

ORIGINS OF PSYCHOPATHOLOGY: A DEVELOPMENTAL MODEL

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Abstract

The main purpose of the present study was to test a latent variable path model of the influence of childhood attachment on psychological adaptation in adolescence. A total of 138 adolescents (mean age = 14.54 years; 64 males and 74 females) along with their mothers and fathers, when available, formed the present sample. Approximately 40% of the adolescents were drawn from a clinical sample and the remainder were from the community. Data were collected on the adolescents and their mothers and fathers on affective, cognitive, life history and demographic variables. The latent variable path model which specified that childhood attachment is central to the development of psychological adaptation in adolescence was fit to the data. Two latent variables, Abuse and Social/Emotional Isolation, were posited to have mutually reciprocal and dynamic effects on a third latent variable, Childhood Attachment which is directly linked to psychological adaptation. Using an Arbitrary Distribution Least Squares (ALS) method, the model resulted in a good fit to the data (Comparative Fit Index = .984), and all three latent variables were significantly ($p < .05$) intercorrelated as expected. Moreover, a single path from Childhood Attachment to psychological adaptation (Psychopathology) was confirmed by a significant path coefficient (.48, $p < .01$). Stepwise discriminant analyses revealed that the specific experiences in childhood did not discriminate among the types of pathology demonstrated in adolescence. The significance of

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the findings for a general theory of developmental psychopathology are discussed.

Key Words: childhood attachment, psychological adaptation, psychopathology.

Introduction

Human infants, like many other vertebrates, form special affiliative bonds with their caregivers called attachments. In the first 6-9 months of life human infants express no preference for particular caregivers though they can distinguish among them. By nine months and beyond, however, infants demonstrate a clear preference for a few caregivers with whom they interact regularly (Bowlby, 1969). Separation protest and stranger wariness develops coincidentally with preferred attachment as does a number of other cognitive, social and emotional changes (Emede, 1995; Stern, 1995). Infants use their attachment figures as secure bases from which to explore the world.

Recently, psychologists have observed that attachment patterns vary among children and that these patterns co-vary with behavior and psychological adjustment (Suess, Grossman & Sroufe, 1992). Moreover, it has been observed that these attachment patterns can remain stable throughout childhood into adolescence. It has been suggested that these attachments either potentiate or are correlated with psychological adjustment and psychopathology (Waters, Posada, Cromwell & Keng-Ling, 1993). In this article, we report results from a study designed to address questions about the relevance of attachment to psychological adjustment and psychopathology. Our basic premise is that psychological adjustment in adolescence (including psychopathology) can be directly linked to early childhood attachments. We propose that much of the variation of adolescent psychological adjustment can be accounted for by the variations in childhood attachment patterns. Accordingly, much of psychopathology in adolescence and beyond may have its origins in early childhood.

Infant attachments are thought to have high survival value because they result in closeness between the relatively helpless infant and its principal caregivers that provide comfort, shelter and protection. These attachments, moreover, result in proximity seeking behavior from the infant particularly in times of distress, fear, illness and hunger. In response to nurturing, responsive and dedicated caregiving, infants and children develop secure attachments.

These children appear confident that their caregivers are available, responsive and helpful should they encounter adverse or frightening situations. Because of this assurance, securely attached children explore the world confidently and effectively. Although they show distress upon separation from the principal caregiver, they are quickly soothed and comforted upon reunion.

The Strange Situation Procedure (SSP), which was invented by Ainsworth and her colleagues (Ainsworth, 1991), is designed to assess a child's attachment classification in a standardized way by separating a child from its principal caregiver and then reuniting the two. When general community samples are assessed in the SSP for attachment classification, approximately 70% of children are classified as securely attached to their principal caregivers such as their mother and father (Ainsworth, 1991).

Children who receive inconsistent care, are neglected, or otherwise maltreated, develop insecure attachments. Three types of insecure attachment patterns have been identified: disorganized, ambivalent and avoidant (Ainsworth, 1991). Children who have ambivalent insecure attachment appear uncertain whether their primary caregiver will be available or responsive when needed. These children oscillate between seeking proximity and contact with their primary caregiver, and resisting such contact. Ambivalently attached children have difficulty using their caregivers as a secure base for exploration and appear to experience considerable emotional conflict. While showing distress at separation from the principal caregiver, insecure ambivalent children are not easily soothed or comforted by the return of the caregiver.

