. Bandura (1977) believed that social incompetencies in children and adolescents result from difficulties in either the acquisition or performance of social behaviors. Further, Kratochwill and French (1984) suggested that skills deficits "occur when the individual has not learned skills that are necessary to exhibit a socially competent response whereas performance deficits arise when the child fails to successfully perform behaviors he or she is capable of" (p. 332). Elksnin and Elksnin (1995) define socially competent individuals as those persons who engage in social skills behavior that leads to positive consequences during social interaction. They believe that social competence relies on more than the ability to perform a social skill; the individual must read a situation properly in an effort to identify the appropriate social skill. Graham, Richardson & Bhate (1997) use the term social competency to describe the ability of an individual to develop and maintain social relationships appropriate to his age and situation.

Life-Skills

Life-skills can be conceptualized in a broader sense than social skills. Some authors have assumed a broader view of skills deficits by looking at life-skills such as interpersonal communications (initiating conversations, and developing and maintaining relationships), developing self-control, stress management, anger management, relaxation skills, goal-setting, decision-making, and proper health maintenance (Danish, Galambos, & Laquatra, 1983). Life-skills allow adolescents to make and preserve interpersonal relationships, to cope with constantly changing environments, and to gain and maintain self-esteem and an internal locus of control (Gilchrist, Schinke, & Maxwell, 1987). Life-skills knowledge and the ability to carry out a variety of practical daily tasks constitute many of the elements needed for self-sufficiency (Mech, Ludy-Dobson, & Hulseman, 1994). According to Darden, Gazda, and Ginter (1996), social skills has been defined as effective interpersonal functioning which comprises both interpersonal and intrapersonal aspects of human nature. Social skills, they believe, denotes activities such as assertiveness or problem-solving skills. By comparison, life-skills "reflects a more encompassing aspect of what denotes effective interpersonal functioning" (p. 134). They denote four life-skills dimensions, which include Interpersonal Communication/Human Relations Skills, Problem-Solving/Decision-Making Skills, Physical Fitness/Health Maintenance Skills, and Identity Development/Purpose in Life Skills.

Gazda's (1982) life-skills model incorporates all of these components in a comprehensive manner. Gazda, Childers, and Brooks (1987) define life-skills as "all of those skills and knowledge prerequisite to development of skills in addition to academic skills that are necessary for living (p. 133). The basic assumption of this model is that

those people who are deficient in certain skills areas have never mastered the basic life skills necessary to cope with the daily requirements of living and have never had appropriate models available to demonstrate these skills (Gazda, 1982). Darden, Ginter et al. (1996) point out several basic assumptions inherent to the model of life-skills including:

there are several well-defined areas of human development: psychosocial , physical-sexual, vocational, cognitive, ego, moral, and affective; coping behaviors that are appropriate age and stage can be determined from these areas; each area comprises identifiable stages requiring mastery in order to progress from lower to advanced stages. (p. 136)

The life-skills paradigm takes into account the multi-dimensional needs of individuals in every aspect of their lives.

Life-Skills and Delinquency

Over the years, delinquency has been recognized as being correlated with skills deficits in adolescents (Freedman, Rosenthal, Donahoe, Schlundt, & McFall, 1978). Freedman, et al.(1978) conceptualized delinquent behavior as a manifestation of situation-specific social-behavioral skill deficits. Henderson and Hollin (1986) note that while the evidence indicates that delinquents are less skilled than non-delinquents are, the range of studies is limited. Chronically violent youth tend to have constricted problem-solving skills, probably due to their inability to use abstract reasoning and their tendency to attribute hostile intentions in neutral situations (Tate, Repucci, & Mulvey, 1995). Skills training has thus become a popular approach to working with juvenile delinquents. According to Jenson and Howard (1990), skills training with delinquents is:

intended to increase the cognitive and social abilities of offenders and to prevent subsequent involvement in crime. The goal of treatment is to teach skills and to facilitate the transfer of learned skills to delinquents' behaviors in the natural environment. (p. 213)

Henggeler (1989) explains that the use of social skills training with juvenile delinquents assumes that they are "deficient" in social skills and that if they acquire such skills, there will be a reduction in problematic interactions with others. Through techniques such as modeling and behavioral rehearsal, offenders are taught strategies for improving their problem solving capabilities, moral reasoning skills, anger control, and interpersonal relationships (Borduin, et al., 1995).

Young (1999) discusses that fact that social skills training directly teaches youths the interpersonal skills needed for everyday life including social problem-solving skills and communication skills. For some youths this may simply entail reeducation whereas for others, these are skills that have never been learned. Some components that he believes are important in skills training include: social participation (i.e., how to join a group, how to initiate conversation), conflict management, compromise, negotiation, perspective taking, self-control, and communication. Problem-solving skills training emphasizes the development of cognitive strategies to increase the adolescent's use of self-control and appropriate responses in social situations (Tate et al., 1995). Young (1999) also states that, "Social skills training has been shown to be successful among delinquent youths, particularly during the period they are involved in training" (p. 249). It does, however, appear difficult for some youths to generalize some skills learned in training to their home and school environments.

Kadish, Glaser, Calhoun, and Ginter (in press) conducted a study to identify developmental strengths of juvenile offenders in four life-skills dimensions by creating a life-skills development scale for use with this population. The four life-skills dimensions include: Interpersonal Communication/Human Relations Skills, Problem Solving/Decision Making Skills, Physical Fitness/Health Maintenance Skills, and Identity Development/Purpose in Life Skills. Within this study, it was found that the scale was reliable (.83) in identifying life-skills strengths of juvenile offenders. There were also significant positive correlations with the adaptive scales of the Behavior Assessment System for Children (BASC) (Reynolds and Kamphaus, 1992).

CHAPTER III

METHOD

The current study was designed to determine whether the LSDS-JF is a valid measure of life-skills development in juvenile offenders. Additionally, the LSDS-JF was cross-validated with the BASC (Behavioral Assessment System for Children) in an effort to determine whether they assess similar constructs. The correlations between the LSDS-JF and the Adaptive scales on the BASC were of particular interest, due to the similarity between the strength-based nature of the LSDS-JF and the Adaptive scales of the BASC.

Participants

Comrey (1988) stated that a sample size of 200 is adequate in most cases of ordinary factor analysis that involve no more than 40 items. This sample should be sufficiently large to eliminate "subject" variance as a major cause for concern. The LSDS-JF contains 40 items and data was collected from 200 subjects commensurate with Comrey's rationale. The youth have completed the short self-report life-skills measure specifically designed to be used with juvenile offenders as part of the routine evaluation in the center. All participants have been informed of the study's intent and are provided an opportunity to have questions answered and to indicate whether they want or do not want to participate. The youth are rewarded for participation with a piece of candy. The youth at the detention center are all male and the average age is approximately 14.7 years, although ages range from 9-17. The racial and ethnic composition of the detention

center is generally 65% African-American, 30% Caucasian, and 5% other. The average length of stay at the center is one month. Charges leading to incarceration vary in severity, e.g., violation of probation, underage drinking, possession of marijuana, child molestation, armed robbery. Youth seen through the courts are adjudicated and on probation. These youth are receiving counseling through the Juvenile Counseling and Assessment Program (JCAP) and completed the LSDS-JF as part of the counseling intake procedure. Both males and females ages 9-17 participated.

Instruments

Data analysis has been conducted on two assessments, the life-skills assessment (i.e., Life-Skills Development Scale-Juvenile Form: LSDS-JF) and the Behavior Assessment System for Children: Self-Report Form-Adolescent (BASC). The BASC is part of a battery of tests that is administered for research and programming purposes at the detention facility to each youth and part of the intake procedure for adjudicated youth involved in counseling through JCAP.

Life-Skills Development Scale-Juvenile Form (LSDS-JF). The development of this instrument is the focus of the current study. The first pilot study using Gazda, Ginter, and Darden's (1990) Life-Skills Development Scale-Adolescent Form (LSDS-B) with a group of incarcerated juvenile offenders in the same detention center utilized in the current study, revealed several limitations of the LSDS-B for use with this population. Limitations included the following: much of the language used in the LSDS-B exceeded the reading level of this population; some of the items' wording was incongruent with the vernacular of the juvenile delinquent culture; and the LSDS-B contained too many items for this population. Several participants in the pilot study commented about the LSDS-

B's length and in some cases expressed a sense of fatigue and inability to maintain focus. As a result of these limitations, a shorter version of the LSDS-B was constructed and labeled the Life-Skills Development Scale-Juvenile Form (LSDS-JF) because of its intended use. Furthermore, it was assumed that facilities interested in incorporating a life-skills approach would find shorter life-skills assessment measure more appropriate to add to an already existing battery than a relatively long assessment.

Of the limitations cited, the reading level of the LSDS-B was a major concern. The 65 items of the LSDS-B were written for an eighth grade reading level. According to DeVellis (1991), reading most local newspapers required a sixth grade reading level. He adds that, "aiming for a reading level between the fifth and seventh grades is probably an appropriate target for most instruments that will be used with the general population" (p. 57). Dawis (1986) explains that using subjects' own words will mean that the readability of the scale will be less of a problem. He further states that "Whether respondents' own words are used or not, it is good practice to check on the readability level of the scale to make sure that it is appropriate to the level of the respondent population" (Dawis, 1986, p.482). After consulting with the teachers and counselors at the youth detention center, it was decided that a scale written at a fifth grade reading level would be more appropriate for this juvenile offender population. Furthermore, according to a study by Sinatra, Hirshoren, and Primavera (1987), adjudicated adolescents tend to read at between a 5.4 and 7.1 grade level. The readability score of the new instrument was evaluated using the Flesch-Kincaid Grade Level Score that rated text on a United States grade school level. It is accessible through Word Perfect and calculates a score based on the readability of the document. The score for the newly created instrument

(LSDS-JF) was a 5.2. The Flesch Reading Ease score, which rates text on a 100-point scale, was also obtained. The higher the instrument's score, the easier it is to understand. The new scale scored a 77.7 on this scale which reflects its relative ease of readability.

According to Dawis (1986), "scale development consists of collecting data with the use of a preliminary form and analyzing the data in order to select items for a more final form" (p. 482). The LSDS-JF created through this first pilot study was therefore derived through the deletion of items that the participants reported having difficulty understanding and by simplifying the wording of other items. For example, on the original scale, one of the items read "I exercise regularly to relieve stress and improve my sense of well-being." This item was changed to "I exercise to improve myself" on the LSDS-JF. The LSDS-JF uses a four-point Likert rating scale using a ranking response format (1= Completely Agree, 2= Mostly Agree, 3= Mostly Disagree, 4= Completely Disagree). Items reflecting skill attainment (" I feel like I am an important part of my family") are reverse scored and items reflecting low skill attainment ("When something goes wrong, it is usually someone else's fault") are not changed; thus, higher scores reflect higher levels of skill maturation. Dawis (1986) explains that, "Ranking response formats use ranks rather than weights as scores and by convention, ranks are ordered in a manner opposite that of weights in the rating response format, that is, the lower the number, the higher the rank" (p. 482). This scale contained 30 items.

