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Problem behavior as a function of attachment relationship

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San Jose State University

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PROBLEM BEHAVIOR AS A FUNCTION OF ATTACHMENT RELATIONSHIP

A Thesis

Presented to

The Faculty of the Department of Psychology

San Jose State University

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

by

Michael R. Alexander

August, 1996

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APPROVED FOR THE DEPARTMENT OF PSYCHOLOGY

Dr. Greg Feist

Dr. Robert Cooper

Dr. Michael Alessandri

APPROVED FOR THE UNIVERSITY

ABSTRACT

PROBLEM BEHAVIOR AS A FUNCTION OF ATTACHMENT RELATIONSHIP

by Michael R. Alexander

Is a child's attachment relationship to his or her parent/s related to his/her propensity toward social problems (e.g., criminal conduct, substance abuse)?

A total of 99 participants, ranging in age from 13-21 years old, were drawn from two groups, Juvenile Hall residents and High School students.

Participants completed a biographical questionnaire, and measures of attachment, self-esteem, and interpersonal problems. The hypothesis that a greater percentage of juvenile offenders would have insecure attachment relationships than would non-offenders was supported for males only. Male participants in the Juvenile Hall versus the High School sample had lower mean scores on the secure attachment variable and on measures of attachment to their mothers. However, there was a reverse trend for female participants, with High School females having lower mean scores on the secure attachment variable and measures of attachment to their mothers, than their Juvenile Hall counterparts. This study clearly identified differences in the life experience and patterns of behavior for males and females, within both the offender and non-offender populations. It is likely that females follow different paths toward problem behavior than males.

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Running head: ATTACHMENT RELATIONSHIP AND PROBLEM BEHAVIOR

Problem Behavior as a Function of Attachment Relationship

Michael R. Alexander

San Jose State University

Abstract

Is a child's attachment relationship with her or his parent/s related to her/his propensity toward social problems (e.g., criminal conduct, substance abuse)?

A total of 99 participants, ranging in age from 13-21 years old, were drawn from two groups, 50 Juvenile Hall residents (25 males and 25 females) and a High School control group consisting of 49 participants (29 females and 20 males). Participants completed measures of attachment, self-esteem, interpersonal problems and a biographical questionnaire. The hypothesis that a greater percentage of juvenile offenders would have insecure attachment relationships than would non-offenders was supported for males only. Male participants in the Juvenile Hall sample had lower mean scores on the secure attachment variable and on measures of attachment to their mothers, than did High School males. However, there was a reverse trend for female participants, with High School females having lower mean scores on the secure attachment variable and measures of attachment to their mothers, than their Juvenile Hall counterparts. This study clearly identified differences in the life experience and patterns of behavior for males and females, within both the offender and non-offender populations. It is likely that females follow different paths than males toward their involvement in problem behavior.

Problem Behavior as a Function of Attachment Relationship

One cannot escape the current media focus on crime and on the increasing propensity for America's youth to be both perpetrators and victims of violence. Many child service professionals are appropriately alarmed by the growing number of young people who engage in behaviors that put them at risk for negative psychosocial health and behavioral problems, such as drug use, teen pregnancy, AIDS, delinquency, and school dropout (Committee for Economic Development, 1987; Gans, Blyth, Elster, & Gaveras, 1990). As many as "25% of the 10- to 17- year old's in America are extremely vulnerable to such negative outcomes, and an additional 25% are moderately vulnerable to the negative consequences of engaging in multiple high risk social and health behaviors" (Weisberg, Caplan, & Harwood, 1991, p. 831). The widespread health and behavioral problems of America's young people have been attributed to the significant changes that have occurred during the past few decades in families, schools, neighborhoods, and the media. According to Weisberg, et al. (1991, p. 831):

the major social, environmental and economic changes include increased poverty rates among children, dramatic alterations in family compositions and stability, the breakdown of traditional neighborhoods and extended families, reduced amounts of meaningful and supportive personal contact between young people and positive adult role models, changing demographics resulting in large numbers of economically and educationally disadvantaged young people entering school, the proliferation of health damaging media messages, inadequate housing, unsafe neighborhood environments,

and societal attitudes and behaviors that hurt ethnic minorities.

Causal models link the development of some delinquency to individual aggressiveness and the rejection of the individual by others (Coie, Lochman, Terry, & Hyman, 1983). Over time the deviance prone individual tends to associate with only deviant peers (Patterson, Capaldi, & Bank, 1991). He or she becomes involved in progressively more serious forms of deviance including: violence, theft, vandalism, substance use, and early sexual activity (Gilmore, Hawkins, Catalano, Day, Moore, & Abbott, 1991; Jessor & Jessor, 1977; McGee & Newcomb, 1992). Poor self-esteem, inadequate attention abilities, inadequate self control, lack of achievement and lack of positive reinforcement are common characteristics of deviant youth (Rice, 1990). The deficit in academic skills experienced by the deviant child further estranges him or her from more adapted cohorts and from the learning environment (Rice, 1990). As time passes, the negative spiral tends to intensify, these children become further and further behind academically, and more socially isolated. These kids give up as others give up on them. Lacking marketable job skills, welfare and criminal activities are among the few options available to them. Many young people are dependent on drugs and tragically, many have or will soon have offspring who will likely follow in their footsteps, just as she or he is likely to have followed in the footsteps of her or his parents.

Do poor attachment relationships predispose a child toward criminal behavior, substance abuse and/or certain psychopathologies? If so, could attachment related intervention strategies reduce the incidence of such problem behaviors?

Attachment is defined as an affective bond, the first of which occurs

between the infant and her or his caregiver/s (Bretherton, 1992). The basic tenets of attachment theory were formulated in the early 1950s by John Bowlby, drawing from the fields of ethology, cybernetics, information theory, developmental psychology and psychoanalysis. Attachment behavior is thought to be biological in origin, evolving through a process of natural selection because it has yielded a survival advantage (Ainsworth, 1989). Over time each child develops generalized expectations about the world based upon the interactions she or he has had with caregivers. Bowlby (1973) labeled these generalized expectations "internal working models." Children use "internal working models" as templates for structuring social interactions both within the immediate family environment and in the external world. "Internal working models" have both a self and an other orientation. The self component is based on the infant's assessment of worthiness to receive help from others. The other component is based upon the degree of sensitivity and responsiveness that the caregiver/s have typically displayed in responding to the child's needs.

Ainsworth, Blehar, Waters, and Wall (1978) identified three patterns of attachment: secure, anxious-resistant, and anxious-avoidant. Main and Hesse (1990) identified a fourth type of insecure attachment, which they labeled disorganized-disoriented. The later three types of attachment (anxious-resistant, anxious-avoidant, and disorganized-disoriented) are collectively known as anxious or insecure attachment types. Bartholomew and Horowitz (1991) have found support for a four factor model of attachment that includes attachment types similar to those developed by Ainsworth et al. (1978) and Main and Hesse (1990). Bartholomew and Horowitz based their model upon the

polarity of the individual's attitude about self, which they call the dependence dimension, and individual's attitude about other, which they call the avoidance dimension. The secure individual has a positive attitude toward both self and other and is generally comfortable with intimacy and autonomy. The preoccupied (anxious-resistant) individual has a negative attitude toward self and a positive attitude toward others and is preoccupied with relationships. The dismissive-avoidant has a positive self concept and a negative other concept and is dismissing of intimacy and counter-dependent. The fearful-avoidant, has a negative view of both self and other and is characteristically fearful of intimacy and socially avoidant. Campos, Barrett, Lamb, Goldsmith, and Stenberg (1983) estimated the frequency of attachment types within the general population to be 62% secure, 23% anxious-avoidant and 15% anxious-resistant. The disorganized-disoriented type of attachment is estimated to be one to three percent (Main & Hesse, 1990).

Attachment theorists link optimum child development with the receipt of sensitive and responsive care giving (Ainsworth, 1989). In a safe environment, securely attached children will freely explore and learn about their world (Sroufe & Waters, 1977). Exploration under the protection and support of a caregiver, allows the child to gradually build the competencies needed to survive and thrive independently. The securely attached child comes to believe she or he can influence the environment and obtain care from others when needed (Bretherton, 1992). "With development there are increasingly varied means of maintaining contact, and there is decreasing proximity to the caregiver in the absence of stress" (Sroufe & Waters, 1977, p. 1186). "Secure attachment relations, perhaps by supporting exploration and

mastery of the environment, predicted adjustment in several areas of functioning, such as cognitive development, academic skills, emotional development, and interpersonal or social functioning" (Rice, 1990, p. 511). Securely attached preschoolers have higher self-esteem, are more popular with their peers, show less negative emotion and less hostile aggression than their insecurely attached cohorts (Sroufe, 1983).

Ainsworth et al. (1978) developed the "Strange Situation" test to categorize children by attachment type or style. The "Strange Situation" test is a laboratory procedure in which an infant enters a playroom, in which they are free to explore with his or her mother or father. While in the playroom, the child is exposed to a strange adult with and without a parent present, then left alone briefly, and then reunited with the parent. The infant's behavior, during each phase of the "Strange Situation" test is believed to reveal the type of attachment relationship that the child has with her or his caregivers. Securely attached infants separate readily from caregivers, are not unduly wary of strangers, when distressed seek contact with their caregiver, and are easily comforted when reunited.

In contrast to the securely attached child, insecure children do not believe they can influence the environment and obtain care from others when needed (Bretherton, 1992). The insecure child may experience the world as a very hostile place, and is less disposed to explore and thus, learn about the world. Her or his cognitive, social, and emotional development tends to suffer accordingly (Rice, 1990). Rice conducted a meta-analysis of the literature on attachment in adolescence, and found "... a consistent positive association between attachment and measures of social competence, self-esteem, identity

and emotional adjustment" (p. 518). At a combined frequency of at least 40%, insecure attachment patterns are extremely common in Western society, especially within the lower socioeconomic strata.

The factors contributing to the disproportionately high incidence of anxious attachments among the poor include: high stress, limited caregiver social support and limited caregiver coping skills, lack of education concerning the needs and behavior of children, parental abuse of alcohol and drugs, parental depression and other psychopathologies, high incidence of teenage pregnancies, and high percentages of single parent households (Dryfoos, 1990). Physical abuse is also more prevalent among poor families and is associated with behavioral and emotional problems, including aggressiveness, communication difficulties, and ineffective problem solving skills (Elicker, Englund, & Sroufe, 1992), lack of social sensitivity and empathy (Wolfe, 1987), and aggressiveness with peers (Dodge, Bates, & Pettit, 1990; George & Main, 1979; Pianta, Egeland, & Erickson, 1989).

Anxious-resistant attachments often result when an infant cannot rely on the availability of the caregiver, the caregiver is insensitive to his or her needs, and/or the child is neglected or abused. Anxious-resistant attachments have been linked to a lack of coordination between the mother and infant at 1 and 3 months (Isabella, Belsky, & von Eye, 1989). Bohlin, Hagekull, Germer, Andersson, and Lindberg, (1990) found that exaggerated behaviors or ineffective soothing by the mother predicted resistant behavior. Extreme poverty, physical neglect, and inconsistent care have also been associated with the development of anxious-resistant attachment. Children who experience such treatment show significant decrement in functioning,

apathy, lack of joy or pleasure, passive hostility, easy frustration, and either a negative relationship with peers or social withdrawal (Baumrind, 1967; Egeland & Sroufe, 1981). Less is known about the maladaptive behaviors of the anxious-resistant versus the anxious-avoidant child. The anxious-resistant child tends to be more passive than the anxious-avoidant child, more prone to depression, suicide, and substance abuse than to acts of hostile aggression. The most salient characteristic of the anxious-resistant child is probably withdrawal. Anxious-resistant individuals may come to the attention of law enforcement authorities because of the criminal activities in which they become involved to support their chemical addiction, (e.g., prostitution and theft). In Ainsworth's (1978) Strange Situation test, the anxious-resistant child is wary of strangers, reluctant to separate from the caregiver, highly upset if the caregiver leaves them, and is not easily comforted on reunion. The anxious-resistant child is emotionally ambivalent toward the caregiver upon reunion and commonly exhibits a mixture of contact seeking, and contact resisting behaviors.

Anxious-avoidant attachments have been associated with physical abuse, indifference, and the emotional unavailability or active rejection of the baby by the caregiver (Bohlin et al. 1990; Egeland & Sroufe, 1981; Sroufe, 1988). The emotional unavailability of the parent/s has also been linked to both parental drug abuse, and parental psychopathology (Garbarino, Guttman, & Seeley, 1986; Pianta, Egeland, & Erickson, 1989; Radkey-Yarrow, Cummings, Kuczynski, & Chapman, 1985). Anxious-avoidant children may act hostile and aggressive, or they may isolate themselves emotionally. The child's aggression can be calculated and unprovoked. Other predelinquent behaviors associated

with the anxious-avoidant child may include: lying, blaming others, and acts of defiance. Both adults and peers tend to respond negatively toward aggressive children, through social rejection, retaliatory aggression, and various other forms of negative reinforcement. Negative reciprocal interaction reinforces maladaptive behavior in both anxious-avoidant and anxious-resistant children, pushing them further into social isolation and/or associations solely with deviant peers. A child who is anxious-avoidant is generally not wary of strangers, will readily separate from the caregiver, and will ignore or actively avoid the caregiver upon reunion (Ainsworth et al. 1978).

In the Strange Situation experience, the behavior of the disorganized-disoriented infant is characterized by a mixture of anxious-resistant and anxious-avoidant behaviors, plus: disorientation, inconsistency, and a dazed or frozen demeanor (Main & Hesse, 1990). Main and Hesse suggest that the inconsistent behavior, characteristic of the disorganized-disoriented infant is associated with the stress induced in the child due to threat or the unpredictability of caregiver behavior.