Insecure avoidant children, while distressed upon separation from the caregiver, avoid the caregiver upon reunion. They appear to expect rejection or negative consequences from the caregiver when exhibiting attachment behaviors. Children with disorganized attachments show distress upon separation from the caregiver but demonstrate fearful backing away from the caregiver upon reunion. When the caregiver approaches, these children avert their gaze, show hypervigilance, and aimless wandering rather than proximity seeking. Their behavior suggests a fragmented, poorly developed strategy for handling the stress of separation, and abnormalities in their strategies for obtaining comfort. As assessed in the SSP, approximately 30% of community sample children demonstrate insecure attachments (Ainsworth, 1991).

The importance of early childhood attachment in humans for psychological adaptation and development has recently begun to be recognized and has led to the development of a comprehensive theory of attachment (Cicchetti, 1993). Modern attachment theory draws upon several disciplines cognitive development (e.g., developmental changes in the working cognitive models of the attachment

relationships), psychoanalysis (e.g., object relations), ethology (e.g., imprinting and bonding), information processing (e.g., narrative scripts of attachment history) - as a focus on human emotional development. Attachment theorists are particularly concerned with the development of emotions from a life span perspective (Freud, 1896; Lamb, 1984), hypothesizing that human affiliative behaviors and emotional responses towards others is a function of attachment. Attachment theorists have thus focused on the long-term implications of childhood attachments (i.e., lasting into the teenage and adult years). It is thought that emotional stability, affiliative behaviors and level of psychological adaptation are rooted in childhood attachments. Insecure and disorganized attachment patterns in infancy and early childhood may be predictors of psychological adaptation and behavior, as well as psychopathology in adolescence and adulthood (Bowlby, 1969; Lamb, 1984). Other researchers have cautioned that early childhood attachments may be superseded by maturation and subsequent events so that attachments may not necessarily be related to long-term psychological adaptation but are unique to the periods of infancy and early childhood (Shaw, Vondra, Hommerding, Keenan, & Dunn, 1994; Shaw, & Vondra, 1993). Nevertheless, it has long been suspected if not yet compellingly demonstrated that early childhood experiences are central to subsequent psychological adaptation (Greenberg, Speltz, Deklyen, & Endriga, 1991; Speltz, Greenberg, & Deklyen, 1990).

Greenberg, Speltz and Deklyen (1993), in a comprehensive review of the role of attachment in the development of early disruptive behaviors, proposed that four factors interact to produce a risk of psychological disturbances in children: 1) insecure attachment relationships (particularly disorganized), 2) family ecology and adversity (e.g., socioeconomic conditions), 3) intrinsic child characteristics (e.g., temperament), and 4) parenting strategies and socialization practices (e.g., coercive discipline). Shaw and colleagues (Shaw et al, 1994) employing longitudinal studies provided empirical support for such a model in boys. Similarly, Waters, et al (1993) in a theoretically based review of the role of attachment in the development of psychopathological behaviors provided two possible theoretical models: 1) attachment problems potentiate disruptive behavior, or 2) that attachment disturbances and disruptive behavior patterns may arise from an interactive complex of family, situational and biological variables.

A number of studies have directly investigated the relationship between insecure and disorganized attachments and psychopathology in preschoolers. Using groups of clinically referred preschoolers who had been diagnosed with Oppositional Defiant Disorder, Greenberg and his colleagues (Greenberg, 1991)

reported that about 80% of the sample were classified as insecurely attached. In a comparison group matched for age, social class and family composition, about 30% were insecurely attached (significantly less than the clinical group). In a longitudinal study, Lyons-Ruth, Alpern and Repacholi (1993) found that 71% of their sample of preschoolers who were insecurely attached were later identified as having abnormally high levels of hostility in the classroom. Mother psychosocial problems during the preschool period independently predicted hostile and aggressive behavior. These factors (mother psychosocial problems and children's attachments) were additive in predicting hostile aggressive behavior.