In the second pilot study, the newly created LSDS-JF was administered to seventy-five youths at the same detention center. According to Dawis (1986), it is always useful to conduct a small N pilot study such as this second pilot study before the main data collection. He further explains that:

The pilot study can be used to check out the nuts-and-bolts points as how easily the scale instructions are followed, how well the scale format functions, how long the scale takes to complete, and especially, how appropriate the scale items are for the target respondent population. (p. 482)

Data collected from this second pilot study revealed a total alpha reliability of .83. The alpha levels of the subscales were as follows: Interpersonal Communication/Human Relations Skills (.76), Problem Solving/Decision Making Skills (.59), Physical Fitness/Health Maintenance Skills (.53), and Identity Development/Purpose in Life Skills (.59). Nunally (1978) suggests a value of .70 as a lower acceptable limit for alpha although it is not unusual to see published scales with lower alphas. However, due to the low reliability scores on some of the subscales, the scale was re-evaluated for the current study. The number of items was increased to 40 with 10 items on each of the four subscales and was re-administered to a larger sample of youth. The LSDS-JF was designed to have high construct and content validity as research indicates that scales with these types of validity have better reliability of measurement (Comrey, 1988). The readability scores remain the same for the expanded instrument.

Behavior Assessment System for Children. The Behavior Assessment System for Children: Self-Report Form-Adolescent (BASC) (Reynolds and Kamphaus, 1992) is a 186-item self-report measure that consists of 14 sub scales: 10 clinical scales and 4 adaptive scales. The scale also provides four composite scores: School Maladjustment, Clinical Maladjustment, Personal Adjustment, and Emotional Symptoms. The BASC is multidimensional in that aspects of clinical and adaptive behavior are rated (Flanagan, 1995). The BASC measures personality and emotional/psychological functioning and

health in adolescents ages 12-18. The BASC is easily administered and scored and can be completed by the child in 10-20 minutes. Scores on clinical scales and composites that are one standard deviation above the mean ($T=60$) are considered "at risk" and scores that are 2 standard deviations above the mean ($T=70$) are clinically significant. On the Adaptive Skills, scores that are $T=40$ are considered "at-risk" and $T=30$ is considered to be indicative of problems in functioning.

The total standardization sample for this version of the BASC included 4,448 male and female adolescents from throughout the United States and Canada. The sample was chosen to be representative of the 1990 U.S. population aged 4-18 years, including exceptional children, for race and ethnicity (Flanagan, 1995). Ethnic groups included African American (16%; $n=710$), Hispanic (8%; $n=335$), White (73%; $n=3,240$), and Other (4%; $n=163$). According to Flanagan (1995), clinical samples were drawn from self-contained classrooms, residential schools, juvenile detention centers, community mental health centers, and outpatient mental health clinics within hospitals and universities. Youth within the sample were classified as emotionally disturbed or behaviorally disordered and engendered diagnoses such as ADHD, Tourette's syndrome, depression, anxiety, conduct disorder, autism, and several other childhood disorders.

Internal consistency coefficients for each subscale averaged near .80 and test-retest reliability coefficients had a median value of .85 (Reynolds & Kamphaus, 1992). Validity of this version of the BASC was established through factor analysis, comparison with scales based on expert judgement, correlations with other instruments (i.e., Minnesota Multiphasic Personality Inventory-Adolescent, Achenbach's Youth Self-Report, Behavior Rating Profile, Children's Personality Questionnaire), and profiles of

clinical groups. Exploratory factor analysis was used to modify the model rather than to confirm the factor structure. As a result, there was some modification to the Self-Report of Personality-Adolescent but the initial three-factor solution of School Maladjustment, Clinical Maladjustment, and Personal Adjustment were retained (Flanagan, 1995). Based on these studies, one may conclude that the adolescent form of the BASC possesses good construct validity (see Reynolds & Kamphaus, 1992). Flanagan (1995) believes that:

This exemplary array of features in one instrument encompasses the strengths of numerous existing instruments while addressing the limitations of others. Until the development of the BASC, such comprehensive assessment of behavior could not be accomplished without employing multiple instruments. (p. 178)

Flanagan (1995) further states that "given its underlying empirical premises, its structure, and its strong psychometric properties, the BASC appears promising for research applications" (p. 185).

Statistics

According to DeVellis (1991):

Measurement instruments that are collections of items intended to reveal levels of theoretical variables, not readily observable by direct means, are usually referred to as scales. We develop scales when we want to measure phenomena that we believe to exist because of our theoretical understanding of the world, but which we cannot access directly. (p. 8)

The current study is an attempt to create a new scale for use with juvenile offenders.

There is a large body of literature on scale development and its corresponding statistical procedures. Reliability has been considered by many to be the fundamental issue in

psychological measurement (Ghiselli, Campbell, & Zedick, 1981). Internal consistency reliability within the subscales is desirable in that high inter-item correlations suggest that the items are all measuring the same thing. Cronbach alpha levels of reliability have been calculated on the total scale and on each of the four subscales.

Construct validity is also desirable in the current study. Construct validity is:

Directly concerned with the theoretical relationship of a variable (e.g., a score on some scale) to other variables. It is the extent to which a measure 'behaves' the way that the construct it purports to measure should behave with regard to established measures of other constructs (Devellis, 1991, p.46).

Convergent validity, or evidence of similarity between theoretically related concepts, is desirable within the subscales. Discriminant or divergent validity, the absence of correlation between measures of unrelated constructs, is expected between subscales of the LSDS-JF. This information, however, will not be evaluated within the context of the current study and will be investigated at a later date.

Factor analytic techniques were also performed. Factor analysis is used most frequently in the development or validation of psychometric instruments (DeVellis, 1991). In scale development, it can inform us in ways that reliability coefficients cannot, about other important properties of a scale. DeVellis (1991) explained that factor analysis can help to determine empirically how many constructs or factors underlie a set of items. Galton laid the foundations of factorial study in the late 19th and early 20th centuries. He developed quantitative methods to give some idea of the interdependence between two variables (Child, 1970). Karl Pearson, in a famous paper at the beginning of the 20th century, was the first to make an explicit procedure for a factor analysis. Its

usage was first intended for analysis of psychological phenomena but has subsequently extended into other scientific realms. Child (1970) explains, " Admittedly, the growth and refinement of factor methods owes a great deal to the early explorations of psychologists searching for a neat and tidy descriptions of man's intellectual abilities. But many other applications now exist" (pp. 5-6).

According to Hair, Anderson, and Tatham (1987), factor analysis is a class of multivariate statistical methods whose primary purpose is data reduction and summarization. This technique analyses the interrelationships among a large number of variables and condenses that information into a smaller set of common underlying factors. Heppner, Kivlighan, and Wampold, (1992) further state that "the fundamental aim of factor analysis is to search for common dimensions that underlie the original variables." Child (1970) also describes factor-analytically derived group labels as "descriptive labels given to a collection of items or tests which are highly correlated and are presumed to reflect common characteristics. It is, moreover, common practice to validate the factors against external criteria which have nothing to do with factorial methods" (p.7). He describes the process of factor analysis as one driven by a hunch as to the factors which might emerge. Scientists using this statistical procedure select test material which have something in common or are markedly different. Child (1970) explains that, "It is this testing and the generation of hypotheses which forms the principal concern of most factor analysts" (p.8).

In the present study, along with factor analytic procedures, external validation was obtained by cross-validating the LSDS-JF with the BASC. Child (1970) emphasizes the importance of such a process when he writes, " It is important to avoid the circularity

resulting from the use of factors as the only source of validation. Some external criteria are essential for substantiating factor content" (p. 9). The Adaptive scales on the BASC were correlated with the subscales on the LSDS-JF since these scales were believed to be measuring the same or similar constructs.

CHAPTER IV

RESULTS

Characteristics of the Sample

The purpose of this study was to create a short self-report instrument to assess the level of life-skills development of juvenile offenders. Data was collected from 200 youth, ages 9-17 who were either detained in the Athens Regional Youth Detention Center or adjudicated delinquent through the Athens-Clarke County Juvenile Court. Most of the youth were male (only two female). 20 of the 200 did not indicate race. Actual percentages of those reported were as follows: 56.5% (n=113) were African-American, 32.0% (n=64) were Caucasian-American, 0.5% (n=1) were Hispanic-American, and 1.0% (n=2) were “other.” Charges included: violation of probation, terroristic threat, disorderly conduct, theft by taking, possession of marijuana, underage consumption, entering an automobile, contempt of court, simple battery, burglary, aggravated assault, and sexual assault. Charges were also clustered into three groups for future analysis. Charges were either listed as Violation of Probation or unavailable for 67 youth. Those reported cluster into groups including: Offenses against Persons (32.5% or n= 65), Offenses against Property (26.5% or n=53), and Drug-related offenses (7.5% or n= 15). These groupings did not play a significant role in the current study but may be examined again in future studies. In the current study they were only used as a basis of comparison of youth based on charges.

Factor Analysis

The 40-item LSDS-JF was administered to 200 youth, and the resultant data were factor analyzed. According to Dawis (1986), "factor analysis is a data reduction technique in which a large set of variables is reduced to a smaller set without much loss of information" (p. 484). The first objective of the factor analysis was to determine how many factors were underlying the items. Tinsley and Tinsley (1987) recommended four possible criteria to use in evaluating the number of factors to rotate. Kaiser's criterion was selected and specifies that only factors with an Eigenvalue of 1.0 or more should be retained for the factor analysis. In addition, another method for determining the number of factors for the LSDS-JF considered the percentage of variance that was accounted for by the factors. At 4 factors, 36% of the variance was accounted for. At 2 factors, 27% of the variance for was accounted for. It is desirable for a higher percentage of the variance to be accounted for by the number of factors chosen. Finally, theory and common sense were also used to determine the number of factors to extract.

Statistical Package for Social Sciences (SPSS) was used to perform the factor analysis. Many factor analysts suggest that factor loadings of .30 or higher should be considered in the interpretation of a factor (Tinsley & Tinsley, 1987; Nunally, 1978). "This generalization derives from the observation that a factor loading of .30 indicates that approximately 10% of the variance in a given variable has been explained by that factor" (Tinsley & Tinsley, 1987, p.422). Dawis (1986) further explains that:

There may be instances in which certain items are essential to the definition of the scale but are not found among the highest loading ones...In this scale, the scale constructor can go back to the original item intercorrelation matrix and eliminate all

items that correlate below a given level (e.g., .30) with the essential defining items.

The reduced matrix can then be factor analyzed. (p. 484)

A principal-components factor analysis using a varimax rotation was performed to identify 4 factors. Seventeen items loaded on the first factor, ten items loaded on the second factor, six items loaded on the third factor, and four items loaded on the fourth factor. There were three items that did not load on any factor. The analysis was performed again with three factors. The results were similar in that seventeen items loaded on the first factor, twelve items loaded on the second factor, and five items loaded on the third factor. There were six items that did not load onto any factor. Finally, the analysis was performed for two factors. Seventeen items loaded into the first factor and 18 items loaded into the second factor. Five items did not load into any factor. Eigenvalues and total variance for 2, 3, and 4 factors are presented in Tables 1,2, and 3.

Table 1

Eigenvalues and Total Variance in Factor Analysis of 2 Factors

	Factors	
	1	2
Initial Eigenvalues	5.50	5.30
Percentage of variance accounted for	13.39	13.23
Cumulative percentage of variance	13.39	26.6

Table 2

Eigenvalues and Total Variance in Factor Analysis of 3 Factors

	Factors		
	1	2	3
Initial Eigenvalues	5.12	4.34	3.12
Percentage of variance accounted for	12.80	10.85	7.81
Cumulative percentage of variance	12.80	23.65	31.45

Table 3

Eigenvalues and Total Variance in Factor Analysis of 4 Factors

	Factors			
	1	2	3	4
Initial Eigenvalues	5.32	4.20	3.00	1.93
Percentage of variance accounted for	13.31	10.50	7.40	4.82
Cumulative percentage of variance	13.31	28.80	31.19	36.01

Factor loadings of .30 or higher were used in the current study. The entire rotated factor loading matrices for both 2, 3, and 4 factors are presented in Tables 4, 5, and 6 and as recommended by Tinsley and Tinsley (1987). Tinsley and Tinsley (1987) stated, "reporting the

entire matrix pattern is absolutely necessary for evaluating and interpreting the factor analysis" (p. 423). The loadings for each factor have been listed in bold and italics within the pattern matrix table.