Research has shown that early attachment patterns persist at least to early adulthood. Feeney and Noller (1990) and Hazan and Shaver (1987) explored the relationship between attachment style with primary caregivers and later adult romantic relationships. Others (Armsden & Greenberg, 1987; Kenny, 1987; Lapsley, Rice, & FitzGerald, 1990) explored the relationship between infant-caregiver attachments and the adjustment of young adults to living away from home in college environments. The attachment literature describes the behavior of the anxiously attached child as hostile and

aggressive, or emotionally isolated (Sroufe, Cooper & DeHart, 1992). In a longitudinal study of children from infancy to sixth grade Sroufe (1983) found linkage between anxious-avoidant attachment in infancy and antisocial behavior, including hostile aggression. Renkin, Egeland, Marvinney, Sroufe, & Mangelsdorf (1989), using the same data as Sroufe, found that the anxious-avoidant attachment pattern predicted aggression and conduct problems in third and sixth grade.

The school is secondary to the family, in terms of influence on the average child. Frequency estimates of school adjustment problems range from 20-30% (Chandler, Weisberg, Cowen, & Guare, 1984). Anxiously attached children tend to "... have lower peer competence, lower self-esteem, and a lower capacity for flexible self-management...." (Sroufe, Cooper, & DeHart, 1992, p. 376). Maladaptive patterns of behavior emerge as early as preschool. Children who are anxiously attached regardless of the subtype have problems thriving in the school environment. This transfer occurs, in part, because of the "internal working models" that the child has formulated from her or his early life experiences (Bowlby, 1973). Because insecure children experience the world as a hostile place, they may respond with aggressive behavior or they may withdraw because they believe that doing so is necessary for their survival (Main & Weston, 1981). In the school environment, the child's aggressive behavior and negative expectations concerning others are typically met by counter-aggression and/or rejection by teachers and peers. When teachers and peers subsequently develop negative expectations of the aggressive or withdrawn child, a lifelong cycle of negative interaction begins (Darley & Fazio, 1980).

A comprehensive understanding of the processes through which antisocial behaviors develop is required to aid in the development of effective strategies for reducing crime and controlling other problem behaviors. The purpose of this study was to determine whether or not an individual's attachment relationship is related to her or his propensity toward social problems (e.g., criminal conduct, substance abuse). In the current study, a comparison was made of a sample of juvenile offenders, confined in a Juvenile Hall facility, with a non-offender High School sample matched on age, gender, socioeconomic status, and ethnicity. All participants completed measures of attachment, self-esteem, interpersonal problems, parenting style, and a personal history questionnaire that included demographics and biographical data associated with problem behaviors. The dependent variables were the mean scores on the various psychological tests and frequencies of problem behavior reported in the personal history questionnaire. The data from the two groups were analyzed for frequency of attachment type within each group and patterns of problem behavior associated with group membership, gender, and attachment type.

This study tested four hypotheses. The first hypothesis predicted that the offender sample would be comprised of a significantly greater number of insecurely attached participants than would the participants in the control sample. If attachment relationships are associated with problem behavior, then juvenile delinquents should be more likely to be insecurely attached than the normal population. Hypothesis one was tested by comparing the mean scores on attachment measures. The second hypothesis predicted that insecurely attached participants would be characterized by significantly

higher levels of criminal conduct and illicit drug use than securely attached participants. Each participant was categorized by attachment type utilizing the participant's relative scores on the Attachment Style Prototype variables, then comparisons were made on frequencies of problem behavior reported in the personal history questionnaire. The third hypothesis predicted that insecure compared to secure participants would exhibit lower levels of self-esteem. Hypothesis four predicted that insecurely attached participants would report more interpersonal problems than securely attached participants. Hypothesis four was tested through a comparison of the scores that the participants, in the various groups, attained on the subscales of the interpersonal problems measure.

Method

Participants

There were a total of 99 participants drawn from two groups. The first group consisted of juvenile offenders confined to the Santa Clara County Juvenile Hall. The second group, the control sample, consisted of high school students from Yerba Buena High School in the Eastside Union High School District of San Jose, California. The Eastside Union High School District was selected in an attempt to match the two groups on age, gender, socioeconomic, and ethnic background.

The offender group had 50 participants (25 males and 25 females) drawn randomly, through use of a table of random numbers, from the Santa Clara County Juvenile Hall population. The data from the Juvenile Hall participants was collected during a 6 week period in the spring of 1995. Eighty-four percent of the participants in the juvenile hall sample were ethnic minorities.

The largest ethnic group in the offender sample was Hispanic (38%), followed by those with mixed ethnic backgrounds, primarily Hispanic and another ethnic group (18%), then Caucasians (18%), African Americans (12%), and Other (14%). The age range for the Juvenile Hall sample was 13-19 years with a mean age of 15.70 years. The random selection of Juvenile Hall participants was limited by a Superior Court condition that, individuals classified as "at risk for suicide," those classified as having a "high potential for assaultive behavior" and those thought to be an "escape risk" would be excluded from the study. Because females confined to the Juvenile Hall represent only 15 percent of the population and an equal number of males and females were included in the sample, a greater percentage of the female Juvenile Hall population were included in the research than were male Juvenile Hall residents. Fewer than five percent of the Juvenile residents, who were asked to participate, declined the opportunity to do so.

There were 49 participants in the control sample (29 females and 20 males). Participants in the control sample ranged in age from 14-21 years, with a mean age of 16.53 years. Ninety-eight percent of the participants in the control sample were ethnic minorities. As with the offender sample, the largest ethnic group in the control sample was Hispanic (63.3 percent). Eighteen percent of the control sample were Asian Americans. The remaining 18 percent of the control sample was comprised of a mixture of ethnic groups, with only one to three participants drawn from each of the other ethnic groups.

There was a significant difference in the ethnicity of the two groups [$\chi^2(7, N = 99) = 24.22, p < .001$]. The control sample was significantly more

Asian than the offender group 9.3% vs. 1.0%, respectively [$\chi^2(1, N = 10) = 6.73, p < .01$]. The offender sample was significantly more Caucasian than the control sample [9.3% vs. 1.0%, respectively; $\chi^2(1, N = 10) = 6.09, p < .025$]. The parents of the juvenile hall sample had more education than the high school sample. The mode for parent education within the control sample was "some high school" versus "high school grad" for the offender sample. Because the occupations of the participants parents were approximately equal, it is believed that the socio-economic status of the two groups is approximately equal. The two groups were significantly different on parental marital status [$\chi^2(2, N = 99) = 19.45, p < .001$], with 79.6% of High School participants having married parents and only 36% off the Juvenile Hall participants [$\chi^2(1, N = 57) = 8.19, p < .005$]. Thirty-eight percent of the Juvenile Hall participants reported that their parents were divorced versus 10.2 % of the High School group [$\chi^2(1, N = 24) = 7.93, p < .005$]. Consistent with delinquency models (Gilmore, Hawkins, Catalano, Day, Moore, & Abbott, 1991; Jessor & Jessor, 1977; McGee & Newcomb, 1992) the two groups were significantly different on criminal arrest [$\chi^2(1, N = 99) = 67.48, p < .001$], sexual activity [$\chi^2(1, N = 99) = 29.19, p < .001$], and drug usage [$\chi^2(1, N = 99) = 27.79, p < .001$]. Thus, the behavior of the High School group appears to be consistent with that of a normal population and the behavior of the Juvenile Hall group appears to be consistent with that of a criminal population. See Tables 1 and 2 for a comprehensive comparison of the juvenile offender and the high school groups.

All participants were treated in accordance with the "Ethical Principles of Psychologists and Code of Conduct," APA, 1992a.

Table 1

Frequencies and Percentages of Problem Behavior and Biographical Data by Research Group

Information Type	Juvenile Hall		High School	
	Frequency	Percent	Frequency	Percent
<u>Gender</u>				
Male	25	50.0	20	40.8
Female	25	50.0	29	59.2
<u>Ethnicity</u>				
Asian	2	4.0	9	18.4 **
Black	6	12.0	2	4.1
Hispanic	19	38.0	31	63.3
White	9	18.0	1	2.0 *
Other	14	28.0	5	10.2
Decline to State	0	0.0	1	2.0
<u>Attachment Type</u>				
Secure	12	24.0	9	18.4
Insecure	24	48.0	23	46.9
Indeterminate	14	28.0	17	34.7
<u>Parents Marital Status?</u>				
Married	18	36.0	39	79.6 **
Divorced	19	38.0	5	10.2 **
Other	13	26.0	5	10.2

(table continues)

Information Type	Juvenile Hall		High School	
	Frequency	Percent	Frequency	Percent
<u>Primary Caregiver?</u>				
Mother	25	50.0	19	38.8
Father	4	8.0	4	8.2
Both	14	28.0	26	53.1
Other	7	14.0	0	0.0
<u>Victim of abuse?</u>	16	32.0	(Not asked)	
<u>Sexually active?</u>	36	73.4	9	18.8 ***
<u>Party to pregnancy?</u>	11	22.4	(Not asked)	
<u>Parents abuse drugs?</u>	26	52.0	(Not asked)	
<u>Use alcohol/drugs?</u>	44	88.0	18	36.7 ***
Alcohol?	37	74.0	10	20.4
Marijuana?	29	58.0	10	20.4
Cocaine?	7	14.0	1	2.0
Methamphetamine?	22	44.0	2	4.1
PCP?	8	16.0	2	4.1
LSD?	16	32.0	2	4.1
Other illicit drug?	4	8.0	2	4.1
<u>User type?</u>				
Never	6	12.0	31	63.3 **
Experimental	7	14.0	2	24.5
Casual	14	28.0	3	6.1 **

(table continues)

Information Type	Juvenile Hall		High School	
	Frequency	Percent	Frequency	Percent
Moderate	8	16.0	2	4.1
Heavy	15	30.0	1	2.0 **
<u>Arrested for crime?</u>	50	100.0	9	18.8 ***
Burglary?	12	25.0	1	2.1
Shoplift?	11	22.9	5	10.4
Robbery?	9	18.8	0	0.0
Other theft?	16	33.3	1	2.1
Other violence?	25	52.1	1	2.1
Drug related?	15	31.3	0	0.0
Sex crime?	2	4.2	0	0.0
Other not specified?	28	58.3	1	2.1

Note: Juvenile Hall ($n = 50$), High School ($n = 49$); * = $p < .05$, ** = $p < .01$,

*** = $p < .001$.

Table 2

Means and Standard Deviations by Research Group

Information Type	Juvenile Hall		High School	
	Mean	Standard Deviation	Mean	Standard Deviation
Age when tested?	15.70	1.23	16.53	1.23
Age of first drug use?	12.70	2.31	13.88	1.54
Age of first criminal act?	13.46	2.11	12.78	1.56
Age of first sexual experience?	12.94	2.15	15.80	2.86 **
No. of sexual partners (6 mo.)?	2.29	1.83	1.19	1.68
SEI Lie Scale	2.68	1.70	2.60	1.45
SEI General-Self Scale	16.90	4.27	17.46	4.52 *
SEI Social Self-Peers Scale	6.42	1.57	6.12	1.84
SEI Home-Parents Scale	4.70	2.49	4.56	2.37
SEI School-Academic Scale	4.30	1.89	4.52	1.74
SEI Total	64.64	14.66	65.33	16.22 **
IPPA - Mother Trust Scale	38.80	10.30	39.69	9.39 *
IPPA - Mother Communication	30.44	9.49	31.14	9.24 *
IPPA - Mother Alienation	20.12	6.22	21.55	6.22
IPPA - Father Trust Scale	27.96	16.81	30.37	14.95
IPPA - Father Communication	21.62	13.62	22.63	12.22
IPPA - Father Alienation	15.22	9.57	17.94	8.52
IPPA - Peer Trust Scale	39.36	7.63	40.08	7.87

(table continues)

Information Type	Juvenile Hall		High School	
	Mean	Standard	Mean	Standard
	Deviation		Deviation	
IPPA - Peer Communication	29.26	6.89	29.22	6.73
IPPA - Peer Alienation	25.44	3.84	25.10	6.02
IPPA - Mother Total	91.57	21.12	92.48	22.84
IPPA - Father Total	79.14	24.68	79.14	25.25
IPPA - Peer Total	95.82	16.12	94.86	17.33
IPPA - Global Total	269.15	43.38	267.73	51.37
Secure	3.14	1.74	3.37	1.79 *
Avoidant	2.82	1.53	2.96	1.74
Preoccupied	2.08	1.52	2.47	1.65
Fearful	2.98	1.86	3.06	1.91
IIP - Hard to be Assertive	24.84	14.83	30.24	13.90
IIP - Hard to be Sociable	24.24	12.36	23.76	11.77
IIP - Hard to be Submissive	18.52	9.50	14.20	7.16 **
IIP - Hard to be Intimate	14.70	8.98	15.10	8.86
IIP - Too Responsible	19.40	9.19	18.73	7.36
IIP - Too Controlling	12.42	7.16	12.69	6.67
IIP - Domineering	11.18	6.14	9.57	5.39
IIP - Vindictive	11.98	6.51	10.43	5.47
IIP - Cold	10.62	6.12	9.82	6.09
IIP - Socially Avoidant	10.34	5.83	10.76	6.25 *

(table continues)

Information Type	Juvenile Hall		High School	
	Mean	Standard	Mean	Standard
		Deviation		Deviation
IIP - Nonassertive	10.46	7.22	11.43	6.03
IIP - Exploitable	7.98	5.00	10.90	5.48 **
IIP - Overly Nurturant	11.00	5.96	13.02	5.42
IIP - Intrusive	10.14	5.16	10.67	4.97
IIP - Overall Mean	2.00	0.49	1.98	0.49
IIP - Circumplex Mean	2.00	0.47	2.01	0.44

Note: * = $p < .05$, ** = $p < .01$, *** = $p < .001$.

Instruments

Each participant completed a battery of tests designed to assess attachment relationships with parents and peers, interpersonal problems, self-esteem, and personal history. The following measures were included in the study:

Attachment. The Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987; see Attachment K) is a 75-item scale designed to assess attachment relationship to parents and peers by having participants indicate on a 5-point scale whether the item is "almost always or always true, often true, sometimes true, seldom true, or almost never or never true". There are nine subscales in the IPPA, three subscales: trust, communication and alienation subscales for each of three attachment objects/groups, (mother, father, and peer/s, respectively). A total score for each attachment object/group is derived by summing the three subscale scores for the participants mother, father, and peer/s, respectively (e.g., Mother Total = Mother Trust + Mother Communication + Mother Alienation). A global measure of the individual's attachment relationships is derived by summing the total scores for each of the three attachment objects (IPPA Total = Mother Total + Father Total + Peer Total). The range of possible scores for the IPPA Total is 75 to 375 points.