Some studies have focused on adolescent adaptation and attachment. In a retrospective study, Kobak and Sceery (1988) assessed university students (i.e., late adolescents) and found that those who had been securely attached to a primary caregiver in early childhood were more ego-resilient, less anxious and less hostile but reported more social support than their insecurely attached peers. Focusing on concurrent adolescent attachment and adaptation, Kwakman, Zuiker, Schippers and de Wuffel (1988) found that both male and female high school students (mean age = 13.4 years) who were insecurely attached to parents tended to use alcohol consumption as means of facilitating social contact more frequently than did the securely attached adolescents. In similar concurrent studies, Kenny (1990; 1988) found relationships between assertiveness, dating competence, maturity in career planning and attachments. Compared to insecurely attached adolescents, both males and females who were securely attached to their parents were more assertive, more competent in dating, and more mature in their career planning. In a similar vein, Ryan and Lynch (1989) found that emotional detachment and isolation in adolescents were related to insecure attachments to their parents.

In a study utilizing a clinical sample of 27 women with eating disorders (mean age = 20 years), Armstrong and Roth (1989) found that 96% showed insecure attachments compared to 27% of a matched comparison group. Finally, in a large scale study (n = 12, 118) of American adolescents involved in the National Longitudinal Study of Adolescent Health, Resnick and colleagues (1998) found that "parent-family connectedness and perceived school connectedness" were protective factors against seven of the eight health risk behaviors measured: emotional distress, suicidal thoughts and behavior, violence, cigarette use, alcohol use, marijuana use, and age of sexual debut. Pregnancy history was the exception. Parent-family connectedness was defined as "closeness to mother and/or father, perceived caring by mother and/or father, satisfaction with relationship to mother and/or father, feeling wanted by family

members". School connectedness included feeling "that teachers treat students fairly, close to people at school, and part of the school" (p. 825).

The foregoing review suggests that attachment relationships are either co-occurrences with psychological adaptation or causal factors in its development including the outcome of psychopathology. The main question addressed in the present study was "To what extent can a latent variable path analysis explicate a direct link between early attachment patterns and adolescent psychological adaptation?" Specifically, this study was designed to assess a sample of both community and clinical adolescents on demographic, life history, and psychological variables. We wished to investigate the link between early attachments and psychopathology in adolescence. Employing structural equation modeling (SEM) as well as descriptive and other multivariate analyses, the intention was to fit a latent variable path model to the data. The latent variable path model allows both the identification of latent variables as well as their interrelationships so as to identify the link between childhood attachments and adolescent psychological adaptation.