Table 4

Rotated Factor Pattern Matrix for 2 Factors

<u>Item #</u>	<u>Factor 1</u>	<u>Factor 2</u>
28	<i>.70</i>	7.08E-02
40	<i>.64</i>	.12
39	<i>.64</i>	5.61E-02
34	<i>.60</i>	-3.65E-03
38	<i>.57</i>	.29
19	<i>.57</i>	.20
36	<i>.55</i>	-6.85E-02
29	<i>.51</i>	.38
23	<i>.51</i>	.12
37	<i>.49</i>	.27
16	<i>.43</i>	.38
4	<i>.43</i>	.28
17	<i>.42</i>	-6.82E-02
33	<i>.41</i>	.31
5	<i>.40</i>	2.90E-02
9	<i>.39</i>	.25

<u>Item #</u>	<u>Factor 1</u>	<u>Factor 2</u>
12	-.37	-.25
21	.35	.69
27	.18	.63
24	.14	.59
1	.27	.59
10	.29	.59
13	-9.09E-02	.56
7	6.77E-03	.51
26	.13	.51
31	3.90E-02	.50
18	1.25E-02	.49
8	.20	.49
6	.26	.48
14	4.74E-02	.46
32	-.23	-.34
35	.29	.32
11	5.31E-02	.32
25	-5.58E-03	.31
30	.25	.30
2	-2.61E-02	.14
3	.22	-8.31E-03
15	.17	1.38E-02

<u>Item #</u>	<u>Factor 1</u>	<u>Factor 2</u>
20	.23	5.30E-03
22	.16	.24

Table 5

Rotated Factor Pattern Matrix for 3 Factors

<u>Item #</u>	<u>Factor 1</u>	<u>Factor 2</u>	<u>Factor 3</u>
28	.68	5.60E-03	.18
39	.64	2.65E-02	9.38E-02
19	.58	.18	8.88E-02
40	.58	-2.58E-02	.37
23	.55	.16	-5.71E-02
29	.53	.37	.12
34	.53	-.15	.33
17	.53	.10	-.37
38	.52	.16	.37
36	.51	-.16	.20
5	.44	9.71E-02	-.13
37	.44	.14	.35
4	.43	.25	.14
9	.42	.27	3.43E-02
16	.41	.31	.25
12	-.38	-.22	-.11

Item #	Factor 1	Factor 2	Factor 3
33	.37	.19	.33
20	.24	1.37E-02	-1.10E-02
13	-2.59E-02	.64	-5.46E-02
21	.32	.58	.40
24	.15	.56	.20
7	4.73E-02	.54	3.10E-02
18	6.09E-02	.54	-5.72E-03
10	.29	.53	.26
1	.25	.50	.33
6	.29	.49	7.75E-02
8	.23	.49	9.43E-02
27	.13	.49	.45
14	7.64E-02	.47	6.22E-02
35	.35	.39	-6.86E-02
11	3.09E-02	.25	.21
22	-.14	.25	1.65E-02
2	3.93E-02	.24	-.21
26	2.21E-02	.27	.63
30	.13	7.33E-02	.57
32	-.15	-.16	-.48
31	-3.16E-02	.33	.46
25	-8.50E-02	.15	.42

Item #	Factor 1	Factor 2	Factor 3
15	.10	-.11	.27
3	.16	-.12	.26

Table 6

Rotated Factor Pattern Matrix for 4 Factors

Item #	Factor 1	Factor 2	Factor 3	Factor 4
28	.70	4.96E-02	4.21E-02	5.22E-02
39	.64	7.40E-02	2.89E-02	-9.75E-02
40	.64	-1.86E-02	.21	.16
34	.59	-.14	.19	8.30E-02
38	.57	.16	.24	.18
19	.56	.22	.13	.26
36	.54	-.13	.10	-3.90E-02
23	.50	.21	4.55E-03	-.33
29	.50	.39	.23	-.33
37	.49	.13	.23	.198
17	.46	.21	-.50	7.62E-02
16	.44	.32	.12	.30
4	.44	.28	3.03E-02	.20
5	.41	.16	-.22	3.90E-02
9	.40	.30	-2.12E-02	6.78E-02

Item #	Factor 1	Factor 2	Factor 3	Factor 4
33	.40	.17	.34	-6.90E-02
12	-.38	-.24	-4.00E-02	-.12
13	-7.78E-02	.64	2.40E-02	8.40E-02
18	2.24E-02	.54	4.78E-02	7.04E-02
21	.33	.54	.48	-3.34E-02
7	1.37E-02	.53	9.58E-02	5.55E-02
24	.14	.53	.26	7.26E-02
10	.29	.52	.30	3.22E-02
6	.26	.50	.11	1.14E-02
8	.21	.50	.12	5.73E-02
14	6.57E-02	.47	2.02E-02	.27
35	.28	.42	5.15E-02	-.28
26	.11	.18	.61	.21
27	.16	.42	.54	-2.31E-02
25	-3.23E-02	7.01E-02	.52	-6.41E-02
31	2.42E-02	.26	.50	.13
1	.25	.45	.46	-.16
30	.24	6.60E-03	.45	.34
11	8.13E-02	.24	4.53E-02	.61
15	.18	-.12	5.40E-02	.46
32	-.24	-.11	-.32	-.44
22	-.13	.24	-7.78E-02	.40

<u>Item #</u>	<u>Factor 1</u>	<u>Factor 2</u>	<u>Factor 3</u>	<u>Factor 4</u>
2	-1.48E-02	.27	-.17	-4.09E-02
3	.20	-.15	.29	-.15
20	.25	4.43E-02	-.11	.13

A determination has been made to utilize the 2 factor solution from the original factor analysis for the final LSDS-JF. The original (theoretical) LSDS-JF can be found in Appendices B-E. The newly created (statistical) LSDS-JF can be found in Appendices F-I. The factors did not fall into the 4 life-skills dimensions previously identified, but the new factors have been examined and common factors within scales noted. Each new factor was labeled with the name of a new subscale. The new subscales and their reliabilities include: Interpersonal Relations/Maturity scale and Family Relations-Sense of Belonging/Health Maintenance-Body Image scale. There were 5 items that did not load into either factor and were therefore eliminated.

Characteristics of the LSDS-JF

The means and standard deviations of each item were computed and listed in Table 7. The means and standard deviations of each subscale (theoretical) and each factor (statistical) were computed and listed in Table 8 and 9. The frequency of scores on each of the items was also calculated and appears in Appendix A.

Table 7

Means and Standard Deviations of Individual Items

Item number	<u>N</u>	<u>M</u>	<u>SD</u>
1	173	3.32	1.03
2	173	2.23	1.24
3	173	2.67	.84
4	173	3.06	.89
5	173	3.45	.92
6	173	3.44	.91
7	173	2.88	1.05
8	173	3.10	1.07
9	173	3.66	.60
10	173	3.42	.86
11	173	2.35	1.12
12	173	1.72	.89
13	173	2.88	1.15
14	173	2.70	.89
15	173	2.39	1.05
16	173	3.49	.81
17	173	3.16	.73
18	173	2.74	1.26

Item number	<u>N</u>	<u>M</u>	<u>SD</u>
19	173	3.47	.80
20	173	3.59	1.49
21	173	3.32	1.00
22	173	1.87	.88
23	173	3.43	.81
24	173	2.94	.92
25	173	2.60	1.13
26	173	2.83	1.08
27	173	3.09	1.14
28	173	3.57	.72
29	173	3.61	.72
30	173	3.03	1.09
31	173	2.73	1.09
32	173	1.94	.86
33	173	3.19	1.00
34	173	3.33	.92
35	173	3.50	.72
36	173	3.37	.75
37	173	3.27	.89
38	173	3.27	.80

Item number	<u>N</u>	<u>M</u>	<u>SD</u>
39	173	3.53	.80
40	173	3.45	.90

Table 8

Means and Standard Deviations for Subscales of LSDS-JF (Theoretical)

Subscale	<u>N</u>	<u>M</u>	<u>SD</u>
IC/HRS	194	32.62	5.03
PS/DMS	190	28.92	3.72
PF/HMS	191	28.98	4.47
ID/PILS	191	31.38	5.23

IC/HRS= Interpersonal Communications/Human Relations Skills Subscale

PS/DMS= Problem Solving/Decision-Making Skills Subscale

PF/HMS= Physical Fitness/Health Maintenance Skills Subscale

ID/PILS= Identity Development/ Purpose-In-Life Skills Subscale

Table 9

Means and Standard Deviations for Subscales of LSDS-JF (Statistical)

Subscale	<u>N</u>	<u>M</u>	<u>SD</u>
IR/M	191	56.01	6.95
FR-SOB/HM-BI	179	52.71	8.83

IR/M= Interpersonal Relations/Maturity scale

FR-SOB/HM-BI =Family Relations-Sense of Belonging/Health Maintenance-Body

Image scale

Subscale means and standard deviation by race were calculated for the theoretical scale and the 2-factor statistical scale and appear in Tables 10 and 11. African American youth tended to score higher on all of the subscales than Caucasian American youth. The means and standard deviations of the one Hispanic American and two American Indian youth were included in the table but cannot be compared to the African American and Caucasian American youth's scores since the number of youth in those categories were so low.

Table 10

Means and Standard Deviations by Race (Theoretical)

Race		SC1	SC2	SC3	SC4
AA	Mean	33.35	29.35	29.91	32.12
	N	111	107	109	109
	SD	4.62	3.48	4.08	3.63
<hr/>					
CA	Mean	32.00	28.18	27.58	32.12
	N	61	61	60	61
	SD	4.96	3.64	4.62	6.82
<hr/>					
HA	Mean	34.00	31.00	34.00	33.00
	N	1	1	1	1
	SD	-	-	-	-
<hr/>					
AI	Mean	30.00	28.50	23.50	27.50
	N	2	2	2	2
	SD	2.82	6.36	2.12	2.12
<hr/>					
Total	Mean	32.85	28.93	29.05	31.50
	N	175	171	172	173
	SD	4.74	3.58	4.43	5.03

AA= African-American

CA= Caucasian-American

HA= Hispanic American

AI= American Indian

Table 11

Means and Standard Deviations by Race (Statistical)

<u>Race</u>		<u>SC1</u>	<u>SC2</u>
AA	Mean	56.91	55.22
	N	111	101
	SD	6.26	6.94
<hr/>			
CA	Mean	55.22	48.98
	N	60	57
	SD	6.94	10.05
<hr/>			
HA	Mean	59.00	59.00
	N	1	1
	SD	-	-
<hr/>			
AI	Mean	54.50	43.00
	N	2	2
	SD	4.95	2.83

<u>Race</u>		<u>SC1</u>	<u>SC2</u>
Total	Mean	56.31	52.88
	N	174	161
	SD	6.50	8.71

AA= African-American

CA= Caucasian-American

HA= Hispanic American

AI= American Indian

Additionally, subscale means and standard deviations were calculated for youth by offense. Table 12 illustrates those means and standard deviations by offense for the theoretical scale. Table 13 illustrates means and standard deviations by offense for the statistical 2-factor solution. There was no statistically significant difference between youth with different types of offenses.