Greenberg, Siegel, and Leitch (1983) reported a two week test-retest reliability of .81 for an early adolescent sample. Armsden, McCauley, Greenberg, Burke, and Mitchell (1990) reported a three week test-retest reliability, for a late adolescent sample, of .93 and .86 for parents and peers, respectively. The IPPA has been found to converge appropriately with

individual scales of the Life Events Checklist (Johnson & McCutcheon, 1978), the Tennessee Self-Concept Scale (Fitts, 1965), the Family Environment Scale (Moos, 1974), Bachman's (1970) Affective States Index, the Family and Peers Utilization Scales of the Inventory of Adolescent Attachment (Greenberg et al. 1983) and the Schedule for Affective Disorders and Schizophrenia for School Age Children (Puig-Antich & Chambers, 1978).

The second measure of attachment, the Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991; see Part IV of Attachment J) is a self-report attachment style prototype adapted from an earlier measure (Hazan & Shaver, 1987). The Relationship Questionnaire is comprised of short paragraphs that describe four attachment styles: secure, avoidant, preoccupied, and fearful. Respondents are asked to assess the degree to which they resemble each of the four attachment style prototypes on a 7-point scale ranging from (0) "not at all" to (6) "totally." Correlations were run on the IPPA and the RQ to establish the convergent validity of the two tests (see Table 3). Each of the RQ subscales correlated significantly with the IPPA Total with r -values ranging from .30 to -.34, $p < .01$. Each of the RQ subscales also correlated significantly with the IPPA Peer Total, with r -values ranging from .22-.28, $p < .05$. Except for the Secure Prototype, the RQ variables correlated significantly with the IPPA Father Total ($r = .22$ -.28, $p < .05$). Only the RQ Preoccupied and Fearful variables correlated significantly with the IPPA Mother Total, ($r = -.25$ and $-.23$, respectively, both $p < .05$).

The Relationship Questionnaire (RQ) was used to assign the participants to one of three attachment groups, the Securely Attached group (secure), the Insecurely or Anxiously Attached group (avoidant, preoccupied and fearful),

Table 3
Correlations of the Inventory of Parent and Peer Attachment (IPPA) and the Relationship Questionnaire (RQ)

Variable	1	2	3	4	5	6	7	8
1. IPPA Mother Total	----	.44***	.43***	.82***	.17	-.13	-.25	-.23
2. IPPA Father Total		----	.21*	.79***	.18	-.26*	-.22*	-.28**
3. IPPA Peer Total			----	.65***	.28**	-.27**	-.27**	-.22*
4. IPPA Global Total				----	.30**	-.30**	-.31**	-.34**
5. RQ Secure					----	-.16	.02	-.31**
6. RQ Avoidant						----	.07	.29**
7. RQ Preoccupied							----	.28**
8. RQ Fearful								----

Note. * $p < .05$, ** $p < .01$, *** $p < .001$; $n = 99$.

and an Indeterminately Attached group. Those with a relatively high score (more like the respondent) on the secure item and relatively low scores (less like the respondent) on the three insecure items (avoidant, preoccupied, fearful) were placed in the Securely Attached group. Those with relatively low scores on the secure item (less like the respondent) and relatively high scores (more like the respondent) on at least one of the three insecure items (Preoccupied, Avoidant, Fearful) were placed in the Insecurely Attached group. Those with a contradictory mix of scores, (e.g., high or low score on both the secure item (Like Me/Not Like Me) and at least one of the insecure items (Like Me/Not Like Me) were placed in the Indeterminately Attached group.

There are several disadvantages to using self-report measures for adolescent populations (Hazan & Shaver, 1987; Kobak & Sceery, 1988; Main, Kaplan, & Cassidy, 1985), including: the tendency toward socially desirable responses (Crowne & Marlowe, 1964), and the fact that many adolescents, especially within problem populations, are heavily dependent on defense mechanisms for coping (Hazan & Shaver, 1987). A primary coping mechanism is denial; a person "in denial" is less likely to provide accurate responses. The comparison of the relative scores on the four RQ variables, to classify the participants according to attachment style, was used as a covert attempt to reduce biased responses.

Self-Esteem. The Coopersmith Self-Esteem Inventory (SEI) School Form (1967; see Attachment L), is a 58-item measure of global self-esteem. Participants were asked to indicate whether each statement was "Like Me" or "Unlike Me." There are five subscales imbedded in the SEI, the 8-item Lie

Scale, (scored separately from the other subscales), the 26-item General-Self Subscale, the 8-item Social Self-Peers subscale, the 8-item Home-Parent subscale, and the 8-item School-Academic subscale. The later four subscales make up the global self-esteem score when they are summed together and multiplied by two, resulting in a total possible score of 100 points $[(26 + 8 + 8 + 8) = 50 * 2 = 100]$.

The SEI has been administered to preadolescents through late adolescents with internal consistency coefficients ranging from .80 to .92 (Fullerton, 1972; Kimball, 1972; Spatz & Johnson, 1973; Taylor & Reitz, 1968). Three year test-retest reliabilities were found to be $r = .62$ for children tested at 12 and 15 years old (Rubin, 1978). Fullerton (1972) reported a correlation of .64 for children tested twelve months apart. Taylor & Reitz (1968) reported convergent validity between the SEI and the California Psychological Inventory Self-Acceptance scale ($r = .45$) and correlations of .42 to .66 with other scales. The SEI correlated with the Soares scale ($r = .60$; Getsinger, 1972), and the Rosenberg Self-Esteem Inventory ($r = .59$ to .60, Crandall, 1973).

Social Relationship. The Inventory of Interpersonal Problems (IIP; Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988; Horowitz, Rosenberg, Ureno, Kalehzan, & O'Halloran, 1989; see Attachment M) is a 127-item self-report inventory intended to assess a broad range of interpersonal problems. Participants are asked to use a 5-point scale ranging from (0) "not at all" to (4) "extremely", to describe the amount of distress associated with the interpersonal problems they have experienced. Eighty-three IIP items are used to form the following subscales: Assertiveness (21-items), Sociability (18-items), Submissiveness (10-items), Intimacy (12-items), Responsibility (12-

items), Control (10-items). Individual means are computed for each subscale by summing the subscale items then dividing by the total number of items. The overall mean is computed by summing all 127 IIP items and dividing by 127. The items of the IIP are also scored using a circumplex scoring method that distributes measures of warmth and dominance across eight octants: Domineering, Vindictive, Cold, Socially Avoidant, Nonassertive, Exploitable, Overly Nurturant, and Intrusive. The individual circumplex subscale means are computed by summing the eight scores within each subscale, then dividing the total by eight. Because the IIP is designed to use mean scores, the possible range is from zero to four points.

The test-retest reliability of the subscales ranged from .74 to .89 with a mean test-retest reliability of .81 (Horowitz et al. 1988). The IIP correlated significantly with other self-report assessment measures of interpersonal relationships, therapist ratings, and an assessment by an independent evaluator. The IIP correlated at $r = .74$ with a composite of z-scores derived from the Global Assessment Scale, Patterns of Individual Change Scales, Global Outcome Ratings, and the Patient's Evaluation of Services. A composite of therapist rating z-scores correlated with the IIP ($r = .64$; Horowitz et al. 1988). The correlation between the total IIP score and the total Symptom Checklist-90-Revised score was .57 and .64 during two administrations. Discriminant validity was demonstrated through the lack of subscale correlations with measures of other interpersonal traits.

Personal History/Demographics. The Biographical Questionnaire (BQ) was developed by the current investigator. The BQ used a self-report format with participants circling fixed responses or providing short fill-in answers

to questions about themselves, members of her or his family, and her or his close friends. The Biographical Questionnaire asked the participant's age, gender, parental occupations, parental educational levels, who their primary caregiver was, their parents' marital status, their age when their parents were divorced, (if applicable), the amount of time per week that they typically spent with each parent, the number of children in their families, and their birth order. The BQ also asked the participant's to identify their school subject likes/dislikes and to provide information about their friendship, sexual activity, and criminal and substance use histories. In addition, the BQ given to Juvenile Hall participants (see Attachment N) also included questions concerning parental involvement in criminal activities, parental mental health histories, participant mental health histories, parental substance abuse histories, whether or not she or he had been a victim of abuse, and, if so, what type of abuse she or he suffered and her or his relationship with the abuser (e.g., father, boyfriend). Such questions were not included in the BQ's administered to the high school sample (see Attachment O) because it was the assumption of the researcher, (based upon consultation with school administrators and members of the thesis committee), that the sensitive nature of the questions rendered them less palatable and relevant to the control group population. The questions were included in the Juvenile Hall version because negative family histories and the discussion of negative family dynamics have been shown to be more common among juveniles with criminal backgrounds, and because the services of mental health professionals were available to any Juvenile Hall participant wishing to discuss such influences on his or her life. Additionally, the Juvenile Hall

participants completed the measure one on one with the researcher, which provided the researcher with the opportunity to discuss such matters during or following the administration of the Biographical Questionnaire.

Procedures

Prior to the data collection phase of the research, each test packet was assigned an anonymous identifying number, segregated by group (Juvenile Hall or High School sample). Participant names were never associated with their responses. Names were listed only on the signed Agreements to Participate in Research (see Attachment H and I).

Because the Santa Clara County Superior Court oversees the administration of the Santa Clara County Juvenile Detention Center and juveniles confined to the Juvenile Hall are by definition Wards of the Court, a Superior Court Judge provided a Guardianship Consent for Juvenile Hall residents to participate in the research (see Attachment D -- Guardianship Consent Agreement). Parental consent was, therefore, not required for the Juvenile Hall sample. The Guardianship Consent Agreement prohibited the inclusion of juveniles classified as "at risk for suicide" and those classified as having a high potential for assaultive behavior or escape risk. These three groups were excluded from the pool of potential participants for the safety of the juveniles so classified, the safety of others in the facility, and the general security of the Juvenile Hall facility. The specific factor that prohibited the inclusions of juveniles from these groups was the fact that the movement of these individuals was restricted and they were believed to be at higher risk for negative consequences associated with the research questions. Their inclusion would also have placed unreasonable demands on the limited

Juvenile Hall Staff.

The Guardianship Consent Agreement also required the researcher to report immediately to Juvenile Hall staff when a participant indicated an intent to harm himself, herself or someone else or when a participant reported that they or another child had been abused. Paragraph 4 of the Agreement to Participate in Research -- Juvenile Hall version (see Attachment H) informed the potential participant of this requirement.

The Juvenile Hall participants were randomly selected from the population of residents, excluding those outside the target age requirement (younger than 13 years old) and those whose participation was prohibited by the Guardianship Consent Agreement. When selected, the potential participant was called out of his or her area of confinement and directed to the interview area. In an interview room, the researcher introduced himself as a graduate student in Psychology from San Jose State University, explained the general purpose of the research, gave potential participants a copy of the Agreement to Participate in Research to read, and answered any questions. Each potential participant was then asked, whether she/he would like to participate. If she/he wished to participate she/he was asked to sign the Agreement to Participate in Research. Participants within the Juvenile Hall sample were not provided with a copy of the Agreement to Participate in Research because of Juvenile Hall policy that restricts the property that residents may possess. Those who chose to participate were offered a can of soda to be consumed while they were completing the research measures. Participants were encouraged to ask question whenever they had them. The research measure was reviewed for completeness and clarifying questions

were asked before each participant left the interview room.

The High School administration directed the researcher to a pool of teachers who were interested in the possibility of including his or her students in the research. Each teacher gave the researcher class time to solicit participation in the research. The researcher introduced himself as a graduate student in Psychology from San Jose State University, explained the general purpose of the research, answered questions, and gave each student a Letter to Potential Participants/Parents (see Attachment G), and a Parental Consent form (See Attachment J) to read and to take home. The students were asked to take the material home, discuss it with her or his parent/s, and return the signed consent form by the specified date that the research would take place. Those with signed parental consent forms were provided with an Agreement to Participate in Research -- High School (see Attachment I). When the student consent form was signed, participants were given a copy of the Agreement to Participate in Research that had been signed by both the participant and the researcher, and a copy of the research measure. Participants in the high school group completed the research measure during one of three extended class periods. The researcher administered all research sessions and read identical instructions to each group. Participants were encouraged to ask questions whenever they had them. Talking was discouraged to insure both confidentiality and to insure individual responses. When students were observed to be talking during a research session, the researcher immediately contacted the individual/s and answered whatever questions the participants had. Consistent with the Juvenile Hall participants, the high school students who chose to participate were offered a can of soda to

be consumed while they were completing the research measures. When all of the research materials were collected the researcher responded to specific questions about the research measure. During this discussion, participants were admonished against discussing the content of the research measure with those who had not yet completed it.

Results

A Chi Squared analysis revealed that Juvenile Hall participants (73.5%) were more sexually active than the High School group [18.8%; $X^2(1, N = 99) = 29.19$ $p < .001$]. The difference in the "age of first sexual experience" was statistically significant [$F(1,42) = 10.84$, $p = .002$], with Juvenile Hall participants reporting a mean age of 12.94 and High School participants reporting a mean age of 15.80. The difference in the "number of sex partners in 6 months" for Juvenile Hall participants ($M = 2.29$) versus High School participants ($M = 1.19$), was marginally significant ($p = .055$).

More Juvenile Hall participants (88.0%) reported drug usage than the High School group [36.7%; $X^2(1, N = 99) = 27.79$ $p < .001$]. There were also significant differences in the intensity of drug usage of the two groups with 63.3% of the High School group reporting that they had never used alcohol or drugs versus 12.0% of the Juvenile Hall group [$X^2(1, N = 37) = 17.44$ $p < .005$]. Thirty percent of the Juvenile Hall group indicated heavy use of drugs versus 2.0% of the High School students [$X^2(1, N = 16) = 11.91$ $p < .005$]. The difference in the age of first drug use for Juvenile Hall participants ($M = 12.70$) versus High School participants ($M = 13.88$) was marginally significant ($p = .054$).