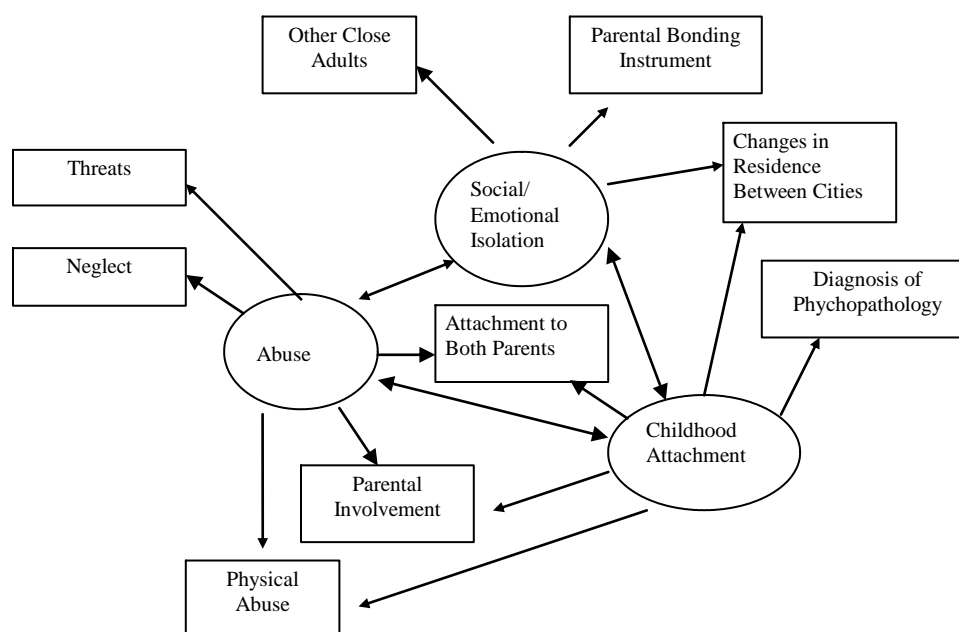
Within this model secure attachment results in emotional stability and positive psychological outcomes, while insecure attachments results in psychological disturbances and pathology. As we have seen, attachments in childhood is affected by the relationships between the child and principal caregiver. If the child is emotionally isolated from the caregivers (e.g., caregiver fails to provide touching, contact comfort, eye contact, verbal responses, and facial expressions indicating positive emotions) or experiences overt abusiveness due to physical beatings, sexual abuse, overt neglect, threats of abandonment or punishment and so on, insecure attachment between the child and caregiver will result. Conversely, emotional responsiveness and systematic care promotes secure attachment. Insecure attachment leads to further isolation and increases further the risk of abuse which both, in turn, further affect attachment patterns. Accordingly it is posited in this model that attachment, abuse and isolation are mutually influential and interdependent. Over time (i.e., developmentally), isolation and abuse (which are distinct but correlated latent variables) lead to insecure attachment which, in turn, reciprocally affects abuse and isolation which in turn further affect attachment and so on.

Measurement and Structural Model

A schematic summarizing the measurement and structural latent variable path model is depicted in Figure 1. By adolescence, this developmental pattern leads

to disturbed psychological processes and pathology. In Figure 1, the latent variable of Abuse is indicated by a number of observed variables, as is Childhood Attachment and Social/Emotional isolation. The double headed arrows between the latent variables indicate correlation or reciprocal influence. The outcome of pathology is indicated by a square since this can be measured directly. This model was tested by fitting it to data employing SEM techniques. The measurement model is the identification of the latent variables (depicted as circles) by the indicator variables (the squares). The structural model refers to the relationships between the latent variables.

Figure 1. Latent variable path model of adolescent psychopathology



Method

Participants

A total of 138 adolescents (mean age = 14.54; 64 (46.4%) males and 74 (53.6%) females) along with their mothers and fathers, when available, formed the

sample for the present study. Approximately 40% of the adolescents were from a clinical sample and the remainder were from the community. The main features of the sample are summarized in Table 1. Data were collected from the adolescents and their mothers and fathers on affective, cognitive, life history and demographic variables.

Instruments and Procedures

Adolescents completed the Adolescent Attachment Survey (AAS) along with the Parental Bonding Instrument (PBI) and the Youth Self Report (YSR), while the parents were administered the Child Behavior Checklist (CBCL).

The YSR is a self-report measure which contains 118 behavior problem items and a social competence scale (Achenbach, 1991a, 1991b). It was used in the present study to assess psychological adaptation and psychopathology of the adolescents. The YSR has several individual scales (withdrawn, somatic complaints, anxious/depressed, social problems, thought problems, attention problems, delinquent behavior, aggressive behavior, self-destructive identity problems) as well as composite scale scores including externalizing and internalizing and an overall total problem score. Numerous studies have provided reliability and validity evidence for the YSR (Achenbach, 1991a, 1991b). Test-retest and internal consistency reliability (Cronbach's alpha coefficient) ranged from .59 to .90 on individual scales, .89 for internalizing, .89 for externalizing, and .95 for the total problem scale. Research provided evidence for content, criterion-related and some construct validity for the YSR (Achenbach, 1991a, 1991b).

The CBCL is a checklist that is completed by parents' on the same scales as the YSR. Numerous reports have documented the evidence for both reliability and aspects of validity of this instrument (Achenbach, 1991a, 1991b). Reliability coefficients including test-retest, inter-interviewer and internal consistency (Cronbach's alpha coefficient) range from .68 to .96 in numerous studies (Achenbach, 1991a, 1991b). Several empirical studies have provided content, criterion-related and some construct validity evidence for the CBCL (Genuis & Violato, 1998).