Table 12

Means and Standard Deviations by Offense (Theoretical)

<u>Offense</u>		<u>SC1</u>	<u>SC2</u>	<u>SC3</u>	<u>SC4</u>
Person	Mean	31.87	28.33	29.03	30.71
	N	63	64	62	65
	SD	4.62	3.36	4.46	4.93

<u>Offense</u>		<u>SC1</u>	<u>SC2</u>	<u>SC3</u>	<u>SC4</u>
Property	Mean	32.96	29.72	28.75	31.37
	N	52	50	51	49
	SD	4.58	3.57	4.35	3.72
Drug	Mean	34.57	27.36	28.50	33.57
	N	14	14	14	14
	SD	4.94	4.36	3.39	10.02
Total	Mean	32.60	28.77	28.86	31.27
	N	129	128	127	128
	SD	4.68	3.63	4.29	5.34

Table 13

Means and Standard Deviations by Offense (Statistical)

<u>Offense</u>		<u>SC1</u>	<u>SC2</u>
Person	Mean	55.13	52.35
	N	61	63
	SD	6.72	9.29

<u>Offense</u>		<u>SC1</u>	<u>SC2</u>
Property	Mean	56.77	52.93
	N	53	45
	SD	5.30	7.94
<hr/>			
Drug	Mean	55.07	53.54
	N	14	13
	SD	10.46	8.71
<hr/>			
Total	Mean	55.80	52.69
	N	128	121
	SD	6.69	8.69

Analysis of variance tests were also performed to compare youth by race and by offense. Tests were performed to determine whether there was a significant difference in performance by race and by offense. The groups compared in the ANOVA for race were African American, Caucasian American, Hispanic American, and American Indian (df=3). The results are presented by race in Tables 14 and 15. The results of the ANOVA by offense are presented in Tables 16 and 17. There was a significant difference by race, but not by offense in the current study. As can be seen in Tables 10 and 11, African American youth tended to score higher on all subscales than Caucasian American youth.

Table 14

One-Way ANOVA by Race (Theoretical)

<u>Source</u>	<u>Sum of Squares</u>	<u>df</u>	<u>F</u>	<u>Sig.</u>
Between Groups	2087.94	3	3.936	.010
Within Groups	27052.40	153		
Total	29140.33	156		

Table 15

One-Way ANOVA by Race (Statistical)

<u>Source</u>	<u>Sum of Squares</u>	<u>df</u>	<u>F</u>	<u>Sig.</u>
Between Groups	2468.91	3	5.61	.001
Within Groups	22458.29	153		
Total	24927.20	156		

Table 16

Oneway ANOVA by Offense (Theoretical)

<u>Source</u>	<u>Sum of Squares</u>	<u>df</u>	<u>F</u>	<u>Sig.</u>
Between Groups	332.90	2	.898	.410
Within Groups	21315.89	115		
Total	21648.79	117		

Table 17

Oneway ANOVA by Offense (Statistical)

<u>Source</u>	<u>Sum of Squares</u>	<u>df</u>	<u>F</u>	<u>Sig.</u>
Between Groups	81.863	2	.25	.78
Within Groups	19189.60	115		
Total	19271.47	117		

Reliability of the LSDS-JF

It is desirable in developing items for a scale that the items have a high correlation among items. The higher the correlations among items, the higher the individual item reliabilities within the context of the total scale. DeVellis (1991) believed that “the more reliable the individual items are, the more reliable will be the scale that they comprise (assuming that they share a common latent variable)” (p.80). It was hoped that the

LSDS-JF would show that the subscales as well as the total scale has a high degree of reliability.

Internal Consistency

The reliability coefficient, alpha, was examined to determine the quality of the LSDS-JF. The Cronbach alpha was the method used in this study and is one method used for estimating internal consistency. The goal for the items in each of the 4 theoretical subscales is that each scale would have “item homogeneity” (Crocker & Algina, 1986). For item homogeneity, the subjects would all have to perform consistently across items on the scale and the items that make up each scale would, therefore, all measure the same thing.

First, the Cronbach alphas are reported for each of the four theoretical subscales and for the total scale. The Cronbach alpha for the total LSDS-JF was .84. The Cronbach alphas for the scales are as follows: Interpersonal Communication/Human Relations Skills (.73), Problem-Solving/Decision-Making Skills (.39), Physical Fitness/Health Maintenance Skills (.54), and Identity Development/Purpose in Life Skills (.69) (Table 18).

Table 18

Cronbach Alpha Scores for LSDS-JF (Theoretical)

<u>Scale</u>	<u>N</u>	<u>Number of Items</u>	<u>Reliability</u>
IC/HRS	194	10	.73

Scale	<u>N</u>	<u>Number of Items</u>	<u>Reliability</u>
PS/DMS	190	10	.39
PF/HMS	191	10	.54
ID/PILS	191	10	.69
Total LSDS-JF	173	40	.84

IC/HRS= Interpersonal Communications/Human Relations Skills Subscale

PS/DMS= Problem Solving/Decision-Making Skills Subscale

PF/HMS= Physical Fitness/Health Maintenance Skills Subscale

ID/PILS= Identity Development/ Purpose-In-Life Skills Subscale

These alphas can be compared to those obtained in the second pilot study. In the second pilot study, the scale contained 30 items and was administered to 75 youth. The alphas for the second pilot study was as follows: ID/HRS (.76), PS/DMS (.59), PF/HMS (.53), and ID/PILS (.59). The scores for the total scale and each subscale, except for Problem-Solving/Decision-Making Skills, increased in the current study.

Nunnally (1978) suggests a value of .70 as an acceptable alpha. DeVellis (1991) listed these guidelines in determining lower and upper limits of alpha: “below .60, unacceptable; between .70 and .80, respectable; between .80 and .90 very good; much above .90, one should consider shortening the scale” (p.85). The total alpha was

therefore acceptable to very good. The Cronbach alphas for the subscales did not reach acceptable levels.

The results point to the fact that, although theoretically the subscales make sense as components of a general life-skills construct, statistically they do not appear to be reliable measures. As a whole, the LSDS-JF is a reliable measure of the general life-skills construct and can be used as a measure to ascertain the level of life-skills development a juvenile has attained both before and after treatment. In an effort to make the subscales more statistically sound, following factor analysis, the subscales were recreated to fit into the two derived factors. The factors were renamed to make the descriptions fit the content of the items in each new subscale. The Cronbach alphas of these newly-derived subscales are listed in Table 19.

Table 19

Cronbach Alpha Scores for LSDS-JF (Statistical)

<u>Scale</u>	<u>N</u>	<u>Number of Items</u>	<u>Reliability</u>
IR/M	191	17	.81
FR-SOB/HM-BI	179	18	.80
Total LSDS-JF	173	35	.86

IR/M= Interpersonal Relations/Maturity scale

FR-SOB/HM-BI= Family Relations-Sense of Belonging/Health Maintenance-Body

Image scale

Validity

Test bias can often be a source of error in creating assessment instruments. Cultural considerations should be inspected as sources of possible test bias. Guerra and Jagers (1998) report that some studies have found differences in the tendency of children of certain cultures to favor extreme responses. They cite a study that reported that "African American children are more likely than Whites to use the extreme response categories in Likert-type questionnaire items" (p.178). The responses of minority youth within this study, may therefore have been more a result of culturally-based response style than valid beliefs of the youth.

Correlations

The correlation of a total test score with an external measure can be used as both an index of its predictive utility and as collateral evidence of its validity. According to McDonald (1999), predictive utility refers to a test's usefulness as a predictor of that performance. Collateral evidence of a test's validity refers to the fact that it measures an attribute expected from theory to influence or be influenced by the external measure.

The correlation between the subscales of the LSDS-JF (theoretical) and the subscales of the BASC have been calculated and displayed in Table 20. The correlations between subscales of the newly derived LSDS-JF (statistical) and the subscales of the BASC have been calculated and displayed in Table 21.

Table 20

Correlations Between Subscales on the LSDS-Juvenile Form (Theoretical) and the BASC

Subscale	1	2	3	4	5
LSDS					
1. Interper.Comm/Human Rela.	----				
2. Prob.Solving/Dec. Making	.38**	----			
3. Phys.Fitness/Health Mainten.	.49**	.28**	----		
4. Identity Dev/Purpose in Life	.58**	.48**	.42**	----	
5. Total score on the LSDS-	.83**	.65**	.72**	.82**	----
BASC					
<i>Clinical</i>					
6. Attitude to School	-.32**	-.31**	-.39**	-.53**	-.50**
7. Attitude to Teachers	-.27**	-.17	-.26*	-.45**	-.39**
8. Sensation Seeking	-.22	-.12	-.28*	-.43**	-.36**
9. Atypicality	-.47**	-.26*	-.38**	-.58**	-.58**
10. Locus of Control	-.46**	-.09	-.50**	-.45**	-.51**
11. Somatization	-.48**	-.21	-.48**	-.49**	-.60**
12. Social Stress	-.48**	-.19	-.30**	-.51**	-.50**
13. Anxiety	-.29*	-.26*	-.201	-.34**	-.37**
14. Depression	-.66**	-.21	-.50**	-.65**	-.69**
15. Sense of Inadequacy	-.44**	-.28*	-.39**	-.50**	-.56**
<i>Adaptive</i>					
16. Relations with Parents	.70**	.12	.51**	.42**	.61**
17. Interpersonal Relations	.45**	.29*	.33**	.50**	.55**
18. Self-Esteem	.45**	.21	.34**	.56**	.56**
19. Self-Reliance	.34*	.35**	.24*	.39**	.46**
<i>Composite</i>					
20. School Maladjustment	-.33**	-.25*	-.37**	-.60**	-.52**
21. Clinical Maladjustment	-.54**	-.26*	-.46**	-.58**	-.63**
22. Personal Adjustment	.67**	.32**	.49**	.62**	.73**
23. Emotional Symptoms	-.59**	-.32**	-.45**	-.65**	-.69**

** . Correlation is significant at the 0.01 level (2-tailed)

* . Correlation is significant at the 0.05 level (2-tailed)

The clinical scales of the BASC correlated negatively with the subscales of the LSDS-JF and the adaptive scales of the BASC correlated positively with the subscales of the LSDS-JF as predicted. The youth who performed well on the adaptive scales of the

BASC, also performed well on the LSDS-JF. These results indicate that the LSDS-JF is a good indicator of adaptive skills as measured by the BASC.