One hundred percent of the Juvenile Hall sample had been arrested for a crime while only 18.8% of the High School group reported ever being arrested

$[X^2(1, N = 98) = 67.48, p < .001]$. The majority of Juvenile Hall participants had been arrested multiple times for multiple types of crimes. See Table 1 for Frequencies of Problem Behavior by Research Group.

Inferential Statistics

Three methods were used to test the first hypothesis, which predicted that the offender sample would be comprised of a significantly greater number of insecurely attached participants than would the participants in the control sample. First, group means were compared on the four Attachment Style Prototype variables through a 2 (Research Group) $\times$ 2 (Participant Gender) Between-Subjects Multivariate Analyses of Variance (MANOVA's). The analyses revealed a statistically significant interaction of Research Group by Gender [$F(1,95) = 5.53, p = .021$] on the mean Secure Attachment Style Prototype scores (see Figure 1). Although High School males ($M = 3.80$) had a higher mean Secure score than Juvenile Hall male ($M = 2.68$), Juvenile Hall females ($M = 3.60$) had a higher mean score on the Secure variable than their High School ($M = 3.07$) counterparts. The differences in the mean scores on the Avoidant, Preoccupied, and Fearful Attachment Style Prototypes were not significant. Table 2 lists the Means and Standard Deviations of the attachment variables by Research Group.

The second test of hypothesis one utilized the IPPA total attachment scores, the three attachment object scores (mother, father, and peers), and the individual subscale scores (trust, communication, and alienation). There were significant Research Group by Gender interactions on the Mother Trust subscale and on the Mother Communication subscale [$F(1,95) = 4.48, p = .037$; $F(1,95) = 5.76, p = .018$, respectively; see Figures 2 & 3]. High School males

Figure 1. Mean Secure Attachment Score as a Function of Research Group and Participant Gender.

Figure 2. Mean Inventory of Parent and Peer Attachment, Mother Trust Subscale Score as a Function of Research Group and Participant Gender.

Figure 3. Mean Inventory of Parent and Peer Attachment, Mother Communication Subscale Score as a Function of Research Group and Participant Gender.

scored highest on the IPPA Mother Trust variable ($M = 44.45$), High School females scored the lowest ($M = 36.41$) and the scores of Juvenile Hall females and males were approximately equal ($M = 38.88$ and 38.72 , respectively). High School males ($M = 34.90$) also scored highest on the IPPA Mother Communication variable followed by Juvenile Hall females ($M = 31.72$), then Juvenile Hall males ($M = 29.16$) and High School females ($M = 28.55$). There were no other significant differences between the groups on the IPPA Total variable.

The third test of hypothesis one compared the percentage of participants in each group who were classified as either secure or insecure. MANOVA's revealed no statistically significant group differences by Attachment Type categories.

Hypothesis two predicted that insecure or anxiously attached participants would be characterized by significantly higher levels of criminal conduct and illicit drugs use. The individuals classified as Insecure, reported consistently more problem behavior (e.g., drug use, criminal conduct) than those classified as Secure, but none of the differences were statistically significant. See Table 4 for the Frequencies and Percentages of Problem Behavior by Attachment Type.

The third hypothesis predicted that insecurely attached participants would exhibit lower levels of self-esteem. There was a significant difference in the Self-Esteem Inventory Total [$F(1,64) = 12.72$, $p = .001$] for the Secure ($M = 73.64$) versus the Insecure ($M = 59.09$) attachment type. See Table 5 for Means and Standard Deviations by Attachment Type.

The fourth hypothesis predicted that insecurely attached participants

Table 4

Frequencies and Percentages of Problem Behavior and Biographical Data by Attachment Type with Groups Combined

Information Type	Secure		Insecure	
	Frequency	Percent	Frequency	Percent
<u>Sexually active?</u>	8	40.0	22	47.8
<u>Arrested for crime?</u>	11	55.0	30	63.8
Burglary?	2	10.5	8	17.8
Shoplift?	1	5.3	11	24.4
Robbery?	2	10.5	4	8.9
Other theft?	3	15.8	13	28.9
Other violence?	5	26.3	13	28.9
Drug related?	3	15.8	7	15.6
Sex crime?	2	10.5	0	0.0
Other not specified?	6	31.6	17	37.8
<u>Use alcohol/drugs?</u>	11	55.0	33	70.2
Alcohol?	9	45.0	25	53.2
Marijuana?	5	25.0	24	51.1
Cocaine?	0	0.0	4	8.5
Methamphetamine?	3	15.0	14	29.8
PCP?	1	5.0	4	8.5
LSD?	1	5.0	13	27.7
Other illicit drug?	1	5.0	3	6.4

(table continues)

Information Type	Secure		Insecure	
	Frequency	Percent	Frequency	Percent
<u>User type?</u>				
Never	9	45.0	14	29.8
Experimental	4	20.0	9	19.1
Casual	2	10.0	9	19.1
Moderate	1	5.0	7	14.9
Heavy	4	20.0	8	17.0
<u>Gender</u>				
Male	11	55.0	21	44.7
Female	9	45.0	26	55.3
<u>Parents Marital Status?</u>				
Married	11	55.0	26	55.3
Divorced	7	35.0	8	17.0
Other	2	10.0	13	27.7
<u>Primary Caregiver?</u>				
Mother	5	25.0	25	53.2
Father	0	0.0	7	14.9
Both	13	65.0	14	29.8
Other	2	10.0	1	2.1

Note: Secure ($n = 20$), Insecure ($n = 47$), No significant differences.

Table 5

Means and Standard Deviations by Attachment Type

Information Type	Secure		Insecure	
	Mean	Standard Deviation	Mean	Standard Deviation
Age when tested?	16.14	1.32	16.19	1.17
Age of first drug use?	13.00	2.09	13.19	2.19
Age of first criminal act?	13.29	2.43	13.21	2.01
Age of first sexual experience?	13.00	2.24	13.13	2.55
No. of sexual partners (6 mo.)?	1.50	1.57	2.27	2.14
SEI Lie Scale	2.82	1.47	2.35	1.69
SEI General-Self Scale	19.23	3.54	15.61	4.88 **
SEI Social Self-Peers Scale	6.68	1.21	5.91	1.93
SEI Home-Parents Scale	5.73	2.23	4.26	2.35 *
SEI School-Academic Scale	5.18	1.97	3.76	1.64 **
SEI Total	73.64	13.45	59.09	15.88 ***
IPPA - Mother Trust Scale	42.77	6.74	38.00	11.22
IPPA - Mother Communication	34.86	7.59	28.94	10.26 *
IPPA - Mother Alienation	23.36	4.84	19.74	6.83 *
IPPA - Father Trust Scale	31.82	16.74	28.11	15.45
IPPA - Father Communication	24.64	14.75	21.02	12.19
IPPA - Father Alienation	19.86	10.12	15.26	8.22
IPPA - Peer Trust Scale	42.73	8.23	37.91	7.95 *

(table continues)

Information Type	Secure		Insecure	
	Mean	Standard Deviation	Mean	Standard Deviation
IPPA - Peer Communication	30.41	7.71	28.11	6.88
IPPA - Peer Alienation	27.82	3.28	24.15	5.23 **
IPPA - Mother Total	101.00	17.08	88.81	23.49
IPPA - Father Total	88.37	27.11	73.92	24.11
IPPA - Peer Total	101.97	16.95	91.38	16.91 **
IPPA - Global Total	293.70	44.64	254.67	47.12 **
Secure	4.77	1.07	1.98	1.22
Avoidant	1.59	1.10	3.36	1.55
Preoccupied	1.36	1.14	2.55	1.68
Fearful	1.14	1.21	4.06	1.45 **
IIP - Hard to be Assertive	25.23	13.62	28.96	15.26
IIP - Hard to be Sociable	20.95	12.37	26.33	12.45
IIP - Hard to be Submissive	14.32	9.93	18.96	7.96
IIP - Hard to be Intimate	12.77	8.20	15.02	7.99
IIP - Too Responsible	18.36	8.95	19.28	8.58
IIP - Too Controlling	12.73	7.80	13.21	6.58
IIP - Domineering	9.36	5.79	11.87	5.94
IIP - Vindictive	9.64	6.01	11.83	5.19
IIP - Cold	8.36	5.48	11.11	5.87
IIP - Socially Avoidant	9.09	6.16	11.72	6.61

(table continues)

Information Type	Secure		Insecure	
	Mean	Standard	Mean	Standard
		Deviation		Deviation
IIP - Nonassertive	9.91	6.03	11.79	7.23
IIP - Exploitable	9.05	4.79	9.85	6.03
IIP - Overly Nurturant	11.59	5.21	11.72	6.15
IIP - Intrusive	10.91	5.16	10.40	4.90
IIP - Overall Mean	1.92	0.54	2.09	0.49
IIP - Circumplex Mean	2.04	0.46	2.07	0.43

Note: * = $p < .05$, ** = $p < .01$, *** = $p < .001$.

would report more interpersonal problems. There were no significant differences in any of the 14 Inventory of Interpersonal Problems subscales by Attachment Type.

Exploratory Analyses

There was a significant Research Group by Gender interaction on the total Self-Esteem Inventory (SEI) scores [$F(1,94) = 7.55, p = .007$; see Figure 4]. High School males ($M = 74.40$) had the highest SEI total and High School females had the lowest SEI total scores ($M = 58.86$). The SEI total for the both male and female Juvenile Hall participants were approximately equal ($M = 64.24$ and 65.04 , respectively). The SEI General-Self subscale also had a significant Research Group by Gender interaction [$F(1,94) = 4.17, p = .044$; see Figure 5], which followed the same general trend as the SEI total scores. High School males had the highest SEI General-Self subscale score ($M = 19.80$) followed by Juvenile Hall males ($M = 17.16$), Juvenile Hall females ($M = 16.64$) and High School females ($M = 15.79$).

There was a significant difference between the two groups on the "Hard to be Submissive" subscale of the IIP [$F(1,95) = 7.17, p = .009$]. The Juvenile Hall participants ($M = 18.52$) indicated more difficulty in being submissive than the High School sample ($M = 14.20$). There was also a significant difference on the "Exploitable" subscale of the IIP [$F(1,95) = 7.13, p = .009$]. The mean Exploitable score for Juvenile Hall participants was 7.98, versus 10.90 for the High School participants. High School females were the most exploitable ($M = 11.17$), followed by High School males ($M = 10.50$), then Juvenile Hall Males ($M = 8.60$) and Juvenile Hall females ($M = 7.36$). There was a significant Research Group by Participant Gender interaction on the IIP "Socially Avoidant" subscale

Figure 4. Mean Total Self-Esteem Score as a Function of Research Group and Participant Gender.

Figure 5. Mean General-Self Self-Esteem Subscale Score as a Function of Research Group and Participant Gender.

[$F(1,95) = 5.42, p = .022$], with Juvenile Hall males being more socially avoidant ($M = 12.52$) than the High School males ($M = 10.05$). The trend was reversed among female participants with High School females being more socially avoidant ($M = 11.24$) than Juvenile Hall females ($M = 8.16$). The differences between the Juvenile Hall and High School groups on the other 11 IIP subscales were not significant. See Table 2 for Means and Standard Deviations by Research Group.

There were several significant differences in the Inventory of Parent and Peer Attachment (IPPA) variables by Attachment Type. The IPPA Total score was significantly higher for the Secure group [$M = 293.70; F(1,55) = 8.49, p = .005$], than the Insecure group ($M = 254.67$). There was a significant difference in the IPPA Peer Total [$F(1,65) = 7.10, p = .010$], with a mean score for the Secure group of 101.97 versus 91.38 for the Insecure group. The scores on the IPPA Peer Trust [$F(1,65) = 6.24, p = .015$], the IPPA Peer Alienation [$F(1,65) = 9.33, p = .003$], the IPPA Mother Communication [$F(1,65) = 5.66, p = .020$], and the IPPA Mother Alienation [$F(1,65) = 4.88, p = .031$] subscale were each significantly different. Table 5 lists the Means and Standard Deviations by Attachment Type for the Secure and Insecure groups. There was a significant Attachment Type by Gender interaction on the Fearful variable [$F(1,65) = 9.72, p = .003$]. Secure Males ($M = 0.58$) had the lowest score on the Fearful variable, followed by Secure Females ($M = 1.80$), then Insecure Males ($M = 3.57$) and Insecure Females ($M = 4.46$).

Because there were so many significant interactions involving gender, the data was analyzed separately for males and females. Juvenile Hall males ($M = 2.79$) had significantly more sexual partners [$F(1,16) = 4.81, p = .043$]

than High School males ($M = 1.00$). More Juvenile Hall males (80.0%) reported being sexually active than High School males [20.0%; $X^2(1, N = 45) = 16.07, p < .001$]. Significantly more Juvenile Hall males (92.0%) advised that they had used alcohol or drugs versus the High School males [35.0%; $X^2(1, N = 45) = 16.25, p < .001$]. Sixty-five percent of the High School males said they had never used alcohol or drugs versus 8.0% of the Juvenile Hall group [35.0%; $X^2(1, N = 15) = 10.71, p < .005$]. While 100.0% of the Juvenile Hall males indicated they had been arrested for a crime, only 20.0% of the High School males indicated that they had been arrested [$X^2(1, N = 45) = 31.03, p < .001$]. Table 6 lists the Frequencies and Percentages of Problem Behavior and Biographical Data for Male Participants by Research Group.

High School males scored significantly higher on the Secure Attachment Style Prototype variable than did Juvenile Hall males (reported earlier). High School males ($M = 276.96$) also scored higher than Juvenile Hall males ($M = 262.17$) on the IPPA Total [$F(1,25) = 4.35, p = .047$]; and on the Mother Total scale [$F(1,39) = 13.15, p = .001$; $M = 103.08$ and $M = 87.86$, respectively. Juvenile Hall males ($M = 18.52$) were less Submissive than High School males [$M = 12.45$; $F(1,29) = 7.05, p = .013$]. Table 7 lists the Means and Standard Deviations of Male Participants by Research Group.