The PBI, a 25 Likert-type item scale, is intended to assess two components of childhood attachments (parental care and overprotection). Parker, Tupling and Brown (1979) found substantial test-retest reliability (.70 on a six month interval) and substantial split half reliability for the PBI as well as some evidence of validity. The AAS made up of 177 items consists of 8 subscales (attachment, separation, neglect, parental involvement, blame, threats, physical abuse and

sexual abuse) intended to measure childhood attachments and experiences as well as demographic variables. Internal consistency reliability coefficients (Cronbach's alpha) for the 8 subscales range from .82 to .94 and the research has provided evidence of validity (Oddone-Paolucci, Genuis, & Violato, 1998).

Adolescent participants and their parents (where available) were individually assessed on all of the instruments.

Results

Testing the Latent Variable Path Model

Fitting the latent variable path model involves minimizing the difference between the sample covariances and the covariances predicted by the model. Formally this is represented as:

$$\Sigma = \Sigma(\theta) \quad (1)$$

where Σ is the population covariance matrix of observed variables, θ is a vector that contains the model parameters, and $\Sigma(\theta)$ is the covariance matrix written as a functions of θ . This simple equation allows the implementation of a general mathematical and statistical approach to the analysis of linear structural equation system through the estimation of parameters and the fitting of models. Estimation can be classified by type of distribution (multinormal, elliptical, arbitrary) assumed of the data and weight matrix used during the computations. The function to be minimized is given by:

$$Q = [s - \sigma(\theta)]' W [s - \sigma(\theta)] \quad (2)$$

where s is the vector of data to be modeled -- the variances and covariances of the observed variables -- and σ is a model for the data. The model vector σ is a function of more basic parameters θ that are to be estimated so as to minimize Q . W is the weight matrix that can be specified in several ways to yield a number of different estimators that depend on the distribution assumed.

To test the model summarized in Figure 1, nine variables were included as identifying the three latent variables (Abuse, Childhood Attachment, and Social-Emotional). The nine measured variables (Other Close Adults from the AAS, Bonding/Attachment from the Parental Bonding Instrument, Psychopathology from clinician diagnosis, and Attachment, Parental Involvement, Moves, Physical Abuse, Neglect, Threats all from the AAS) were intercorrelated. The intercorrelation matrix and standard deviations of all nine measured variables is summarized in Table 2. In order to fit the model, this intercorrelation matrix was converted to a variance-covariance matrix. As W in this analysis will yield

estimators based on arbitrary distributions, the model was fit using arbitrary distribution least squares (ALS) estimation.

The overall fit of the model to the data was good producing a Comparative Fit Index (CFI) = .984 and $X^2 = 115.1$, $df = 24$, $p < .001$. The minimizing of the Q function (Eq. 2) proceeded smoothly requiring 15 iterations. A CFI = .984 indicates that 98.4% of the variance and covariance in the data is accounted for by the proposed model. Further evidence of the model's fit comes from the average standardized residuals of .25 from the residual population matrix, $\Sigma - \Sigma(\theta)$, as estimated by its sample counterpart, $S - \Sigma$. The path coefficients and other parameters are summarized in Figure 1.

All three latent variables in Figure 1 are clearly identified. Abuse has loadings (ranging from .24 to .69) from five variables (Threats, Neglect, Physical Abuse, Parental Involvement, Attachment to Both Parents) which are all theoretically relevant to an Abuse construct. The loadings on Childhood Attachment range from .22 to .70 (Attachment to Both Parents, Changes in Residence, Parental Involvement, Physical Abuse). With the possible exception of Neglect (.95), none of theta-delta coefficients (residuals) on these variables are very large. Three of the above measured variables (Parental Involvement, Physical Abuse, Attachment to Both Parents) also serve to identify Childhood Attachment as they have split loadings. Changes in Residence is the fourth measured variable loading on Childhood Attachments (residual = .70).