Table 21

Correlations Between Subscales on the LSDS-Juvenile Form (Statistical) and the BASC

Subscale	1	2	3
LSDS			
1. Interpersonal Rel./Maturity	---		
2. FR-SOB/HM-BI	.49**	---	
3. Total score on the LSDS	.82**	.90**	---
BASC			
<i>Clinical</i>			
6. Attitude to School	-.39**	-.46**	-.50**
7. Attitude to Teachers	-.30**	-.36**	-.39**
8. Sensation Seeking	-.10	-.41**	-.34**
9. Atypicality	-.34**	-.53**	-.56**
10. Locus of Control	-.21	-.58**	-.52**
11. Somatization	-.34**	-.52**	-.57**
12. Social Stress	-.32**	-.46**	-.49**
13. Anxiety	-.22	-.32**	-.34**
14. Depression	-.39**	-.71**	-.70**
15. Sense of Inadequacy	-.42**	-.42**	-.53**
<i>Adaptive</i>			
16. Relations with Parents	.26*	.68**	.62**
17. Interpersonal Relations	.50**	.39**	.55**
18. Self-Esteem	.26*	.59**	.57**
19. Self-Reliance	.43**	.27*	.43**
<i>Composite</i>			
20. School Maladjustment	-.37**	-.48**	-.51**
21. Clinical Maladjustment	-.35**	-.60**	-.61**
22. Personal Adjustment	.49**	.64**	.72**
23. Emotional Symptoms	-.45**	-.62**	-.68**

** . Correlation is significant at the 0.01 level (2-tailed)

* . Correlation is significant at the 0.05 level (2-tailed)

CHAPTER V

SUMMARY AND RECOMMENDATIONS

Summary of the Study

Juvenile Delinquency

Juvenile delinquency is a problem that continues to plague society and as this problem continues to receive more media attention, concern for dealing with delinquent youth grows. Although juvenile delinquency has come to the forefront of late, juvenile delinquency has been a concern since the start of the 20th century. Illinois was the first state to pass a juvenile court act in 1899 (Jensen and Rojek, 1998). Jensen and Rojek (1998) explain that although the legal concept is only about a hundred years old, there has been concern throughout history with misbehavior of youth as well as a tendency to view the situation as worse than in the proceeding generations.

Juveniles have accounted for a growing share of arrests over the years and their arrest rate has been increasing. Jensen and Rojek (1998) report that in 1988, persons 10 to 17 years of age accounted for about 11 percent of arrests for murder compared to 15 percent in 1996. According to the Office of Juvenile Justice and Delinquency Prevention's website juveniles were involved in 17% of all violent crime arrests and 33% of all property crime arrests in 1998. Thus, it seems evident that the youth crime rate is increasing. Additionally, the website reports that in 1998 law enforcement agencies made an estimated 2.6 million arrests of youth under the age of 18 in the United States.

There are numerous risk factors for juvenile offending. In reviewing the literature on predictors of youth violence, Hawkins, Herrenkohl, Farrington, Brewer, Catalano, and Harrachi (1998) found several groups of predictors. Psychological characteristics that could contribute to the possibility that someone may become violent include: hyperactivity, attention deficit, impulsivity, and risk-taking; internalizing disorders such as nervousness/withdrawal, worrying, and anxiety; aggressiveness; early initiation of violence and delinquency; other antisocial behaviors; and antisocial attitudes and beliefs. Family factors that could contribute to delinquent behavior include: parental criminality; child maltreatment; poor parent-child relations; poor family management practices; poor parent-child involvement and interaction; poor family bonding; family and marital conflict; parental attitudes that are favorable towards violence; stressful family events; residential mobility; and separation from parents and early home leaving. School factors include: academic failure; low bonding to school; truancy and dropping out of school; poor school transitions; high delinquency rate in the school; and preference for lower-status jobs. Some peer-related factors that could contribute to delinquency include: delinquent siblings; delinquent peers; and gang membership. Finally, there are community and neighborhood factors that need to be identified when studying risk factors for delinquency. Some of these factors include: poverty; community disorganization and low neighborhood attachment; availability of drugs; neighborhood adults involved in crime; exposure to violence; exposure to racial prejudice; and community disorganization when faced with dealing with violence. (pp. 112-142)

The resulting deficits from these multiple predictors of delinquent behavior are difficult to manage. Deficits include academic problems, social skills and life-skills

deficits, and psychological problems. The complex issues that surround youth involved with the juvenile justice system need to be addressed by mental health professionals, medical professionals, teachers, parents, and other youth care workers who come face to face with these youth on a daily basis.

Life-Skills and Delinquency

Life-skills can be defined as a comprehensive set of skills required for effective living. Gazda's (1982) life-skills model has the basic assumption that those people who are deficient in certain skills areas have never mastered the basic life-skills that are necessary to cope with daily requirements of living. In some cases, the result of this deficit can be delinquent behaviors. Kadish et al. (in press) explain that,

It has long been recognized that one of the contributors to the occurrence of delinquency is a failure of life-skills maturation, that is, requisite skills for effective living are not achieved which results in conduct that is out of accord with a community's acceptable behavior and established laws. (p. 3)

A life-skills approach to working with juvenile offenders has been supported in a general body of existing professional literature. Teaching juvenile offenders social skills has received the most treatment in the literature (e.g. Henggeler, 1989). The use of social skills training with juvenile offenders typically reflects the assumption that they are deficient in social skills. Factors that are affected by skills training include: reducing problematic interactions with others, increasing internal locus of control, developing self-control, stress management, anger management, interpersonal communication, relaxation skills, goal-setting, decision-making, and appropriate health maintenance. Young (1999) states that, " Social skills training has been shown to be successful among delinquent

youths, particularly during the period that they are involved in training" (p. 249). It may be more difficult for youth to generalize the skills learned in training to situations outside of the training setting.

Agee (1995) noted that effective assessment is a key component to providing successful treatment to juvenile offenders. Gerken (1986) explained that the assessment in the social skills area is not well advanced. The same holds true for the area of life-skills 14 years later. To date, there have not been many comprehensive evaluation tools for youth care workers in a juvenile detention facility to use to evaluate how these youth perceive themselves in the area of life-skills development.

Pilot Study

A pilot study was conducted prior to the present study to ascertain whether the LSDS-JF is a valid indicator of life-skills development in juvenile offenders. The investigators were interested in determining whether this scale could identify the developmental strengths of juvenile offenders and whether the instrument could correlate with another instrument which assesses similar areas (BASC) (Reynolds and Kamphaus, 1992). This scale was based on the belief in the existence of four life-skills dimensions. These include: Interpersonal Communication/Human Relations Skills, Problem-Solving/Decision-Making Skills, Physical Fitness/Health Maintenance Skills, and Identity Development/Purpose-in-Life Skills.

This study was based on an earlier measure introduced by Gazda, Ginter, and Darden (1990), i.e., the Life-Skills Development Scale--Adolescent Form (LSDS-B). The LSDS-B is a 65-item instrument and is divided into four subscales, each one measuring one of the four developmental life-skills dimensions. The LSDS-B was first

administered to a group of juvenile offenders at a local youth detention facility. It was determined that the wording was too difficult and the scale too long for use with this population.

The LSDS-B was revised into the 30-item LSDS-JF. This scale was written on a fifth grade reading level and the questions were made more relevant to juvenile offenders. The 30-item scale was administered to 75 youth and the results were analyzed. Low to moderate correlations were found among subscales of the LSDS-JF which indicated that the subscales are measuring somewhat distinct but related constructs. The LSDS-JF also correlated as expected with subscales of the BASC. There was a positive correlation between the Adaptive subscales on the BASC and the subscales of the LSDS-JF and a negative correlation with the Clinical subscales of the BASC. This indicates that the LSDS-JF and the Adaptive subscales of the BASC measure similar constructs.

The results of this pilot study indicated that the LSDS-JF is a valid instrument to identify life-skills strengths in juvenile offenders. Factor analysis could not be conducted during the pilot study due to the small number of youth tested as well as the length of the scale. It was determined that to fully test the statistical strength of the scale, it would be necessary to increase the length of the instrument and then collect data from more youth.

Purpose of the Study

The idea for the current study was born from the pilot study mentioned above. The purpose of this study was to create a short self-report instrument to be used by those working with juvenile offenders to assess the youths' level of life-skills development. The instrument requires the youth to evaluate their own life-skills development by rating items on a 4-point Likert scale. Towberman (1992) explained that an emphasis needs to

be placed on individualized treatment of juvenile offenders. An emphasis on rehabilitation requires the identification and examination of specific treatment needs of youth. The hope is that this instrument will be used to help staff develop programming addressing the specific needs of these youth.

Conclusions

Hypotheses and Conclusions

Several statistical procedures were employed within this study to evaluate the effectiveness of this scale for assessing life-skills development in juvenile offenders. Exploratory factor analysis was used to evaluate the structure of the Life Skills Development Scale-Juvenile Form. The factor analysis identified that there is likely one general factor but 2 strong factors could be identified in total. In determining the quality of this scale, the reliability coefficient, alpha, was examined. The method used for determining reliability in this study was Cronbach's alpha, one of the most common methods used for estimating internal consistency. Correlations between the subscales on the LSDS-JF and the Adaptive scales on the BASC were also obtained. The 3 specific research questions along with their findings are presented below.

Research Question 1a

Research question 1a asked: Do the subscales of the LSDS-JF measure distinct constructs as determined by factor analysis?

Theoretically there appears to be distinct life-skills constructs. Statistically, however, there does not appear to be 4 distinct constructs. As a whole, the LSDS-JF is a reliable measure of the general life-skills construct and can be used as a measure to ascertain the level of life-skills development a juvenile has attained both before and after

treatment. The results of this study may point to the fact that life-skills, as a general construct, is valid for use with a juvenile offender population, yet the individual subscales as used in the theoretically derived scale, do not appear to be appropriate for this population.

The theoretically derived subscale's scores may not be a reliable measure of different life-skills constructs, but as a whole the life-skills construct appears to be valid. The LSDS-JF as theoretically derived, could be used as a clinical tool in determining strengths and weaknesses for individual youth. In this way, the scale can provide specific information that can then guide the course of treatment.

The reliability coefficient, alpha, was examined to determine the quality of the LSDS-JF. The Cronbach alpha was the method used in this study and is one method used for estimating internal consistency. The goal for the items in each of the 4 subscales is that each scale would have "item homogeneity" (Crocker & Algina, 1986). For item homogeneity, the subjects would all have to perform consistently across items on the scale and the items that make up each scale would, therefore, all measure the same thing. The Cronbach alpha correlations for the subscales and total scale of the LSDS-JF were determined to be as follows: Interpersonal Communication/Human Relations Skills (.73), Problem-Solving/Decision-Making Skills (.39), Physical Fitness/Health Maintenance Skills (.54), and Identity Development/Purpose- in- Life Skills (.69). The overall reliability of the scale was .84, an acceptable level. Additionally, the low to moderate correlations among subscales suggest that the subscales are measuring somewhat theoretically distinct but related constructs.

Analysis of variance tests were run to determine whether youth scored differently on the LSDS-JF based on race and/or offense. Test results pointed to a significant difference for race but not for offense. The African American youth tended to score higher on all subscales of the theoretically-derived LSDS-JF than Caucasian American youth. African-American youth may have been culturally socialized to answer in a socially desirable manner and therefore tended to answer in a more positive manner, making their scores higher. Further research is needed to determine why the African-American youth scored higher on all subscales.

Research Question 1b

Research question 1b asked: Does the LSDS-JF fall into four factors as empirically predicted?

Results of the exploratory factor analysis indicated that there was one general life-skills factor with a possibility of two or three additional factors. When the analysis was performed with the four factors requested, seventeen items fit into the first factor, ten items fit into the second factor, six items fit into the third factor and four items fit into the fourth factor. There were three items that did not fit into any factor. When the analysis was then performed with three factors requested, again seventeen items fit into the first factor, twelve items fit into the second factor, and five items fit into the third factor. There were six items that did not fit into any factor. Finally, the analysis was performed with two factors requested, and seventeen items fit into the first factor and eighteen into the second. Five items did not fit into any factor. It was determined that the two factor solution would be used to further refine the scale. The items of the LSDS-JF were reclassified into subscales according to the statistical results and the newly named

subscales, followed by their alpha reliabilities, are: Interpersonal Relations/Maturity scale (.81), Family Relations-Sense of Belonging /Health Maintenance-Body Image scale (.80).

The alpha reliability for the newly formed 2-factor solution LSDS-JF is .86.