More Juvenile Hall females (66.7%) were sexually active than High School females [17.9%; $X^2(1, N = 52) = 12.79, p < .001$]. Like their male counterparts, significantly more Juvenile Hall females (84.0%) advised that they had used alcohol or drugs versus the High School females [37.9%; $X^2(1, N = 54) = 11.80, p < .001$]. The frequency of drug usage was significantly lower for High School females with 62.1% in the never category versus 8.0% of the Juvenile Hall

Table 6

Frequencies and Percentages of Problem Behavior and Biographical Data for Male Participants by Research Group

Information Type	Juvenile Hall Males		High School Males	
	Frequency	Percent	Frequency	Percent
<u>Sexually active?</u>	20	80.0	4	20.0 ***
<u>Arrested for crime?</u>	25	100.0	4	20.0 ***
Burglary?	7	28.0	1	5.0
Shoplift?	4	16.0	2	10.0
Robbery?	6	24.0	0	0.0
Other theft?	6	24.0	0	0.0
Other violence?	14	56.0	1	5.0
Drug related?	7	28.0	0	0.0
Sex crime?	1	4.0	0	0.0
Other not specified?	10	40.0	1	5.0
<u>Use alcohol/drugs?</u>	23	92.0	7	35.0 ***
Alcohol?	19	76.0	4	20.0
Marijuana?	15	60.0	4	20.0
Cocaine?	3	12.0	0	0.0
Methamphetamine?	10	40.0	0	0.0
PCP?	5	20.0	0	0.0
LSD?	6	24.0	0	0.0
Other illicit drug?	0	0.0	0	0.0

(table continues)

Information Type	Juvenile Hall Males		High School Males	
	Frequency	Percent	Frequency	Percent
<u>User type?</u>				
Never	2	8.0	13	65.0 **
Experimental	3	12.0	5	25.0
Casual	7	28.0	2	10.0
Moderate	8	32.0	0	0.0 *
Heavy	5	20.0	0	0.0
<u>Victim of abuse?</u>	2	8.0	(Not asked)	
<u>Party to pregnancy?</u>	4	16.0	(Not asked)	
<u>Parents abuse drugs?</u>	14	60.9	(Not asked)	
<u>Attachment Type</u>				
Secure	6	24.0	6	30.0
Insecure	14	56.0	7	35.0
Indeterminate	5	20.0	7	35.0
<u>Parents Marital Status?</u>				
Married	11	44.0	17	85.0
Divorced	7	28.0	2	10.0
Other	7	28.0	1	5.0
<u>Primary Caregiver?</u>				
Mother	10	40.0	9	45.0
Father	3	12.0	0	0.0
Both	9	36.0	11	55.0

(table continues)

Information	Type	Juvenile Hall Males		High School Males	
		Frequency	Percent	Frequency	Percent

Other	3	12.0	0	0.0
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Ethnicity

Asian	1	4.0	3	15.0
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Black	5	20.0	1	5.0
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Hispanic	13	52.0	12	60.0
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White	2	8.0	1	5.0
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Other	4	16.0	3	15.0
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Note: Juvenile Hall ($n = 25$), High School ($n = 20$); * = $p < .05$, ** = $p < .01$, *** = $p < .001$.

Table 7

Means and Standard Deviations of Male Participants by Research Group

Information Type	Juvenile Hall Males		High School Males	
	Mean	Standard Deviation	Mean	Standard Deviation
Age when tested?	16.08	0.91	16.75	1.41
Age of first drug use?	13.13	2.07	13.86	1.86
Age of first criminal act?	13.64	2.56	12.60	1.95
Age of first sexual experience?	12.80	2.48	15.75	2.87
No. of sex partners (6 mo.)?	2.79	1.93	1.00	1.55*
SEI Lie Scale	2.48	1.73	3.05	1.57
SEI General-Self Scale	17.16	4.70	19.80	3.09
SEI Social Self-Peers Scale	6.12	1.74	6.45	1.76
SEI Home-Parents Scale	4.84	2.19	5.65	2.35
SEI School-Academic Scale	4.00	2.06	5.30	1.87
SEI Total	64.24	15.35	74.40	13.00
IPPA - Mother Trust Scale	38.72	7.09	44.45	6.57
IPPA - Mother Communication	29.16	5.87	34.90	6.21
IPPA - Mother Alienation	19.36	4.03	23.50	5.77
IPPA - Father Trust Scale	30.08	16.10	34.65	12.27
IPPA - Father Communication	23.20	12.96	26.05	9.81
IPPA - Father Alienation	15.28	8.39	20.00	6.77
IPPA - Peer Trust Scale	37.12	7.92	38.80	9.12

(table continues)

		Attachment Relationship				52
Information	Type	Juvenile	Hall Males	High School	Males	
		Mean	Standard	Mean	Standard	
			Deviation		Deviation	
<hr/>						
IPPA - Peer Communication		26.08	7.28	28.15	7.60	
IPPA - Peer Alienation		24.44	4.14	25.75	6.83	
IPPA - Mother Total		87.86	15.05	103.08	16.52*	
IPPA - Father Total		81.85	20.01	80.83	26.23	
IPPA - Peer Total		89.09	16.15	93.05	20.27	
IPPA - Global Total		262.17	40.72	276.96	47.51*	
Secure		2.68	1.77	3.80	1.88*	
Avoidant		2.92	1.41	2.60	2.04	
Preoccupied		2.00	1.53	2.45	1.70	
Fearful		2.76	1.88	2.60	1.96	
IIP - Hard to be Assertive		27.56	15.51	28.25	13.36	
IIP - Hard to be Sociable		18.52	8.51	12.45	6.50*	
IIP - Hard to be Intimate		16.76	9.68	16.10	10.57	
IIP - Too Responsible		20.16	7.86	18.40	6.95	
IIP - Too Controlling		13.36	6.86	13.65	8.11	
IIP - Domineering		11.72	5.42	10.25	6.03	
IIP - Vindictive		12.92	6.18	10.30	6.53	
IIP - Cold		11.56	6.52	9.15	6.98	
IIP - Socially Avoidant		12.52	5.85	10.05	6.41	
IIP - Nonassertive		11.48	7.54	11.35	6.02	

(table continues)

Information Type	Juvenile Hall Males		High School Males	
	Mean	Standard Deviation	Mean	Standard Deviation
IIP - Exploitable	8.60	5.59	10.50	4.41
IIP - Overly Nurturant	11.72	5.63	13.15	5.20
IIP - Intrusive	11.08	5.27	12.45	5.09
IIP - Overall Mean	2.08	0.45	1.90	0.37
IIP - Circumplex Mean	2.00	0.40	2.08	0.47

Note: * = $p < .05$, ** = $p < .01$, *** = $p < .001$.

group [$X^2(1, N = 22) = 7.03, p < .01$]. Three percent of the High School females were in the casual category versus 28.0% of the Juvenile Hall females [$X^2(1, N = 8) = 5.48, p < .05$]; and 18.5% of the Juvenile Hall females were in the heavy usage category versus 1.9% of the High School females [$X^2(1, N = 11) = 8.78, p < .01$]. While 100.0% of the Juvenile Hall females indicated they had been arrested for a crime, only 17.9% of the High School females indicated that they had been arrested [$X^2(1, N = 53) = 36.28, p < .001$]. Table 8 lists the Frequencies and Percentages of Problem Behavior and Biographical Data for Female Participants by Research Group.

Juvenile Hall females ($M = 102.55$) scored significantly higher on the IPPA Peer Total variable [$F(1,32) = 7.01, p = .012$] than did High School females ($M = 96.11$). High School females scored higher than their Juvenile Hall counterparts on three IIP variables. The High School females ($M = 31.62$) indicated that they found it more "Hard to be Assertive" than the Juvenile Hall females [$M = 22.12; F(1,32) = 6.17, p = .018$]. High School females ($M = 11.24$) indicated an increased "Tendency toward Social Avoidance" over the Juvenile Hall females [$M = 8.16; F(1,32) = 6.12, p = .019$]. Finally, the High School females ($M = 11.17$) indicated that they were more Exploitable [$F(1,32) = 6.05, p = .020$] than the Juvenile Hall females ($M = 7.36$). Table 9 lists the Means and Standard Deviations of Female Participants by Research Group.

Gender Differences

Female participants ($M = 99.09$) had significantly higher IPPA Peer Total scores than did males [$M = 90.85; F(1,97) = 6.34, p = .013$]. Female participants also scored significantly higher on the IPPA Peer Trust subscale [$F(1,95) = 4.63, p = .034$] and the IPPA Peer Communication subscale [$F(1,95) = 9.77, p = .002$].

Table 8

Frequencies and Percentages of Problem Behavior and Biographical Data for Female Participants by Research Group

Information Type	Juvenile Hall Females		High School Females	
	Frequency	Percent	Frequency	Percent
<u>Sexually active?</u>	16	66.7	5	17.9 ***
<u>Arrested for crime?</u>	25	100.0	5	17.9 **
Burglary?	5	21.7	0	0.0
Shoplift?	7	30.4	3	10.7
Robbery?	3	13.0	0	0.0
Other theft?	10	43.5	1	3.6
Other violence?	11	47.8	0	0.0
Drug related?	8	34.8	0	0.0
Sex crime?	1	4.3	0	0.0
Other not specified?	18	78.3	0	0.0
<u>Use alcohol/drugs?</u>	21	84.0	11	37.9 ***
Alcohol?	18	72.0	6	20.7
Marijuana?	14	56.0	6	20.7
Cocaine?	4	16.0	1	3.4
Methamphetamine?	12	48.0	2	6.9
PCP?	3	12.0	2	6.9
LSD?	10	40.0	2	6.9
Other illicit drug?	4	16.0	2	6.9

(table continues)

Information Type	Juvenile Hall Females		High School Females	
	Frequency	Percent	Frequency	Percent

User type?

Never	4	16.0	18	2.1 **
Experimental	4	16.0	7	24.1
Casual	7	28.0	1	3.4 *
Moderate	0	0.0	2	6.9
Heavy	10	40.0	1	3.4 **

Victim of abuse? 14 56.0 (Not asked)

Party to pregnancy? 7 28.0 (Not asked)

Parents abuse drugs? 12 48.0 (Not asked)

Attachment Type

Secure	7	28.0	3	10.3
Insecure	10	40.0	16	55.2
Indeterminate	8	32.0	10	34.5

Parents Marital Status?

Married	7	28.0	22	75.9 *
Divorced	12	48.0	3	10.3 **
Other	6	24.0	4	13.8

Primary Caregiver?

Mother	15	60.0	10	34.5
Father	1	4.0	4	13.8
Both	5	20.0	15	51.7

(table continues)

Information Type	Juvenile Hall Females		High School Females	
	Frequency	Percent	Frequency	Percent
Other	4	16.0	0	0.0
<u>Ethnicity</u>				
Asian	1	4.0	6	20.7 *
Black	1	4.0	1	3.4
Hispanic	6	24.0	19	65.5 *
White	7	28.0	0	0.0 **
Other	10	40.0	3	10.2

Note: Juvenile Hall ($n = 25$), High School ($n = 29$); * = $p < .05$, ** = $p < .01$, *** = $p < .001$.

Table 9

Means and Standard Deviations of Female Participants by Research Group

Information	Type	Juvenile Hall Females		High School Females	
		Mean	Standard Deviation	Mean	Standard Deviation
Age when tested?		15.32	1.41	16.38	1.08
Age of first drug use?		12.20	2.53	13.90	1.37
Age of first criminal act?		13.28	1.57	13.00	1.15
Age of first sexual experience?		13.13	1.71	15.83	3.13
No. of sexual partners (6 mo.)?		1.67	1.54	1.30	1.83
SEI Lie Scale		2.88	1.67	2.29	1.30
SEI General-Self Scale		16.64	3.87	15.79	4.68
SEI Social Self-Peers Scale		6.72	1.34	5.89	1.89
SEI Home-Parents Scale		4.56	2.80	3.79	2.10
SEI School-Academic Scale		4.60	1.68	3.96	1.43
SEI Total		65.04	14.24	58.86	15.32
IPPA - Mother Trust Scale		38.88	12.89	36.41	9.73
IPPA - Mother Communication		31.72	12.08	28.55	10.16
IPPA - Mother Alienation		20.88	7.85	20.21	6.25
IPPA - Father Trust Scale		25.84	17.57	27.41	16.09
IPPA - Father Communication		20.04	14.34	20.28	13.29
IPPA - Father Alienation		15.16	10.80	16.52	9.39
IPPA - Peer Trust Scale		41.60	6.75	40.97	6.90

(table continues)

Information Type	Juvenile Hall Females		High School Females	
	Mean	Standard Deviation	Mean	Standard Deviation
IPPA - Peer Communication	32.44	4.77	29.97	6.09
IPPA - Peer Alienation	26.44	3.29	24.66	5.48
IPPA - Mother Total	95.43	25.77	85.17	23.94
IPPA - Father Total	76.30	29.06	77.73	24.88
IPPA - Peer Total	102.55	13.24	96.11	15.23 *
IPPA - Global Total	276.85	46.00	260.05	54.16
Secure	3.60	1.61	3.07	1.69
Avoidant	2.72	1.67	3.21	1.50
Preoccupied	2.16	1.55	2.48	1.64
Fearful	3.20	1.85	3.38	1.84
IIP - Hard to be Assertive	22.12	13.88	31.62	14.32 *
IIP - Hard to be Sociable	12.64	7.87	14.41	7.58
IIP - Too Responsible	18.64	10.45	18.97	7.75
IIP - Too Controlling	11.48	7.47	12.03	5.52
IIP - Domineering	10.64	6.86	9.10	4.95
IIP - Vindictive	11.04	6.82	10.52	4.73
IIP - Cold	9.68	5.66	10.28	5.48
IIP - Socially Avoidant	8.16	5.03	11.24	6.20 *
IIP - Nonassertive	9.44	6.88	12.17	6.02
IIP - Exploitable	7.36	4.37	11.17	6.18 *

(table continues)

Information Type	Juvenile Hall Females		High School Females	
	Mean	Standard Deviation	Mean	Standard Deviation
IIP - Overly Nurturant	10.28	6.30	12.93	5.66
IIP - Intrusive	9.20	4.97	9.45	4.58
IIP - Overall Mean	1.90	0.53	2.03	0.55
IIP - Circumplex Mean	2.01	0.54	1.97	0.43

Note: * = $p < .05$, ** = $p < .01$, *** = $p < .001$.