There are three measured variables (Changes in Residence, Parental Bonding Instrument, Other Close Adults) which load on Social/Emotional Isolation with a particularly large loading (.84) from Changes in Residence. The Parental Bonding Instrument has a weak loading on Childhood Attachments (-.04) but a large residual (.99) and Other Close Adults has a moderate loading on Childhood Attachments (.35) and a large residual (.94). The overall model as well as the pattern of coefficients, therefore, fits the data very well although this last feature of it is problematic.

All of the latent variables are intercorrelated (see Figure 1) as predicted, and the crucial path coefficient from Childhood Attachments to Diagnosis of Psychopathology is significant (path coefficient = -.48; $p < .001$). The intercorrelations among Childhood Attachments, Social/Emotional Isolation, Abuse are all significant (-.29, -.33, .24, $p < .05$ - see Figure 1). The negative correlations and path coefficient reflect the inverted scales of Social Isolation relative to Attachment and Abuse. These results support the role of childhood attachments in developmental psychopathology specifically. Overall, they also support the role of childhood attachments in the development of psychological adaptation generally. The data support the overall model and the particulars of

the predicted relationships as well.

Secondary Analysis: Non-Specificity of Psychopathology Diagnosis and Attachment

In order to evaluate the validity of the diagnosis of psychopathology of the participants, and the specificity of the diagnostic category relative to childhood attachment classifications, stepwise discriminant analyses were employed. Both the YSR and CBCL provide assessments of adolescent psychopathology. The intention in the present analyses was to determine the degree of correspondence of a classification of psychopathology rendered by the YSR, CBCL and independent clinical diagnosis.

Nine variables (Internalizing, Externalizing and Total Problem score from the YSR and CBCL for each parent) were selected and entered into the discriminant analysis (the total number of subjects for this analysis was 370 - adolescents, mothers, fathers). Four of the variables 1) internalizing from the CBCL from fathers, 2) problem score from the YSR, 3) total problem score from the CBCL from fathers, and 4) total problem score from the CBCL from mother, produced one significant discriminant function (Function one: $X^2 = 342.42$, $df = 4$, $p < .001$) producing an eigenvalue = 5.15 and a canonical correlation = .92. Using the derived discriminant function, 97.1% of the adolescents were classified correctly as belonging to the clinical or community samples. These results provide evidence of convergent validity for the clinical diagnoses.

An important research question that can be addressed in the present data is "Are there particular pathologies in adolescence that are significantly related to specific childhood experiences?". This question has to do with the specificity-nonspecificity of childhood experiences in the development of psychopathology. It appears that risk factors in childhood and later developmental outcomes are not specifically linked (Freud, 1896). Rather, the number of risk factors may be more predictive of outcomes than any particular combination of them. In order to address the specificity-nonspecificity question, the present data were further explored through univariate analyses to identify variables related to developmental outcomes: 1) moves between cities or towns, 2) regular separation from parents, 3) long-term separation, 4) permanent separation, 5) felt rejection, 6) threats of abandonment, 7) blaming child for parental illness, 8) parent threatening to harm self, 9) parent threatening to harm child, 10) physical abuse, and 11) sexual abuse. These variables were entered into a stepwise discriminant analysis with Withdrawn, Internalizing, Externalizing and Total Problem Score on the YSR as classification variables. Two non-significant

discriminant functions were derived (Function one: $X^2 = 11.19$, $df = 6$, $p < .10$, eigenvalue = .09, canonical correlation = .29; Function two: $X^2 = 4.20$, $df = 2$, $p < .12$, eigenvalue = .05). The resulting group classification was not better than chance. These results support the nonspecificity of developmental outcomes for early childhood experiences.

Discussion

The main results in the present study are 1) that we were able to identify a latent variable path model with three latent variables (Abuse, Childhood Attachment, Social/Emotional Isolation), 2) the latent variable path model fit the data very well and indicates that there is a direct link from childhood attachment to adolescent psychological adaptation, 3) clinician diagnosis for the adolescent clinical subjects was cross-validated with the CBCL and YSR, and 4) the type of outcome was not related to any specific risk factor in childhood.