Interpersonal Relations/Maturity scale.

The Interpersonal Relations/Maturity scale generally contains items that assess whether individuals are having difficulties in relating to others interpersonally.

Adolescence is a difficult time for many youth. It's a time where youth are no longer children, yet not quite an adult, often resulting in confusion for the youth. Youth may be unsure how to interact with others and may not possess the level of maturity expected of them by adults. Juvenile offenders have particular difficulty in this area. Interpersonal skills training is often found within social skills training programs for juvenile offenders due to the fact that they tend to have difficulties in interpersonal relationships. (e.g., Howell, et al., 1995; Brewer, Hawkins, Catalano, and Neckerman, 1995). This subscale can therefore be helpful in identifying those youth who are having interpersonal difficulties. Programming for these youth can focus on communication, decision making, and problem solving, all of which are generally focused on within social skills training programs.

Sample items include on the Interpersonal Relations/Maturity scale include: "I am comfortable with members of the opposite sex," "I know how to act when I am around others", and "I can enjoy 'being myself' when I am with others. There are also items on this scale which tap into the idea of maturity. Sample items include: "As I get older, I am changing the way I think about things," "I know how things I do now will affect my

future," and "In some ways I am different from others and I am proud of those differences."

Family Relations-Sense of Belonging/Health Maintenance-Body Image scale.

This subscale includes a variety of different types of items. For ease of discussion, the subscale will be split into two areas: Family Relations/Sense of Belonging and Health Maintenance/Body Image.

The Family Relations/Sense of Belonging portion of the scale contains items that assess whether youth feel like they "fit in." Family difficulties are often a focus of treatment with juvenile offenders as many tend to have communication problems within their families. Hawkins, et al. (1998) noted that three dimensions of family relations have been identified as predictors of crime. These areas include poor family management practices, involvement and interaction of the parent with the child, and bonding to the family.

Families of juvenile offenders are often frustrated by their behavior and react accordingly. These families are often very punitive and may react in a manner that models inappropriate behavior for the youth. Additionally, the families of juvenile offenders often tend to have a history of their own problems whether it be substance abuse, criminality, or domestic abuse. Rapp and Wodarski (1997) report, for example, besides bringing chaos into the household, parental alcoholism tends to model poor coping skills, aggressive responses to children and poor expression of feelings. These difficulties combined with the problems of the juvenile tend to make family relations more tenuous.

Items pertaining to family relations include: "I feel like I am an important part of my family," "I do not understand why my parents act as they do," and "I can talk with my parents." Items that relate to a more general sense of belonging or fitting in include: "Nobody understands me" and "When I am with people my age, I feel like an outsider."

The Health Maintenance/Body Image portion of the scale contains a number of items to assess strengths and difficulties with maintaining one's health and with body image. There are several questions on this subscale that relate to drug and alcohol usage. A large portion of juvenile offenders use drugs and alcohol and engage in other risky behaviors. Lipsey and Derzon (1998) explain that early substance use and delinquent offending are highly predictive. Additionally, Huizinga & Jakob-Chien (1998) report that as the seriousness of offending increases so does the seriousness of drug use. There appears to be a debate about whether low self-esteem or high self-esteem is related to delinquent behavior. The traditional view has held that low self-esteem caused violence and that violence and aggression is a way to gain acceptance and esteem. Huizinga & Jakob-Chien (1998) report, however, that "there is sufficient justification to question this view and to argue that it is high self-esteem and threats to high esteem that lead to violence"(p. 55). Self-esteem and body image are related constructs.

Sample items relating to health maintenance include: "I know ways to relax my mind and body without using drugs and alcohol," "As a passenger or driver in an automobile, I wear my seatbelt," and "I brush and floss my teeth regularly." Items relating to body image include: " I like my body the way it is," "I like the way I am," and "If I could, I would change some parts of my body."

Although for statistical reasons, the LSDS-JF was grouped into two subscales, the second subscale seems to be a “catch-all” category. This most likely points to the fact that the LSDS-JF as a whole is a good measure of the general life-skills construct.

Although other research cited points to the fact that there are several life-skills constructs (i.e., problem solving skills, decision-making skills, interpersonal communication skills), it seems that these categories may not be as salient for a juvenile offender population.

Research Question 1c

Research question 1c asked: Does cross-validation with other measures (i.e., Behavior Assessment System for Children) support LSDS-JF constructs?

Correlations between the theoretical subscales of the LSDS-JF and the Adaptive scales on the BASC indicate that the LSDS-JF is a good indicator of those adaptive skills measured by the BASC. There were high positive correlations between the Adaptive scales on the BASC and the subscale and total scores on the LSDS-JF. As found in the second pilot study, youth who tended to score high on the Adaptive scales of the BASC also tended to score high on the four theoretical life-skills dimensions. For example, youth who scored high on the Self-Esteem subscale on the BASC tended to score high in the area of Interpersonal Communication/ Human Relations Skills subscale on the LSDS-JF. Additionally, those who scored high on the Clinical Scales, indicating some difficulties, scored lower on life-skills dimensions. An illustration of this is that those with difficulties on the Social Stress subscale on the BASC also tended to score poorly on the Interpersonal Communication/Human Relations Skills subscale on the LSDS-JF.

On the statistically restructured scales, the correlations tended to be similar to those on the original scale. The items on the Adaptive Scales of the BASC correlated

positively with the items on the LSDS-JF. Additionally, the Clinical Scales of the BASC correlated negatively with the items on the LSDS-JF. These results provide further evidence for the construct validity of the LSDS-JF. Both theoretically and statistically, the LSDS-JF seems to assess the same general constructs as the Adaptive Scales on the BASC.

Limitations

Although several of the analyses proved to be significant, the research design and methodology included limitations to internal validity. There was a lack of control for confounding variables such as gender, SES, type of offense, and family background. The motivation of the youth participating in this study may not have been very high due to the fact that the results would not affect them in any way. The youth were given candy for merely participating, not for performing honestly.

The LSDS-JF is affected by a social desirability response style. The use of the scale should not be affected, however, if those using the scale set the cut off scores such that using this response style would receive training. A few youth may receive life-skills training who may have not necessarily needed it, but this could provide benefits for the other youth. Including more skilled peers provides the opportunity for prosocial group modeling. A measure of social desirability could be used along side of the LSDS-JF to determine which youth use this response style.

Due to subject availability, the sample used in this study was only able to include 5 youth who were adjudicated but not detained. There may some differences between youth who are detained and those who are not detained in terms of motivation, skill level,

and degree of delinquency. The present study was most likely not affected by these differences due to the small number of non-detained youth used.

Additionally, there were no non-offender youth used as a comparison group. It was hoped that a sample of non-offender youth could be obtained through the school district, but due to bureaucratic reasons, such a sample could not be used. A sample of non-offender youth would have allowed for the comparison of scores to determine if the LSDS-JF is an accurate measure of life-skills in juvenile offenders in particular.

Implications

The LSDS-JF was devised as an aid in intervention design, implementation, and evaluation in juvenile justice programs. The LSDS-JF provides utility for these programs. However, like its predecessors (i.e., Darden, 1991) the evidence of validity and reliability currently available needs to be taken into account. The reliability of the total scale is probably appropriate for comparison of individuals in terms on the general Life-skills construct. In its current form, the LSDS-JF subscales do not provide distinct enough differences that they can be utilized individually. It is recommended that the total score of the LSDS-JF offers utility in comparing one individual to another or comparing one individual to the norms of the instrument. Like Darden (1991), "stating that an individual views him or herself as more or less socially competent than his or her peer group as measured by the LSDS is appropriate" (p. 127). It is suggested that users of the LSDS-JF review the ratings of individual items as well and use those to structure intervention plans rather than the total score which is valid but tells you less about what particular types of skills within a dimension require strengthening.

Recommendations for Further Research

The LSDS-JF shows promise as an assessment instrument of a general Life-Skills construct for use with a juvenile offender population. Further revisions of the LSDS-JF are recommended. Refinement of individual item wording, an increase in sample size, and better control for confounding variables are necessary. Testing of the general Life-Skills construct as measured by total score for evidence of discriminant validity is suggested. It would be helpful to determine whether there is a difference between adjudicated, detained youth and adjudicated youth who are not detained. Comparing juvenile offenders' scores on the LSDS-JF with a sample of same-age, non-offender youth will provide information regarding the scale's discriminant validity. Lastly, future studies should validate the instrument's usefulness with females since there is a growing number of females being adjudicated delinquent through the juvenile justice system.

Summary

The present study involved the development and psychometric investigation of an instrument which can be used to assess life-skills development in juvenile offenders including the areas of: interpersonal communication/human-relations skills, problem-solving/decision-making skills, physical fitness/health maintenance skills, and identity development/purpose-in-life skills. These areas did not prove to be as reliable in the present study as in the pilot study and other past studies.

The information that is gathered from this instrument could be used to identify the areas of strength that juvenile offenders possess, in order to build on those strengths. It can also be used to target areas where difficulties are occurring in an effort to improve upon skills in those areas.

The process of validating an instrument can be a tenuous one. It is never complete. Based on its theoretical underpinnings, the LSDS-JF has practical significance for use with a juvenile offender population. As a research tool, it needs more work. In its present form, it can be used as a starting place for those looking for a way to measure and evaluate the life-skills needs of juvenile offenders.

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APPENDIX A

FREQUENCY OF ITEMS ENDORSED

Item 1. I feel like an important part of my family

Frequencies attained for item 1

Likert Descriptor	Frequency	%
1. Completely Agree	124	62.0
2. Mostly Agree	39	19.5
3. Mostly Disagree	17	8.5
4. Completely Disagree	20	10.0

Item 2. I don't use "mood changing" substances (alcohol, tobacco, caffeine, medicines, other drugs) to relieve stress or to "get me going."

Frequencies attained for item 2

Likert Descriptor	Frequency	%
1. Completely Agree	53	26.5
2. Mostly Agree	22	11.0
3. Mostly Disagree	44	22.0
4. Completely Disagree	81	40.5

Item 3. When something goes wrong, it is usually somebody else's fault.

Frequencies attained for item 3

Likert Descriptor	Frequency	%
1. Completely Agree	16	8.0
2. Mostly Agree	62	31.0
3. Mostly Disagree	91	45.5
4. Completely Disagree	31	15.5

Item 4. When solving a problem, I am able to think everything through in my head.

Frequencies attained for item 4

Likert Descriptor	Frequency	%
1. Completely Agree	72	36.0
2. Mostly Agree	87	43.5
3. Mostly Disagree	26	13.0
4. Completely Disagree	15	7.5

Item 5. I am comfortable when I am with members of the opposite sex.

Frequencies attained for item 5

Likert Descriptor	Frequency	%
1. Completely Agree	135	67.8
2. Mostly Agree	34	17.1
3. Mostly Disagree	18	9.0
4. Completely Disagree	12	6.0

Item 6. I like my body the way it is.

Frequencies attained for item 6

Likert Descriptor	Frequency	%
1. Completely Agree	128	64.0
2. Mostly Agree	45	22.5
3. Mostly Disagree	12	6.0
4. Completely Disagree	14	7.0

Item 7. As a passenger or driver in an automobile, I wear my seatbelt.

Frequencies attained for item 7

Likert Descriptor	Frequency	%
1. Completely Agree	69	34.7
2. Mostly Agree	70	35.2
3. Mostly Disagree	31	15.6
4. Completely Disagree	29	14.6

Item 8. I know several ways to relax my body without using drugs and alcohol.