Male participants ($M = 41.27$) scored significantly higher on the IPPA Mother Trust subscale [$F(1, 95) = 4.13, p = .045$] than female participants ($M = 37.56$).

There was a significant interaction of Gender by Research Group on the Mother Trust variable, (reported earlier). There was also a significant Gender by Research Group interaction on the IPPA Mother Communication variable (reported earlier). Table 10 lists the Means and Standard Deviations by Gender.

Male participants ($M = 68.76$) had significantly higher scores than female participants ($M = 61.77$) on the total Self-Esteem Inventory (SEI) [$F(1,94) = 6.14, p = .015$]. Male participants versus females had significantly higher scores on the SEI General-Self subscale [$F(1,96) = 6.15, p = .015, M = 18.33$ and 16.19 , respectively]. Male participants ($M = 5.20$) also had significantly higher scores on the SEI Home-Parent subscales, [$F(1,96) = 4.74, p = .032$] than females ($M = 4.15$).

Fifty-six percent of the Juvenile Hall females reported being victims of abuse, versus 8.0% of the male Juvenile Hall participants. Eleven (7 females, 4 males) of the 50 Juvenile Hall participants reported being "a party to a pregnancy." The percent of Juvenile Hall participants who reported parental substance abuse was 60.9% for males and 48.0% for females. There were no significant gender differences in the frequencies of problem behavior for the Juvenile Hall group.

There was a significant gender difference within the Juvenile Hall sample between the IPPA Peer Total scores [$F(1,48) = 10.38, p = .002$] of females ($M = 102.55$) versus males ($M = 89.09$). There were also significant gender differences on the IPPA Peer Trust variable [$F(1,48) = 4.63, p = .036$] and the IPPA Peer Communication variable [$F(1,48) = 13.35, p = .001$]. Juvenile Hall

Table 10

Means and Standard Deviations by Gender

Information Type	Males		Females	
	Mean	Standard Deviation	Mean	Standard Deviation
Age when tested?	16.38	1.19	15.89	1.34
Age of first drug use?	13.30	2.02	12.77	2.33
Age of first criminal act?	13.47	2.47	13.24	1.50
Age of first sexual experience?	13.29	2.73	13.86	2.44
No. of sexual partners (6 mo.)?	2.36	1.98	1.52	1.64
SEI Lie Scale	2.73	1.67	2.57	1.45
SEI General-Self Scale	18.33	4.23	16.19	4.30 **
SEI Social Self-Peers Scale	6.27	1.74	6.28	1.69
SEI Home-Parents Scale	5.20	2.27	4.15	2.46 *
SEI School-Academic Scale	4.58	2.06	4.26	1.57
SEI Total	68.76	15.09	61.77	15.01 *
IPPA - Mother Trust Scale	41.27	7.37	37.56	11.26 *
IPPA - Mother Communication	31.71	6.62	30.02	11.10 *
IPPA - Mother Alienation	21.20	5.25	20.52	6.98
IPPA - Father Trust Scale	32.11	14.55	26.69	16.65
IPPA - Father Communication	24.47	11.63	20.17	13.65
IPPA - Father Alienation	17.38	7.99	15.89	9.99
IPPA - Peer Trust Scale	37.87	8.42	41.86	6.77 *

(table continues)

Information Type	Males		Females	
	Mean	Standard	Mean	Standard
		Deviation		Deviation
IPPA - Peer Communication	27.00	7.41	31.11	5.61 *
IPPA - Peer Alienation	25.02	5.47	25.48	4.64
IPPA - Mother Total	94.62	17.32	89.82	25.08
IPPA - Father Total	81.35	22.96	77.08	26.55
IPPA - Peer Total	90.85	17.99	99.09	14.57 *
IPPA - Global Total	269.38	44.24	267.47	50.84
Secure	3.18	1.89	3.31	1.66 *
Avoidant	2.78	1.70	2.98	1.58
Preoccupied	2.20	1.60	2.33	1.59
Fearful	2.69	1.89	3.30	1.83 **
IIP - Hard to be Assertive	27.87	14.44	27.22	14.78
IIP - Hard to be Sociable	25.20	12.29	23.00	11.80
IIP - Hard to be Submissive	15.82	8.19	16.85	9.08
IIP - Hard to be Intimate	16.47	9.98	13.59	7.69
IIP - Too Responsible	19.38	7.44	18.81	9.01
IIP - Too Controlling	13.49	7.35	11.78	6.44
IIP - Domineering	11.07	5.68	9.81	5.90
IIP - Vindictive	11.76	6.40	10.76	5.74
IIP - Cold	10.49	6.76	10.00	5.52
IIP - Socially Avoidant	11.42	6.16	9.81	5.85 *

(table continues)

Information Type	Males		Females	
	Mean	Standard	Mean	Standard
		Deviation		Deviation
IIP - Nonassertive	10.98	6.85	10.91	6.52
IIP - Exploitable	9.44	5.13	9.41	5.70
IIP - Overly Nurturant	12.36	5.43	11.70	6.06
IIP - Intrusive	11.69	5.18	9.33	4.72 *
IIP - Overall Mean	2.01	0.42	1.98	0.54
IIP - Circumplex Mean	2.03	0.42	1.98	0.48

Note: * = $p < .05$, ** = $p < .01$, *** = $p < .001$.

males indicated a significantly higher tendency toward Social Avoidance on the IIP subscale [$F(1,48) = 7.99, p = .007$] than did Juvenile Hall females ($M = 8.16$). Table 11 lists the Means and Standard Deviations of Juvenile Hall Participants by Gender.

There were significant gender differences for High School participants on the Self-Esteem Inventory (SEI) Total score, with High School females ($M = 58.86$) having consistently lower self-esteem than the male High School participants [$M = 74.40; F(1,46) = 13.57, p = .001$]. High School males (19.80) had a higher mean score on the SEI General-Self than High School females [15.59; $F(1,46) = 11.20, p = .002$]. The High School males versus High School females had a higher mean score on the SEI Home-Parents of 5.65 versus 3.79, respectively, [$F(1,46) = 8.35, p = .006$]. Finally, the High School males versus High School females had a higher mean score on the SEI School-Academic of 5.30 versus 3.96, respectively, [$F(1,46) = 7.90, p = .007$].

High School males ($M = 103.08$) had significantly higher IPPA Mother Total Attachment scores [$F(1,47) = 8.40, p = .006$] than High School females ($M = 85.17$). Male High School participants ($M = 44.45$) versus females ($M = 36.41$) also had higher scores on the IPPA Mother Trust subscale. The same pattern was found on the IPPA Mother Communication subscale [$F(1,47) = 10.35, p = .002$; and $F(1,47) = 6.18, p = .016$, respectively], with mean scores of 34.90 for High School males and 28.55 for High School females. Table 12 lists the Means and Standard Deviations of High School Participants by Gender.

There were no significant gender differences in the frequencies of problem behavior for the High School group.

Table 11

Means and Standard Deviations of Juvenile Hall Participants by Gender

Information Type	Males		Females	
	Mean	Standard Deviation	Mean	Standard Deviation
Age when tested?	16.08	0.91	15.32	1.41
Age of first drug use?	13.13	2.07	12.20	1.71
Age of first criminal act?	13.64	2.56	13.28	1.57
Age of first sexual experience?	12.80	2.48	13.13	1.71
SEI Lie Scale	2.48	1.73	2.88	1.67
SEI General-Self Scale	17.16	4.70	16.64	3.87
SEI Social Self-Peers Scale	6.12	1.74	6.72	1.34
SEI Home-Parents Scale	4.84	2.19	4.56	2.80
SEI School-Academic Scale	4.00	2.06	4.60	1.68
SEI Total	64.24	15.35	65.08	14.24
IPPA - Mother Trust Scale	38.72	7.09	38.88	12.89
IPPA - Mother Communication	29.16	5.87	31.72	12.08
IPPA - Mother Alienation	19.36	4.03	20.88	7.85
IPPA - Father Trust Scale	30.08	16.10	25.84	17.57
IPPA - Father Communication	23.20	2.96	20.04	14.34
IPPA - Father Alienation	15.28	8.39	15.16	10.80
IPPA - Peer Trust Scale	37.12	7.92	41.60	6.75 *
IPPA - Peer Communication	26.08	7.28	32.44	4.77 ***

(table continues)

Information Type	Males		Females	
	Mean	Standard	Mean	Standard
		Deviation		Deviation
IPPA - Peer Alienation	24.44	4.14	26.44	3.29
IPPA - Mother Total	87.86	5.05	95.43	25.77
IPPA - Father Total	81.85	20.01	76.30	29.06
IPPA - Peer Total	89.09	16.15	102.55	13.24 **
IPPA - Global Total	262.17	40.72	276.85	46.00
Secure	2.68	1.77	3.60	1.61
Avoidant	2.92	1.41	2.72	1.67
Preoccupied	2.00	1.53	2.16	1.55
Fearful	2.76	1.88	3.20	1.85
IIP - Hard to be Assertive	27.56	15.51	22.12	13.88
IIP - Hard to be Sociable	28.00	11.99	20.48	11.79
IIP - Hard to be Submissive	18.52	8.51	18.52	10.58
IIP - Hard to be Intimate	16.76	9.68	12.64	7.87
IIP - Too Responsible	20.16	7.86	18.64	10.45
IIP - Too Controlling	13.36	6.86	11.48	7.47
IIP - Domineering	11.72	5.42	10.64	6.86
IIP - Vindictive	12.92	6.18	11.04	6.82
IIP - Cold	11.56	6.52	9.68	5.66
IIP - Socially Avoidant	12.52	5.85	8.16	5.03 **
IIP - Nonassertive	11.48	7.54	9.44	6.88

(table continues)

Information Type	Males		Females	
	Mean	Standard	Mean	Standard
		Deviation		Deviation
IIP - Exploitable	8.60	5.59	7.36	4.37
IIP - Overly Nurturant	11.72	5.63	10.28	6.30
IIP - Intrusive	11.08	5.27	9.20	4.97
IIP - Overall Mean	2.08	0.45	1.90	0.53
IIP - Circumplex Mean	2.00	0.40	2.01	0.54

Note: * = $p < .05$, ** = $p < .01$, *** = $p < .001$.

Table 12

Means and Standard Deviations of High School Participants by Gender

Information Type	Males		Females	
	Mean	Standard Deviation	Mean	Standard Deviation
Age when tested?	16.75	1.41	16.38	1.08
Age of first drug use?	13.86	1.86	13.90	1.37
Age of first criminal act?	12.60	1.95	13.00	1.15
Age of first sexual experience?	15.75	2.87	15.83	3.13
No. of sexual partners (6 mo.)?	1.00	1.55	1.30	1.83
SEI Lie Scale	3.05	1.57	2.29	1.30
SEI General-Self Scale	19.80	3.09	15.79	4.68 **
SEI Social Self-Peers Scale	6.45	1.76	5.89	1.89
SEI Home-Parents Scale	5.65	2.35	3.79	2.10 **
SEI School-Academic Scale	5.30	1.87	3.96	1.43 **
SEI Total	74.40	13.00	58.86	15.32 ***
IPPA - Mother Trust Scale	44.45	6.57	36.41	9.73 **
IPPA - Mother Communication	34.90	6.21	28.55	10.16 *
IPPA - Mother Alienation	23.50	5.77	20.21	6.25
IPPA - Father Trust Scale	34.65	12.27	27.41	16.09
IPPA - Father Communication	26.05	9.81	20.28	13.29
IPPA - Father Alienation	20.00	6.77	16.52	9.39
IPPA - Peer Trust Scale	38.80	9.12	40.97	6.90

(table continues)

Information Type	Males		Females	
	Mean	Standard	Mean	Standard
		Deviation		Deviation
IPPA - Peer Communication	28.15	7.60	29.97	6.09
IPPA - Peer Alienation	25.75	6.83	24.66	5.48
IPPA - Mother Total	103.08	16.52	85.17	23.94 * *
IPPA - Father Total	80.83	26.23	77.73	24.88
IPPA - Peer Total	93.05	20.27	96.11	15.23
IPPA - Global Total	276.96	47.51	260.05	54.16
Secure	3.80	1.88	3.07	1.69
Avoidant	2.60	2.04	3.21	1.50
Preoccupied	2.45	1.70	2.48	1.64
Fearful	2.60	1.96	3.38	1.84
IIP - Hard to be Assertive	28.25	13.36	31.62	14.32
IIP - Hard to be Sociable	21.70	12.06	25.17	11.57
IIP - Hard to be Submissive	12.45	6.50	15.41	7.45
IIP - Hard to be Intimate	16.10	10.57	14.41	7.58
IIP - Too Responsible	18.40	6.95	18.97	7.75
IIP - Too Controlling	13.65	8.11	12.03	5.52
IIP - Domineering	10.25	6.03	9.10	4.95
IIP - Vindictive	10.30	6.53	10.52	4.73
IIP - Cold	9.15	6.98	10.28	5.48
IIP - Socially Avoidant	10.05	6.41	11.24	6.20

(table continues)

Information Type	Males		Females	
	Mean	Standard	Mean	Standard
		Deviation		Deviation
IIP - Nonassertive	10.35	6.02	12.17	6.02
IIP - Exploitable	13.15	5.20	12.93	5.66
IIP - Intrusive	12.45	5.09	9.45	4.58 *
IIP - Overall Mean	1.90	0.37	2.03	0.55
IIP - Circumplex Mean	2.08	0.47	1.97	0.43

Note: * = $p < .05$, ** = $p < .01$, *** = $p < .001$.

Discussion

The purpose of this study was to determine whether or not an individual's attachment relationship is related to her or his propensity toward social problems (e.g., criminal conduct, substance abuse). Four hypotheses were tested.

The first hypothesis predicted that a greater percentage of juvenile offenders would have insecure attachment relationships than would non-offenders. The support for this hypothesis was moderated by gender: it was supported for males but not for females. There was a similar pattern of support for the hypothesis with the Inventory of Parent and Peer Attachment (IPPA) Mother Trust and Mother Communication subscales. Non-offender males were significantly more attached to their mothers than were males in the offender sample. However, non-offender females had lower mother attachment scores than offender females.

The second hypothesis predicted that insecure or anxiously attached participants would be characterized by significantly higher levels of criminal conduct and illicit drugs use. There was a trend toward support of this hypothesis, but there were no significant differences.