In total, the present findings provide support for the developmental nature of psychopathology. Specifically, they indicate that childhood attachments play a central role in subsequent psychological adaptation in adolescence. The reciprocal effects between behavioral experiences in childhood and the security of emotional attachments is evidenced by both the loadings of observed variables on to the latent variable, and the significant correlations found between attachment and the other two latent variables, Abuse and Isolation. Although various childhood experiences affect attachment security and the development of attachments type affects both the experiential and interpretive components of subsequent experiences, Childhood Attachment was the link leading to adolescent psychopathology.

As Waters and his colleagues have suggested (Waters et al 1993), one hypothesis is that attachments potentiate psychological adjustment and psychopathology. The present results favor this interpretation as indicated by the direct significant link between Childhood Attachments and psychopathology in adolescence. The alternative hypothesis that insecure attachment and disruptive behavior patterns may arise from a common underlying interactive complex of family, situational and biological variables was not supported in the present study. This hypothesis requires that the link should be indirect, and that it should be correlated with psychopathology in adolescence as one of a complex system of correlated interacting variables. It appears that the interacting complex of family, situational and biological variables function on attachment

patterns which in turn determines psychological adaptation in adolescence.

The reciprocal influence between behavioral experiences in childhood and the security of emotional attachment is evidenced by both the significant loadings of observed variables on to the latent attachment variable, and the significant correlations between Childhood Attachment and the other two latent variables, Abuse and Social/Emotional Isolation. The directional influence of Childhood Attachment to adolescent psychopathology is supported in the present study. Attachment was assessed based on experiences prior to the age of 10 years, while psychopathology was diagnosed in adolescence with subject ranging in age from 12 to 17 years. The existence of attachment type before age 10 and its association with psychopathology in adolescence supports the contention for the direction of effect from childhood attachment to adolescent psychopathology.

Several features of the latent path model require clarification. Two of the indicator variables on Social/Emotional Isolation had small loadings (Other Close Adults, Parental Bonding Instrument) and large residuals. The variable Changes in Residence is a clear indicator of this latent variable with a large loading and small residual. Further study to examine the place of Social/Emotional Isolation in the model will be beneficial.

The effect of sexual abuse was not clear in the model even though much previous research has shown the many detrimental effects of sexual abuse in child development. It may be that the other forms of abuse assessed in the present study (e.g., physical) may have rendered the effects of sexual abuse redundant. Alternatively, the effects of sexual abuse maybe so pervasive that they are dissipated throughout the model. Further research should be designed to clarify this relationship.

Our findings that there is a lack of specificity in type of risk factor (e.g., physical abuse, sexual abuse, felt rejection, etc.) and psychopathological outcome (e.g., withdrawn, internalizing, externalizing) confirms the findings of many others (Zeanah et al 1997). It appears that the number of risk factors may be more predictive of outcome than any particular combination of them (Freud, 1896). Their lack of specificity may also be due to the potentiating and mediating effects of attachment.

Our current results indicate that future research should focus on extending and replicating the following model. First, a prospective longitudinal research design should be employed in further work (as opposed to a retrospective longitudinal design as in the present case). Second, the various forms of insecure attachment (ambivalent, avoidant, disorganized) should be assessed so that any differential effect of different types of insecure attachment can be

assessed. Third, any subsequent work would benefit by examining how the variables within the present model work interactively and dynamically over time, and how this interaction affects the model as a whole.

The main finding in the present study suggests that childhood attachment plays a central and direct role in the development of adolescent adaptation and psychopathology. While such a role for attachment has long been suspected, it has been demonstrated in the present study. While more research is required to work out the particulars (e.g. specific experiences that lead to secure/insecure attachment; the reciprocal dynamic of the latent variables over time), the latent variable path model in the present study provides a simple and parsimonious model of developmental psychopathology.