Frequencies attained for item 8

Likert Descriptor	Frequency	%
1. Completely Agree	96	48.2
2. Mostly Agree	53	26.6
3. Mostly Disagree	23	11.6
4. Completely Disagree	27	13.6

Item 9. I know how to act when I am around others.

Frequencies attained for item 9

Likert Descriptor	Frequency	%
1. Completely Agree	142	71.0
2. Mostly Agree	46	23.0
3. Mostly Disagree	9	4.5
4. Completely Disagree	3	1.5

Item 10. I like the way I am.

Frequencies attained for item 10

Likert Descriptor	Frequency	%
1. Completely Agree	124	62.3
2. Mostly Agree	48	24.1
3. Mostly Disagree	16	8.0
4. Completely Disagree	11	5.5

Item 11. I am happy about where I am headed in life.

Frequencies attained for item 11

Likert Descriptor	Frequency	%
1. Completely Agree	39	19.8
2. Mostly Agree	46	23.4
3. Mostly Disagree	50	25.4
4. Completely Disagree	62	31.5

Item 12. I exercise to improve myself.

Frequencies attained for item 12

Likert Descriptor	Frequency	%
1. Completely Agree	7	3.5
2. Mostly Agree	29	14.6
3. Mostly Disagree	62	31.2
4. Completely Disagree	99	49.7

Item 13. Sometimes, I misuse or abuse alcohol or drugs.

Frequencies attained for item 13

Likert Descriptor	Frequency	%
1. Completely Agree	36	18.4
2. Mostly Agree	41	20.9
3. Mostly Disagree	38	19.4
4. Completely Disagree	81	41.3

Item 14. I think about what I do before I do it.

Frequencies attained for item 14

Likert Descriptor	Frequency	%
1. Completely Agree	36	18.6
2. Mostly Agree	88	45.4
3. Mostly Disagree	48	24.7
4. Completely Disagree	22	11.3

Item 15. I need help finding out about school and jobs.

Frequencies attained for item 15

Likert Descriptor	Frequency	%
1. Completely Agree	46	23.0
2. Mostly Agree	66	33.0
3. Mostly Disagree	49	24.5
4. Completely Disagree	39	19.5

Item 16. I can enjoy "being myself" when I am with others.

Frequencies attained for item 16

Likert Descriptor	Frequency	%
1. Completely Agree	129	64.5
2. Mostly Agree	50	25.0
3. Mostly Disagree	10	5.0
4. Completely Disagree	11	5.5

Item 17. I know when someone is telling the truth and when they are making things up.

Frequencies attained for item 17

Likert Descriptor	Frequency	%
1. Completely Agree	63	31.7
2. Mostly Agree	110	55.3
3. Mostly Disagree	18	9.0
4. Completely Disagree	8	4.0

Item 18. If I could, I would change some parts of my body.

Frequencies attained for item 18

Likert Descriptor	Frequency	%
1. Completely Agree	50	25.0
2. Mostly Agree	40	20.0
3. Mostly Disagree	24	12.0
4. Completely Disagree	86	43.0

Item 19. In order for people to live together in society, it is important for them to know how to behave.

Frequencies attained for item 19

Likert Descriptor	Frequency	%
1. Completely Agree	123	61.8
2. Mostly Agree	56	28.1
3. Mostly Disagree	11	5.5
4. Completely Disagree	9	4.5

Item 20. I know what jobs I might like to do when I am older.

Frequencies attained for item 20

Likert Descriptor	Frequency	%
1. Completely Agree	124	62.3
2. Mostly Agree	53	26.6
3. Mostly Disagree	11	5.5
4. Completely Disagree	10	5.0

Item 21. When I am with my family, I feel like I fit in.

Frequencies attained for item 21

Likert Descriptor	Frequency	%
1. Completely Agree	122	61.0
2. Mostly Agree	41	20.5
3. Mostly Disagree	15	7.5
4. Completely Disagree	22	11.0

Item 22. Sometimes I do stuff before I think.

Frequencies attained for item 22

Likert Descriptor	Frequency	%
1. Completely Agree	77	38.5
2. Mostly Agree	79	39.5
3. Mostly Disagree	32	16.0
4. Completely Disagree	12	6.0

Item 23. As I get older, I am changing the way I think about things.

Frequencies attained for item 23

Likert Descriptor	Frequency	%
1. Completely Agree	114	57.0
2. Mostly Agree	67	33.5
3. Mostly Disagree	10	5.0
4. Completely Disagree	9	4.5

Item 24. I find it easy to express my emotions the right way.

Frequencies attained for item 24

Likert Descriptor	Frequency	%
1. Completely Agree	58	29.6
2. Mostly Agree	84	42.9
3. Mostly Disagree	37	18.9
4. Completely Disagree	17	8.7

Item 25. I do not understand why my parents act as they do.

Frequencies attained for item 25

Likert Descriptor	Frequency	%
1. Completely Agree	45	22.7
2. Mostly Agree	48	24.2
3. Mostly Disagree	51	25.8
4. Completely Disagree	54	27.3

Item 26. Nobody understands me.

Frequencies attained for item 26

Likert Descriptor	Frequency	%
1. Completely Agree	35	17.6
2. Mostly Agree	38	19.1
3. Mostly Disagree	61	30.7
4. Completely Disagree	65	32.7

Item 27. I can talk with my parents.

Frequencies attained for item 27

Likert Descriptor	Frequency	%
1. Completely Agree	104	52.0
2. Mostly Agree	44	22.0
3. Mostly Disagree	17	8.5
4. Completely Disagree	34	17.0

Item 28. I know the difference between making the right choice and making the wrong choice.

Frequencies attained for item 28

Likert Descriptor	Frequency	%
1. Completely Agree	135	68.2
2. Mostly Agree	46	23.2
3. Mostly Disagree	11	5.6
4. Completely Disagree	6	3.0

Item 29. Taking care of my body is important to me.

Frequencies attained for item 29

Likert Descriptor	Frequency	%
1. Completely Agree	144	72.4
2. Mostly Agree	39	19.6
3. Mostly Disagree	10	5.0
4. Completely Disagree	6	3.0

Item 30. When I am with people my age, I feel like an outsider.

Frequencies attained for item 30

Likert Descriptor	Frequency	%
1. Completely Agree	29	14.6
2. Mostly Agree	27	13.6
3. Mostly Disagree	50	25.3
4. Completely Disagree	92	46.5

Item 31. I often feel tired and ill.

Frequencies attained for item 31

Likert Descriptor	Frequency	%
1. Completely Agree	35	17.5
2. Mostly Agree	40	20.0
3. Mostly Disagree	64	32.0
4. Completely Disagree	61	30.5

Item 32. I do not know good ways to make decisions.

Frequencies attained for item 32

Likert Descriptor	Frequency	%
1. Completely Agree	11	5.5
2. Mostly Agree	38	19.0
3. Mostly Disagree	85	42.5
4. Completely Disagree	66	33.0

Item 33. My parents believe that I am a lovable person.

Frequencies attained for item 33

Likert Descriptor	Frequency	%
1. Completely Agree	102	51.3
2. Mostly Agree	56	28.1
3. Mostly Disagree	19	9.5
4. Completely Disagree	22	11.1

Item 34. I know how the things that I do now will affect my future.

Frequencies attained for item 34

Likert Descriptor	Frequency	%
1. Completely Agree	111	55.5
2. Mostly Agree	57	28.5
3. Mostly Disagree	18	9.0
4. Completely Disagree	14	7.0

Item 35. I brush and floss my teeth regularly.

Frequencies attained for item 35

Likert Descriptor	Frequency	%
1. Completely Agree	117	58.8
2. Mostly Agree	67	33.7
3. Mostly Disagree	9	4.5
4. Completely Disagree	6	3.0

Item 36. I understand why people sometimes have problems.

Frequencies attained for item 36

Likert Descriptor	Frequency	%
1. Completely Agree	96	48.0
2. Mostly Agree	85	42.5
3. Mostly Disagree	14	7.0
4. Completely Disagree	5	2.5

Item 37. I can laugh at myself and I have a good sense of humor.

Frequencies attained for item 37

Likert Descriptor	Frequency	%
1. Completely Agree	96	48.0
2. Mostly Agree	74	37.0
3. Mostly Disagree	16	8.0
4. Completely Disagree	14	7.0

Item 38. I can identify my strengths and weaknesses and can see how they will affect my goals.

Frequencies attained for item 38

Likert Descriptor	Frequency	%
1. Completely Agree	88	44.2
2. Mostly Agree	81	40.7
3. Mostly Disagree	22	11.1
4. Completely Disagree	8	4.0

Item 39. I know how to protect myself from diseases.

Frequencies attained for item 39

Likert Descriptor	Frequency	%
1. Completely Agree	133	66.5
2. Mostly Agree	47	23.5
3. Mostly Disagree	12	6.0
4. Completely Disagree	8	4.0

Item 40. In some ways I am different from others and I am proud of those differences.

Frequencies attained for item 40

Likert Descriptor	Frequency	%
1. Completely Agree	132	66.0
2. Mostly Agree	42	21.0
3. Mostly Disagree	11	5.5
4. Completely Disagree	15	7.5

APPENDIX B

LIFE-SKILLS DEVELOPMENT SCALE -JF (Theoretical)

Tara E. Kadish

Brian A. Glaser

Earl J. Ginter

2000

Permission to use this instrument must be obtained from Tara E. Kadish, Dr. Brian A. Glaser, or Dr. Earl Ginter.

DIRECTIONS

Read each statement and decide whether you (1) completely agree, (2) mostly agree, (3) mostly disagree, or (4) completely disagree with the statement. Once you have made your decision, circle the appropriate number on your answer sheet.

RESPONSE CODE

1= Completely Agree

2= Mostly Agree

3= Mostly Disagree

4= Completely Disagree

1. I feel like I am an important part of my family.
2. I don't use mood changing substances (alcohol, tobacco, caffeine, medicines, other drugs) to relieve stress or to get me going.
3. When something goes wrong, it is usually somebody else's fault.
4. When solving a problem, I am able to think everything through in my head.
5. I am comfortable when I am with members of the opposite sex.
6. I like my body the way it is.
7. As a passenger or driver in an automobile, I wear my seatbelt.
8. I know several ways to relax my mind and body without using drugs and alcohol.
9. I know how to act when I am around others.
10. I like the way I am.
11. I am happy about where I am headed in life.
12. I exercise to improve myself.

(Please Continue)

RESPONSE CODE

1= Completely Agree

2= Mostly Agree

3= Mostly Disagree

4= Completely Disagree

13. Sometimes, I misuse or abuse alcohol or drugs.
14. I think about what I do before I do it.
15. I need help with finding out about school and jobs.
16. I can enjoy being myself when I am with others.
17. I know when someone is telling the truth and when they are making things up.
18. If I could, I would change some parts of my body.
19. In order for people to live together in society, it is important for them to know how to behave.
20. I know what jobs I might like to do when I am older.
21. When I am with my family, I feel like I fit in.
22. Sometimes I do stuff before I think.
23. As I get older, I am changing the way I think about things.
24. I find it easy to express my emotions the right way.
25. I do not understand why my parents act as they do.
26. Nobody understands me.
27. I can talk with my parents.
28. I know the difference between making the right choice and making the wrong choice.
29. Taking care of my body is important to me.