The third hypothesis predicted that insecurely attached participants would exhibit lower levels of self-esteem. Those classified as insecure scored significantly lower on the self-esteem measure. Among the research groups, only the male Juvenile Hall participants had a lower level of self-esteem versus their High School counterparts. Therefore, low self-esteem may be a predictor of problem behavior for males only.

The fourth hypothesis predicted that insecurely attached participants

would report more interpersonal problems. This hypothesis was not supported. Although the insecure group had higher scores than the secure group on 13 of the 14 subscales of the Inventory of Interpersonal Problems, none of the differences were statistically significant. There were statistically significant differences between the research groups on only three of the IIP subscales, "Hard to be Submissive," "Social Avoidance," and "Exploitability." Juvenile Hall participants were less submissive and less exploitable than their High School cohorts. Juvenile Hall males were more socially avoidant than High School males; however, High School females were more socially avoidant than Juvenile Hall females.

The Secure Attachment Type does appear to be related to higher self-esteem, and to better interpersonal relationships with parents and peers. But, the individual's attachment relationship appears to be minimally related to his or her propensity toward social problems (e.g., criminal conduct, substance abuse).

The later three hypotheses were tested using a classification system adapted by the researcher. Although this classification system has not been used before, the classification system was supported by the direction of the results for the dependent measures. The secure group has higher attachment and self-esteem scores, consistently lower scores on the interpersonal problem measure, and lower amounts of problem behavior.

Limitations of the Current Study

The Relationship Questionnaire is not the optimal measure of attachment for adolescents for at least two reasons. First, many of the participants may not have understood the measure. Second, many insecurely

attached individuals may practice denial or a number of other defense mechanisms. Research has shown that many individuals are unable to accurately describe the quality of their relationships until much later in their lives (Hazan & Shaver, 1987; Kobak & Sceery, 1988; Main, Kaplan, & Cassidy, 1985). This phenomenon may mean that the integrity of participant responses on the Inventory of Parent and Peer Attachment (IPPA) and the Inventory of Interpersonal Problems (IIP) could be compromised as well, especially for those who are insecurely attached to others. For the reasons listed above, future research should attempt to use methods of measuring adolescent attachment and incidents of problem behavior, other than self-report measures.

The primary weakness of this study was the fact that the participants in control sample were a convenience sample, consisting of students from only three classes. Further, the research groups were not matched on ethnicity. The representativeness of the Juvenile Hall sample, particularly for female participants, may have been impaired because the court order that authorized the research in the Juvenile Hall denied access to clinically depressed individuals, and females have been shown to suffer higher incidence of depression (Nolen-Hoeksema, 1987; Radloff, 1975; Weissman & Klerman, 1979). There may be no practical alternative to the access restrictions imposed by the Court because of the potential risk of injury to the more vulnerable individuals, because of the need to insure the safety of others in the facility, and for the general security of the Juvenile Hall facility. However, the exclusion of the depressed and more aggressive individuals from the study does limit the external validity of the findings.

The researcher has some concern about the truthfulness and possible social desirability bias of the high school participants' responses, particularly on questions related to sexual activity, criminal activity, and drug usage. Unlike the testing conditions in the Juvenile Hall where the testing took place in an interview room, one on one with the researcher, the high school participants were tested together in an open classroom during one of three sessions. The high school participants may have felt less trusting about their responses being kept anonymous. Other high school classmates may have been able to see her or his responses. Juvenile offenders may be more comfortable being open with an adult about their problem behavior because in some cases it is part of their identity. Also, each individual confined to the Juvenile Hall has had some experience talking with public defenders or defense attorney, psychologists, and Juvenile Hall staff, and they are more secure in their belief that what they say is privileged information that can not and will not be used against them.

Both the males and the females in this study seemed to follow a problem path consistent with results of other studies (Catalano, Day, Moore, & Abbott, 1991; Gilmore, Hawkins, McGee & Newcomb, 1992; Jessor & Jessor, 1977; Patterson, Capaldi, & Bank, 1991) that included: early sexual activity, early drug usage, and association with deviant peers. However, there may be different life experiences that predispose males and females toward such a path. For example, Juvenile Hall females reported a higher frequency of divorce and more Juvenile Hall females were being raised by single mothers. Fifty-six percent of the female participants from the Juvenile Hall reported being victims of abuse versus 8.0% of the Juvenile Hall males. A history of

abuse may be highly related to whether or not a young girl becomes involved in problem behavior (It is likely that the incidence of abuse included in this study were actually under-reported because the consent form that the participants signed advised that the researcher was required to report any disclosure of abuse that had not previously been reported to Juvenile Authorities). Twenty-eight percent of the Juvenile Hall females were or had been pregnant.

The High School females in this study have lower self-esteem than the Juvenile Hall females. Was one of the samples unrepresentative of the populations from which it was drawn? Does juvenile delinquency somehow boost the self-esteem of females? Did the fact that the parents of Juvenile Hall participants had more education than those of the High School population have anything to do with the behavioral differences? The High School participants reported that 79.6% of their parents were married versus 36.0% of the Juvenile Hall participants. Similar to the Juvenile Hall participants, 27.6% of the High School females had no father in their household versus 5.0% of the High School males. Were these girls more likely to have been involved in problem behavior than the High School females who had two parents in their households? Could this explain, in part, the deficit in both self-esteem scores and attachment scores for the female High School participants?

Because so many of the above factors are correlated, if not causally related with problem behavior, research on adolescent populations needs to be segregated by gender. Because females represent approximately 15.0% of the criminal population, it is likely that they have been neglected as a group. Effective intervention strategies for females may be very different from

intervention strategies that may work for males. Future research should attempt to identify the paths of problem behavior for adolescent females and intervention strategies for females "at risk" for problem behavior. Future research efforts should also randomly select participants in the control group and attempt to better match the research groups demographically.

This study clearly identified differences in the life experience and patterns of behavior for males and females, within both the offender and non-offender populations. It is likely that males and females follow different paths in their involvement with problem behavior. A protective factor that may have influenced the lower amount of problem behavior within the control populations may be the higher percentage of intact families.

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Office of the Academic Vice President • Associate Academic Vice President • Graduate Studies and Research
One Washington Square • San Jose, California 95192-0025 • (408) 924-2480

TO: Michael Alexander
905 Emerald Hill Road
Redwood City, CA 94601-1120

FROM: Serena W. Stanford
AAVP, Graduate Studies & Research

DATE: February 27, 1995

The Human Subjects-Institutional Review Board has given conditional approval to your request to use human subjects in the study entitled:

"Interpersonal Relations and Adolescent Behavior Patterns"

The Board requires that the following conditions be met and a copy of the requested materials be submitted to the HS-IRB:

1. Written approval from all participating institutions. The approval must be on the institutions letterhead and indicate awareness of your research and agreement to allow your project at the indicated facility.
2. A guardianship consent agreement from the Santa Clara County Superior Court whereby the judge grants, as the participants legal guardian, consent for the juvenile hall participants to participate in the study. Again, consent must indicate awareness of your research and agreement to allow your project to take place at the juvenile hall facility.

You may proceed with this project only after you receive HS-IRB approval of the completed protocol.

If you have any questions or need assistance please contact Susan Hoagland, HS-IRB Coordinator at (408) 924-2479. For additional information please contact Craig Cisar, Ph.D., HS-IRB Chairperson at (408) 924-3018.

Attachment - B

Office of the Academic Vice President • Associate Academic Vice President • Graduate Studies and Research
One Washington Square • San Jose, California 95192-0025 • (408) 924-2480

TO: Michael Alexander
905 Emerald Hill Road.
Redwood City, CA 94601-1120

FROM: Serena W. Stanford *Serena W. Stanford*
AAVP, Graduate Studies & Research

DATE: April 5, 1995

The Human Subjects-Institutional Review Board has approved your request to use human subjects in the study entitled:

"Interpersonal Relations and Adolescent Behavior Patterns"

This approval is contingent upon the subjects participating in your research project being appropriately protected from risk. This includes the protection of the anonymity of the subjects' identity when they participate in your research project, and with regard to any and all data that may be collected from the subjects. The Board's approval includes continued monitoring of your research by the Board to assure that the subjects are being adequately and properly protected from such risks. If at any time a subject becomes injured or complains of injury, you must notify Dr. Serena Stanford immediately. Injury includes but is not limited to bodily harm, psychological trauma and release of potentially damaging personal information.

Please also be advised that each subject needs to be fully informed and aware that their participation in your research project is voluntary, and that he or she may withdraw from the project at any time. Further, a subject's participation, refusal to participate, or withdrawal, will not affect any services the subject is receiving or will receive at the institution in which the research is being conducted.

If you have any questions, please contact me at (408) 924-2480.

Attachment - C

A campus of The California State University

Office of the Academic Vice President • Associate Academic Vice President • Graduate Studies and Research
One Washington Square • San Jose, California 95192-0025 • 408/924-2480

TO: Michael Alexander
905 Emerald Hill Road
Redwood City, CA 94601-1120

FROM: Serena W. Stanford
AAVP, Graduate Studies & Research

DATE: May 8, 1995

The Human Subjects-Institutional Review Board has approved your request to use human subjects in the study entitled:

"Interpersonal Relations and Adolescent Behavior Patterns"

This approval is contingent upon the subjects participating in your research project being appropriately protected from risk. This includes the protection of the anonymity of the subjects' identity when they participate in your research project, and with regard to any and all data that may be collected from the subjects. The Board's approval includes continued monitoring of your research by the Board to assure that the subjects are being adequately and properly protected from such risks. If at any time a subject becomes injured or complains of injury, you must notify Serena Stanford, Ph.D., immediately. Injury includes but is not limited to bodily harm, psychological trauma and release of potentially damaging personal information.

Please also be advised that each subject needs to be fully informed and aware that their participation in your research project is voluntary, and that he or she may withdraw from the project at any time. Further, a subject's participation, refusal to participate, or withdrawal will not affect any services the subject is receiving or will receive at the institution in which the research is being conducted.

If you have any questions, please contact me at (408) 924-2480.

County of Santa Clara

Attachment - D

Probation Department
Administration

840 Guadalupe Parkway
San Jose, California 95110
(408) 299-2141

Dennis P. Handis
Chief Probation Officer

March 8, 1995

TO: The Honorable Thomas Edwards
FROM: Shirley Cantu, Superintendent, Juvenile Hall
RE: AUTHORIZATION FOR ACCESS TO CONFIDENTIAL RECORDS

Michael Alexander a graduate student at San Jose State University is requesting access to juvenile records. Access to our computerized Juvenile Retention System is not being requested.

The purpose of his access is to complete the requirements for his Masters Degree program. I have attached his thesis proposal which has been reviewed by myself and Pasquala Huerta the Supervisor of the Mental Health Unit located in Juvenile Hall. His proposal meets standards within our system but would preclude his access to minors who are on "Suicide Watch". This limitation has been explained to Mr. Alexander. He has met the standard clearance requirements of all volunteers in juvenile hall.

His proposal has the conditional endorsement of the Human Subject-Institutional Review Board, this authorization is also attached.

I will direct Mr. Alexander's access to in-custody youth and data gathering.

Should this meet your approval, please sign below.

Michael Alexander is authorized access to minors detained in juvenile hall in order to complete a research project as approved. Any minor's participation is strictly voluntary.

3-8-95
Date

Thomas Edwards
Thomas Edwards, Judge,
Of The Juvenile Court

SC/cm
aixndrmk.ltr

Board of Supervisors: Michael M. Honda, Zoe Lorigren, Ron Gonzales, Rod Dindon, Dianne McKenna

Attachment - E

Yerba Buena High School

1855 Lucretia Ave • San José, California 95122 • (408) 279-1500

Gary Zellner, Principal

Richard Frias, Associate Principal

"Planning for the Future"

May 4, 1995

Mr. Michael Alexander
San Jose State University, Department of Psychology
One Washington Square
San Jose, CA 95192-0025

Dear Mr. Alexander:

You are authorized to conduct research on the Yerba Buena High School campus in accordance with your research proposal, and the conditions imposed by the San Jose State University Human-Subjects Institutional Review Board with the following additional conditions:

The involvement of any student is strictly voluntary. Before the commencement of research, the Letter to Potential Participants/ Parents and the Parental Consent Form must be sent home with interested students so they may secure parental consent for participation. Additionally, each student participant must sign an Agreement to Participate in Research.

All of your involvement with Yerba Buena High School student must be conducted at the discretion and under the direction of the Yerba Buena teaching staff. You will be responsible for the provision of all material and instruction needed for the project.

Please coordinate all logistical matters with Mr. Ortiz.

Cordially,

Richard J. Frias
Associate Principal

Attachment - F**Letter to Potential Juvenile Hall Participants
Study Interpersonal Relations and Adolescent Behavior Patterns**

Dear Potential Participant:

Your assistance is requested in a research study investigating interpersonal relationships and adolescent behavior patterns. The intent of the research is to increase understanding of the connection between interpersonal relationships and adolescent behavior. Such knowledge may contribute to changes in public programs and policies which serve adolescents.

The research will be conducted in the Santa Clara County Juvenile Detention Center. The study will take approximately 60 minutes. You will be asked to provide multiple choice and short answer responses to written questions concerning your life experience.

Information gathered will be strictly confidential, except that the following information must be reported immediately to Juvenile Hall staff: statements indicating that you intend to harm yourself or someone else or reports that you or another child have been abused. No other information will be released to Juvenile Hall staff or anyone else. Your name will not be associated with any of the research materials and individual responses will not be reported in published or unpublished reports of this study.

If you have any questions about this study, please feel free to call me at (408) 924-5627 or my thesis chair person, Gregory Feist, Ph.D., at (408) 924-5643. If you have complaints about this research, you may contact Robert Cooper, Ph.D., Chairman of the Department of Psychology, San Jose State University, San Jose, CA 95192-0120, at (408) 924-5600. Any questions or complaints about the rights of research participants or research-related injury, may be discussed with: Serena Stanford, Ph.D., Associate Academic Vice President for Graduate Studies and Research, at (408) 924-2480.