Table 1. Descriptive Characteristics of the Sample

Variable	Clinical Group		Community Group			Total
	n ^a	(%) ^b	n ^a	(%) ^b	n ^a	(%) ^b
Gender: Adolescents						
Male	25	(39.1)	39	(60.9)	64	(100)
Female	30	(40.1)	44	(59.9)	74	(100)
Family Constellation						
Family triads	21	(20.2)	83	(79.8)	104	(100)
Adolescent-mother dyads	19	(100)	0	(0)	19	(100)
Adolescent-father dyads	8	(100)	0	(0)	8	(100)
Adolescent only	7	(100)	0	(0)	7	(100)
Repeated Grades						
Zero	33	(28.9)	81	(71.1)	114	(100)
One	20	(90.1)	2	(9.9)	22	(100)
Two or more	2	(100)	0	(0)	2	(100)
Ethnicity						
Caucasian	40	(34.8)	75	(65.2)	115	(100)
Metis	8	(66.7)	4	(33.3)	12	(100)
Asian	2	(66.7)	1	(33.3)	3	(100)
Black	1	(100)	0	(0)	1	(100)
East Indian	0	(0)	1	(100)	1	(100)
Aboriginal	1	(100)	0	(0)	1	(100)
Mixed	1	(100)	0	(0)	1	(100)
Other	2	(50.0)	2	(50.0)	4	(100)
Socioeconomic Status						
Entrepreneurial or professional	18	(36.0)	32	(64.0)	50	(100)
Skilled labor	8	(15.1)	45	(84.9)	53	(100)
Unskilled labor/unemployed	4	(80.0)	1	(20.0)	5	(100)

^a Number of subjects within this category; ^b Percentage of subjects within this category; * Ages for the clinical group ranged from 12 to 17 years, mean age = 14.32, standard deviation = 1.40. For the community group, the ages also ranged from 12 to 17 years, mean age = 14.54, standard deviation = 1.68 years.

Table 2. Pearson Product Moment Correlations Among Nine Variables

Attachment	1.00								
Parental Bonding Ins	.03	1.00							
Diagnosis	.49	.18	1.00						
Other Adults	-.51	-.13	.32	1.00					
Parental Involvement	.85	.12	.46	-.46	1.00				
Neglect	.11	-.18	-.15	.08	.15	1.00			
Threats	.13	.00	-.14	-.03	.20	.60	1.00		
Physical Abuse	-.40	-.09	-.51	.30	-.26	.34	.24	1.00	
Changes in Residence	-.35	-.13	.45	.42	-.29	.15	.05	.42	1.00
Standard Deviations	5.8	6.4	4.9	6.9	7.9	4.1	1.6	4.4	2.7

Riassunto

L'obiettivo principale della presente ricerca era quello di verificare un modello del percorso di una variabile latente relativo all'influenza dell'attaccamento infantile sull'adattamento psicologico nell'adolescenza. Il campione era formato da 138 adolescenti (età media = 14.54 anni; 64 maschi e 74 femmine) e dalle madri e padri disponibili a partecipare alla ricerca. Circa il 40% degli adolescenti erano pazienti clinici. Le informazioni raccolte dagli adolescenti, dalle madri e dai padri erano relative a variabili affettive, cognitive, biografiche e demografiche. Il modello del percorso di una variabile latente che specificava che l'attaccamento infantile è centrale nello sviluppo di adattamento psicologico è stato adattato a queste informazioni. Due variabili latenti, Abuso e Isolamento Sociale/Emotivo, hanno dimostrato di avere effetti reciproci e dinamici su una terza variabile latente, Attaccamento Infantile, la quale è correlata direttamente all'adattamento psicologico. Usando un metodo di discriminazione arbitraria dei minimi quadrati (ALS), il modello è risultato adeguato ai dati (Indice comparativo di adeguatezza: = .984), e tutte le tre variabili latenti sono risultate correlate in modo significativo, come ci si attendeva ($p < .05$). Inoltre un singolo percorso da Attaccamento Infantile a Adattamento Psicologico (Psicopatologia) è stato confermato da un coefficiente di percorso significativo (.48, $p < .01$). Le analisi stepwise discriminanti hanno rivelato che le esperienze specifiche nell'infanzia non discriminano il tipo di patologia sviluppata nell'adolescenza. Viene discusso il significato dei risultati per una teoria generale dello sviluppo psicopatologico.

Parole chiave: attaccamento infantile, adattamento psicologico, psicopatologia.

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