(Please Continue)

RESPONSE CODE

- 1= Completely Agree
2= Mostly Agree
3= Mostly Disagree
4= Completely Disagree
-

30. When I am with people my age, I feel like an outsider
31. I often feel tired and ill.
32. I do not know good ways to make decisions.
33. My parents believe that I am a lovable person.
34. I know how the things that I do now will affect my future.
35. I brush and floss my teeth regularly.
36. I understand why people sometimes have problems.
37. I can laugh at myself and I have a good sense of humor.
38. I can identify my strengths and weaknesses and can see how they will affect my goals.
39. I know how to protect myself from diseases.
40. In some ways I am different from others and I am proud of those differences.

APPENDIX C

ANSWER SHEET FOR LSDS-JF (Theoretical)

Name:
Male or Female:
Birthdate:

RESPONSE CODE
1= Completely Agree
2= Mostly Agree
3= Mostly Disagree
4= Completely Disagree

- | | |
|-------------|-------------|
| 1) 1 2 3 4 | 13) 1 2 3 4 |
| 2) 1 2 3 4 | 14) 1 2 3 4 |
| 3) 1 2 3 4 | 15) 1 2 3 4 |
| 4) 1 2 3 4 | 16) 1 2 3 4 |
| 5) 1 2 3 4 | 17) 1 2 3 4 |
| 6) 1 2 3 4 | 18) 1 2 3 4 |
| 7) 1 2 3 4 | 19) 1 2 3 4 |
| 8) 1 2 3 4 | 20) 1 2 3 4 |
| 9) 1 2 3 4 | 21) 1 2 3 4 |
| 10) 1 2 3 4 | 22) 1 2 3 4 |
| 11) 1 2 3 4 | 23) 1 2 3 4 |
| 12) 1 2 3 4 | 24) 1 2 3 4 |

RESPONSE CODE

1= Completely Agree

2= Mostly Agree

3= Mostly Disagree

4= Completely Disagree

25) 1 2 3 4

26) 1 2 3 4

27) 1 2 3 4

28) 1 2 3 4

29) 1 2 3 4

30) 1 2 3 4

31) 1 2 3 4

32) 1 2 3 4

33) 1 2 3 4

34) 1 2 3 4

35) 1 2 3 4

36) 1 2 3 4

37) 1 2 3 4

38) 1 2 3 4

39) 1 2 3 4

40) 1 2 3 4

APPENDIX D

ITEMS COMPRISING THE SUBSCALES OF THE LSDS-JF (Theoretical)

Interpersonal Communications/Human Relations Skills :10 items

1. I feel like I am an important part of my family.
 5. I am comfortable when I am with members of the opposite sex.
 9. I know how to act when I am around others.
 16. I can enjoy "being myself" when I am with others.
 21. When I am with my family, I feel like I fit in.
 25. I do not understand why my parents act as they do.
 27. I can talk with my parents.
 30. When I am with people my age, I feel like an outsider.
 33. My parents believe that I am a lovable person.
 36. I understand why people sometimes have problems.
-

Problem Solving/Decision-Making Skills: 10 items

4. When solving a problem, I am able to think everything through in my head.
14. I think about what I do before I do it.
15. I need help with finding out about school and jobs.
16. I know when someone is telling the truth and when they are making things up.
20. I know what jobs I might like to do when I am older.

- 22. Sometimes I do stuff before I think.
 - 28. I know the difference between making the right choice and making the wrong choice.
 - 32. I do not know good ways to make decisions.
 - 34. I know how the things that I do now will affect my future.
 - 38. I can identify my strengths and weaknesses and can see how they will affect my goals.
-

Physical Fitness/Health Maintenance Skills: 10 items

- 2. I don't use "mood changing" substances (alcohol, tobacco, caffeine, medicines, other drugs) to relieve stress or to "get me going."
 - 7. As a passenger or driver in an automobile, I wear my seatbelt.
 - 8. I know several ways to relax my mind and body without using drugs and alcohol.
 - 12. I exercise to improve myself.
 - 13. Sometimes, I misuse or abuse alcohol or drugs.
 - 18. If I could, I would change some parts of my body.
 - 29. Taking care of my body is important to me.
 - 31. I often feel tired and ill.
 - 35. I brush and floss my teeth regularly.
 - 39. I know how to protect myself from diseases.
-

Identity Development/Purpose in Life Skills: 10 items

- 3. When something goes wrong, it is usually somebody else's fault.

6. I like the way my body is.
 10. I like the way I am.
 11. I am happy about where I am headed in life.
 19. In order for people to live together in society, it is important for them to know how to behave.
 23. As I get older, I am changing the way I think about things.
 24. I find it easy to express my emotions the right way.
 26. Nobody understands me.
 37. I can laugh at myself and I have a good sense of humor.
 40. In some ways I am different from others and I am proud of those differences.
-

APPENDIX E

SCORING KEY FOR LSDS-JF (Theoretical)

Interpersonal Communication/Human Relations Skills: 10 items

*1	25
*5	*27
*9	30
*16	*33
*21	*36

Problem Solving/Decision-Making Skills: 10 items

*4	*28
*14	*32
15	*34
*17	*38
*20	
22	

Physical Fitness/Health Maintenance Skills: 10 items

*2	18
*7	*29
*8	31
*12	*35
13	*39

Identity Development/Purpose in Life Skills: 10 items

3	*23
*6	*24
*10	26
*11	*37
*19	*40

* Item is reverse scored

APPENDIX F

LIFE-SKILLS DEVELOPMENT SCALE -JF (Statistical)

Tara E. Kadish

Brian A. Glaser

Earl J. Ginter

2000

Permission to use this instrument must be obtained from Tara E. Kadish, Dr. Brian A. Glaser, or Dr. Earl Ginter.

DIRECTIONS

Read each statement and decide whether you (1) completely agree, (2) mostly agree, (3) mostly disagree, or (4) completely disagree with the statement. Once you have made your decision, circle the appropriate number on your answer sheet.

RESPONSE CODE

1= Completely Agree

2= Mostly Agree

3= Mostly Disagree

4= Completely Disagree

1. I feel like I am an important part of my family.
2. When solving a problem, I am able to think everything through in my head.
3. I am comfortable when I am with members of the opposite sex.
4. I like my body the way it is.
5. As a passenger or driver in an automobile, I wear my seatbelt.
6. I know several ways to relax my mind and body without using drugs and alcohol.
7. I know how to act when I am around others.
8. I like the way I am.
9. I am happy about where I am headed in life.
10. I exercise to improve myself.

(Please Continue)

RESPONSE CODE

1= Completely Agree

2= Mostly Agree

3= Mostly Disagree

4= Completely Disagree

11. Sometimes, I misuse or abuse alcohol or drugs.
12. I think about what I do before I do it.
13. I can enjoy being myself when I am with others.
14. I know when someone is telling the truth and when they are making things up.
15. If I could, I would change some parts of my body.
16. In order for people to live together in society, it is important for them to know how to behave.
17. When I am with my family, I feel like I fit in.
18. As I get older, I am changing the way I think about things.
19. I find it easy to express my emotions the right way.
20. I do not understand why my parents act as they do.
21. Nobody understands me.
22. I can talk with my parents.
23. I know the difference between making the right choice and making the wrong choice.
24. Taking care of my body is important to me.

(Please Continue)

RESPONSE CODE

- 1= Completely Agree
2= Mostly Agree
3= Mostly Disagree
4= Completely Disagree
-

25. When I am with people my age, I feel like an outsider
26. I often feel tired and ill.
27. I do not know good ways to make decisions.
28. My parents believe that I am a lovable person.
29. I know how the things that I do now will affect my future.
30. I brush and floss my teeth regularly.
31. I understand why people sometimes have problems.
32. I can laugh at myself and I have a good sense of humor.
33. I can identify my strengths and weaknesses and can see how they will affect my goals.
34. I know how to protect myself from diseases.
35. In some ways I am different from others and I am proud of those differences.

APPENDIX G

ANSWER SHEET FOR LSDS-JF (Statistical)

Name:
Male or Female:
Birthdate:

RESPONSE CODE
1= Completely Agree
2= Mostly Agree
3= Mostly Disagree
4= Completely Disagree

- | | |
|-------------|-------------|
| 1) 1 2 3 4 | 13) 1 2 3 4 |
| 2) 1 2 3 4 | 14) 1 2 3 4 |
| 3) 1 2 3 4 | 15) 1 2 3 4 |
| 4) 1 2 3 4 | 16) 1 2 3 4 |
| 5) 1 2 3 4 | 17) 1 2 3 4 |
| 6) 1 2 3 4 | 18) 1 2 3 4 |
| 7) 1 2 3 4 | 19) 1 2 3 4 |
| 8) 1 2 3 4 | 20) 1 2 3 4 |
| 9) 1 2 3 4 | 21) 1 2 3 4 |
| 10) 1 2 3 4 | 22) 1 2 3 4 |
| 11) 1 2 3 4 | 23) 1 2 3 4 |
| 12) 1 2 3 4 | 24) 1 2 3 4 |

RESPONSE CODE

1= Completely Agree

2= Mostly Agree

3= Mostly Disagree

4= Completely Disagree

25) 1 2 3 4

26) 1 2 3 4

27) 1 2 3 4

28) 1 2 3 4

29) 1 2 3 4

30) 1 2 3 4

31) 1 2 3 4

32) 1 2 3 4

33) 1 2 3 4

34) 1 2 3 4

35) 1 2 3 4

APPENDIX H

ITEMS COMPRISING THE SUBSCALES OF THE LSDS-JF (Statistical)

Interpersonal Relationships/Maturity scale: 17 items

2. When solving a problem, I am able to think everything through in my head.
3. I am comfortable when I am with members of the opposite sex.
7. I know how to act when I am around others.
10. I exercise to improve myself.
13. I can enjoy "being myself" when I am with others.
14. I know when someone is telling the truth and when they are making things up.
16. In order for people to live together in society, it is important for them to know how to behave.
18. As I get older, I am changing the way I think about things.
23. I know the difference between making the right choice and making the wrong choice.
24. Taking care of my body is important to me.
28. My parents believe that I am a lovable person.
29. I know how the things I do now affect my future.
31. I understand why people sometimes have problems.
32. I can laugh at myself and I have a good sense of humor.

33. I can identify my strengths and weaknesses and can see how they will affect my goals.
 34. I know how to protect myself from diseases.
 35. In some ways I am different from others and I am proud of those differences.
-

Family Relations-Sense of Belonging/Health Maintenance-Body Image scale: 18 items

1. I feel like I am an important part of my family.
4. I like my body the way it is.
5. As a passenger or driver in an automobile, I wear my seatbelt.
6. I know several ways to relax my mind and body without using drugs and alcohol.
8. I like the way I am.
9. I am happy about where I am headed in life.
11. Sometimes I misuse or abuse alcohol or drugs.
12. I think about what I do before I do it.
15. If I could, I would change some parts of my body.
17. When I am with my family, I feel like I fit in.
19. I find it easy to express my emotions the right way.
20. I do not understand why my parents act as they do.
21. Nobody understands me.
22. I can talk with my parents.
25. When I am with people my age, I feel like an outsider.

26. I often feel tired and ill.
 27. I do not know good ways to make decisions.
 30. I brush and floss my teeth regularly.
-

APPENDIX I

SCORING KEY FOR LSDS-JF (Statistical)

Interpersonal Relationships/Maturity scale: 17 items

2*	28*
3*	29*
7*	31*
10*	32*
13*	33*
14*	34*
16*	35*
18*	
23*	
24*	

Family Relations-Sense of Belonging/Health Maintenance-Body Image scale: 18 items

1*	17*
4*	19*
5*	20
6*	21
8*	22*
9*	25
11	26
12*	27*
15	30*

*Items are reverse scored