Your participation is completely voluntary. You may discontinue participation at any time. Choosing whether or not to participate, as well as choosing to discontinue at any time during the study, will in no way affect your relations with the Santa Clara County Juvenile Detention Center, the Judicial System or San Jose State University. Attached is a consent form. If you are willing to participate, please sign and return the consent form.

Sincerely,

Michael R. Alexander
San Jose State University - Graduate Student Researcher

Attachment - G

Letter to Potential Participants/Parents

Study Interpersonal Relations and Adolescent Behavior Patterns

Dear Potential Participant/Parent/Guardian:

Your assistance is requested in a research study investigating interpersonal relationships and adolescent behavior patterns. The intent of the research is to increase understanding of the connection between interpersonal relationships and adolescent behavior. Such knowledge may contribute to changes in public programs and policies which serve adolescents.

The research will be conducted on the Yerba Buena High School campus during regular school hours. The study will take 45-60 minutes. Participants will be asked to provide multiple choice and short answer responses to written questions concerning his or her life experience.

All information gathered will be strictly confidential and will not be used by anyone except the researchers directly involved in the study. All responses will be totally anonymous, names will not be associated with responses, and individual responses will not be reported in published or unpublished reports of this study.

If you have any questions about this study, please feel free to call me at (415) 365-7966 or my thesis chair person, Gregory Feist, Ph.D., at (408) 924-5643. If you have complaints about this research, you may contact Robert Cooper, Ph.D., Chairman of the Department of Psychology, San Jose State University, San Jose, CA 95192-0120, at (408) 924-5600. Any questions or complaints about the rights of research participants or research-related injury, may be discussed with: Serena Stanford, Ph.D., Associate Academic Vice President for Graduate Studies and Research, at (408)924-2480.

Participation is completely voluntary. Any participant may discontinue participation at any time. Choosing whether or not to participate, as well as choosing to discontinue at any time during the study, will in no way affect your/your child's relations with Yerba Buena High School or San Jose State University. Attached is a consent form. If you agree/are willing to permit your son or daughter to participate, please sign and return the consent form.

Sincerely,

Michael R. Alexander
San Jose State University - Graduate Researcher

Attachment - H

Agreement to Participate in Research

Responsible Investigator: Michael Alexander

Title of Protocol: Interpersonal Relations and Adolescent Behavior Patterns

I am being asked to participate in a research study investigating interpersonal relationships and adolescent behavior patterns. I understand that:

1. I will be asked to participate in one research session lasting 45-60 minutes. The research will be conducted in the Santa Clara County Juvenile Detention Center. I will be asked to provide multiple choice and short answer responses to written questions concerning my life experience.
2. The possible risks of the study are minimal. I understand that some of the subject matter may be unpleasant and I may experience some discomfort associated with the recall of unpleasant life events.
3. The possible benefits of this study to me are minimal. The intent of the research is to increase understanding of the connection between interpersonal relationships and adolescent behavior. Such knowledge may contribute to changes in public programs and policies which serve adolescents.
4. Information gathered will be strictly confidential, except that the following information must be reported immediately to Juvenile Hall staff: statements indicating that you intend to harm yourself or someone else or reports that you or another child have been abused. No other information will be released to Juvenile Hall staff or anyone else. Your name will not be associated with any of the research materials and individual responses will not be reported in published or unpublished reports of this study.
5. There will be no compensation for participation in this study.
6. Any questions about my participation in this study can be answered by: Michael Alexander, at (408) 924-5627 or Gregory Feist, Ph.D., at (408) 924-5643. Complaints about the research procedures may be directed to: Robert Cooper, Ph.D., Chairman of the Department of Psychology, San Jose State University, San Jose, CA 95192-0120, at (408) 924-5600. Any questions or complaints about my rights as a research subject, or research-related injury, may be discussed with: Serena Stanford, Ph.D., Associate Academic Vice President for Graduate Studies and Research, at (408) 924-2480.
7. My consent is given voluntarily and freely without undue pressure to participate. I understand that I may refuse to participate in this study. Furthermore, if I choose to participate in the study, I may withdraw my participation at any time, without prejudice to my relations with San Jose State University, the Santa Clara County Juvenile Detention Center or the Santa Clara County Superior Court. No service of any kind, to which I would otherwise be entitled, will be lost or jeopardized if I choose "not to participate" in the study.

My signature below indicates that I have read and understand the information provided in this consent form, that I have decided to participate in this study.

Print Name _____ Date _____

Sign Name _____

Researcher's Signature _____ Date _____

The researcher's signature on this document indicates agreement to include the above named participant in the research and attestation that the participant has been fully informed of his or her rights.

Attachment - I

Agreement to Participate in Research

Responsible Investigator: Michael Alexander

Title of Protocol: Interpersonal Relations and Adolescent Behavior Patterns

I am being asked to participate in a research study investigating interpersonal relationships and adolescent behavior patterns. I understand that:

1. I will be asked to participate in one research session lasting 45-60 minutes. The research will be conducted on the Yerba Buena High School campus. I will be asked to provide multiple choice and short answer responses to written questions concerning my life experience.

2. The possible risks of the study are minimal. I understand that some of the subject matter may be unpleasant and I may experience some discomfort associated with the recall of unpleasant life events.

3. The possible benefits of this study to me are minimal. The intent of this research is to increase understanding of the connection between interpersonal relationships and adolescent behavior. Such knowledge may contribute to changes in public programs and policies which serve adolescents. If you are interested in the findings of this research, a summary will be provided to your teacher.

4. All information gathered will be strictly confidential and will not be used by anyone except the researchers directly involved in the study. I understand my name will not be associated with any of the research materials and that my responses will be totally anonymous. Individual responses will not be reported in published or unpublished reports of this study.

5. There will be no compensation for participation in this study.

6. Any questions about my participation in this study can be answered by: Michael Alexander, at (415) 365-7966 or Gregory Feist, Ph.D., at (408) 924-5643. Complaints about the research procedures may be directed to: Robert Cooper, Ph.D., Chairman of the Department of Psychology, San Jose State University, San Jose, CA 95192-0120, at (408) 924-5600. Any questions or complaints about my rights as a research subject, or research-related injury, may be discussed with: Serena Stanford, Ph.D., Associate Academic Vice President for Graduate Studies and Research, at (408) 924-2480.

7. My consent is given voluntarily and freely without undue pressure to participate. I understand that I may refuse to participate in this study. Furthermore, if I choose to participate in the study, I may withdraw my participation at any time, without prejudice to my relations with San Jose State University or Yerba Buena High School. No service of any kind, to which I would otherwise be entitled, will be lost or jeopardized if I choose "not to participate" in the study.

My signature below indicates that I have read and understand the information provided in this consent form, that I have decided to participate in this study and that I acknowledge receipt of a signed and dated copy of this form.

Print Name _____ Date _____

Sign Name _____

Researcher's Signature _____ Date _____

The researcher's signature on this document indicates agreement to include the above named participant in the research and attestation that the participant has been fully informed of his or her rights.

Attachment - J

Parental Consent Form

Responsible Investigator: Michael Alexander

Title of Protocol: Interpersonal Relations and Adolescent Behavior Patterns

Your son or daughter has been asked to participate in a research study investigating interpersonal relationships and adolescent behavior patterns. She or he will be asked to provide multiple choice and short answer responses to written questions concerning his or her life experience. The research will be conducted on the Yerba Buena High School campus during regular school hours.

The intent of the research is to increase understanding of the connection between interpersonal relationships and adolescent behavior. Such knowledge may contribute to changes in public programs and policies which serve adolescents. Although the possible risks of the study are minimal, some participants may experience discomfort when recalling life events.

All information gathered will be strictly confidential and will not be used by anyone except the researchers directly involved in the study. All responses will be totally anonymous, names will never be associated with responses. Even though individual responses are anonymous, they will not be reported in published or unpublished reports of this study.

Questions about this study can be answered by the principal investigator, Michael Alexander, at (415) 365-7966 or Gregory Feist, Ph.D., at (408) 924-5643. Complaints about the research procedures may be directed to: Robert Cooper, Ph.D., Chairman of the Department of Psychology, San Jose State University, San Jose, CA 95192-0120, at (408) 924-5600. Any questions or complaints about the rights of research participants or research-related injury, may be discussed with: Serena Stanford, Ph.D., Associate Academic Vice President for Graduate Studies and Research, at (408)924-2480.

The parent's signature on this document indicates consent for participation in the study.

Child's Name _____ Age _____ Gender M _____ F _____

Signature _____ Date _____
Parent/Guardian

Researcher's Signature _____ Date _____

The researcher's signature on this document indicates agreement to include the above named participant in the research and attestation that the participant has been fully informed of his or her rights.

PLEASE NOTE

Materials in this document have not been filmed at the request of the author. They are available for consultation, however, in the author's university library.

Pages 94-106

UMI

Attachment - N

Biographical Questionnaire

1. ID # _____ 2. Age _____ 3. Gender: Female () Male ()
4. Mothers job/s: _____
5. Fathers job/s: _____
6. Mother's Education (mark highest level with x)

a. Elementary ()	e. 2 Year College ()
b. Middle School/Jr. High ()	f. 4 Year College ()
c. High School ()	g. Beyond 4 Year College ()
d. Vocational School ()	h. Don't know ()
7. Father's Education (mark highest level with x)

a. Elementary ()	e. 2 Year College ()
b. Middle School/Jr. High ()	f. 4 Year College ()
c. High School ()	g. Beyond 4 Year College ()
d. Vocational School ()	h. Don't know ()
8. Who was your primary caregiver while you were growing up?
 mother () father () mother & father equally () other ()
9. Are your parents married () divorced () other ()?
- 9a. If your parents were divorced, what was your age when they divorced?
 _____ How frequently do you see the parent you don't live with? _____
10. How much time per week do you spend sharing activities with:
 mother _____ father _____ another caregiver _____
11. Number of children in family? _____ If there were other children in
 your family, what was your position in the birth order, (example: 3rd of 5
 children)? _____
- 12a. What subject in school do you enjoy most? _____
- 12b. What subject in school do you enjoy least? _____
13. How many close friends do you have? _____
- 13a. Are your close friends the:
 same sex () opposite sex () both sexes ()

14. To your knowledge was either of your parents ever diagnosed or treated for a mental problem, i.e., depression, bipolar disorder, schizophrenia?

Yes () No () Don't know () If yes, type? _____

15. To your knowledge did either of your parents abuse alcohol or drugs while you lived with them. Yes () No () Don't know ()

16. To your knowledge was either of your parents ever convicted of a crime?

Yes () No () Don't know () If yes, were they juveniles, adults, both juveniles and adults or don't know at the time the offense/s occurred?

(Circle one of the four choices.)

17. Have you ever used alcohol or drugs? Yes () No ()

17a. If yes, please provide additional information below:

Substance type Typical quantity Frequency of use Age of first use

17b. What people and/or experiences influenced your early use of the above substances? _____

18. Have you ever been diagnosed and/or treated for a mental condition, i.e., attention deficit disorder, depression, bipolar disorder, or schizophrenia?

Yes () No () Don't know () If yes, type? _____

19. Have you ever been the victim of abuse? Yes () No () If yes, circle type sexual/physical/sexual. Relationship of abuser/s? _____

20. Are you sexually active? Yes () No () If yes, how old were you when your first sexual experience occurred? _____ Total number of sex partners in the past 6 months? _____

21. Have you ever been a party to pregnancy. Yes () No () If yes, was it carried to term? Yes () No () If yes, does your child normally live with you, your partner, a relative, or another? (circle one of four choices)

22. Have you been arrested for a criminal offense? Yes () No () If yes, please provide additional information:

Offense name _____ Age at time of offense _____ Were you convicted? _____

22a. If you have been arrested for a crime, what people and/or experiences influenced your involvement in the activity?

23. Ethnicity:

African-American	()	Asian-American	()
European-American	()	Indian-Pakistani	()
Latino-American	()	Mexican-American	()
Middle-Eastern	()	Native-American	()
Pacific Islander	()	Pilipino/Filipino	()
Decline to State	()	If mixed list under other.	
Other _____			

24. Continuation: _____

Attachment - O

Biographical Questionnaire

1. ID # _____ 2. Age _____ 3. Gender: Female () Male ()
4. Mothers occupation _____
5. Fathers occupation _____
6. Mother's Education (mark (x) highest level)
 - a. Middle School/Jr. High () e. Some College ()
 - b. Vocational School () f. 4 Year College Degree ()
 - c. Some High School () g. Beyond 4 Year College ()
 - d. High School Graduate () h. Don't Know ()
7. Father's Education (mark (x) highest level)
 - a. Middle School/Jr. High () e. Some College ()
 - b. Vocational School () f. 4 Year College Degree ()
 - c. Some High School () g. Beyond 4 Year College ()
 - d. High School Graduate () h. Don't Know ()
8. Who was your primary caregiver while you were growing up? _____
9. Are your parents married () divorced () other ()? If your parents were divorced, how old were you when they divorced? _____ How frequently do you see your non-custodial parent? _____
10. How much time per week do you spend sharing activities with:
 mother _____ father _____ another caregiver _____
11. Number of children in your family? _____ If there were other children in your family, what was your position in the birth order, (example: 3rd of 5 children)? _____
- 12a. What subject in school do you enjoy most? _____
- 12b. What subject in school do you enjoy least? _____
13. How many close friends do you have? _____ 13a. Are your close friends the: same sex () opposite sex () both sexes ()?
15. Are you sexually active? Yes () No () If yes, how old were you when your first sexual experience occurred? _____
- Total number of sex partners in the past 6 months? _____

14. Have you ever used alcohol or drugs? Yes () No () If yes, please provide additional information below:

Substance type Typical quantity Frequency of use Age of first use

14b. If applicable, what people and/or experiences influenced your early use of the above substances?

16. Have you ever committed a criminal offense? Yes () No () If yes, please provide additional information below:

Offense name Age at the time of offense Were you convicted?

16a. If you have committed a crime, what people and/or experiences influenced your involvement? _____

17. Ethnicity:

African-American ()	Asian- American ()
European-American ()	Indian-Pakistani ()
Latino-American ()	Mexican-American ()
Middle-Eastern ()	Native-American ()
Pacific Islander ()	Pilipino/Filipino ()
Decline to State ()	Other? _____