CHAPTER 5

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YOUNG ADULTS' PARENTAL BONDS, PARTNER RELATIONS, AND MENTAL DISORDERS: RESULTS FROM THE NETHERLANDS MENTAL HEALTH SURVEY AND INCIDENCE STUDY[1]

In this study we examined (1) whether parental bonding was related to the prevalence of DSM-III-R mental disorders in young adulthood, and (2) whether young adults' experiences in partner relationships would mediate these associations. Data were used from 1,581 Dutch young adults aged 18-34 years, who were interviewed in 3 waves (1996, 1997, and 1999) of the Netherlands Mental Health Survey and Incidence Study (NEMESIS). Structural Equation Modelling demonstrated that parental bonding was significantly, negatively associated with later mood and anxiety disorders, but not substance disorders. Partner relationship quality did not mediate these negative associations between parental bonding and mood and anxiety disorders. Thus, a model in which only direct linkages between parental bonding and the presence of mental disorders were specified provided an adequate fit to the data. Overall, the results suggest that mental disorders are directly related to parental care and overprotection during childhood and adolescence, but the lower-quality parental bonds were found to be related only to anxiety and mood disorders - and not substance disorders - and were of a relatively modest strength. Keywords: young adulthood, parental bonds, partner relationships, prevalence, mental disorders, DSM-III-R

The nature and quality of people's childhood experiences with parents are generally believed to exert an important influence on individual adjustment in later life (Shaffer, 2002; Sroufe, Carlson, Levy, & Egeland, 1999). Although the structure of parent–child relationships changes during adolescence, parents remain influential in providing support and guidance for their children and continue to serve as important attachment figures (Ainsworth, 1989; Grotevant & Cooper, 1986). In adolescence and young adulthood, however, most people learn how to establish and maintain partner relationships (Erikson, 1963), and these relationships become increasingly important sources of support and intimacy (Furman & Burmester, 1992; Laursen & Williams, 1997). In accordance, research on adolescents and young adults has demonstrated that lower levels of intimacy and perceived quality in partner relationships are associated with emotional maladjustment (Cramer & Donachie, 1999;

McLennan & Omodei, 1988) and criminality and substance abuse (e.g., Mudar, Leonard, & Soltysinski, 2001; Simons, Stewart, Gordon & Conger, 2002; Quinton, Pickles, Maughan, & Rutter, 1993). Until now, however, only a limited number of studies focusing on individual adjustment have examined parent-child bonds in conjunction with intimate partner relationships (Anderson & Stevens, 1993; Gittleman, Klein, Smider, & Essex, 1998; Bartholomew & Horowitz, 1991).

An explanation for the relationship between people's bonds with parents and the later prevalence of mental disorders is based on the assumption of 'cross-relationship continuity'. Parental bonding might contribute to the development of mental disorders through its effect on individuals' experiences in a later partner relationship. According to attachment theory, parents usually provide their offspring with a 'secure base' – meeting childrens' propensity to establish safe and protective relationships with people in their direct surroundings – without limiting the possibility to actively explore the environment (Bowlby, 1977). These early attachment-experiences are incorporated into internal working models: cognitive-affective schemas that form the basis of an individual's understanding of and participation in intimate relationships throughout life (Parkes & Stevenson-Hinde, 1982). Specifically, negative bonding experiences such as with the unavailability or insensitivity of caretakers may lead people to perceive themselves as unworthy of love, and others as emotionally unavailable or unresponsive (Kenny & Rice, 1995). Eventually, this may lead to negative evaluations of the partner relationship which, in turn, may increase the vulnerability for both internalizing and externalizing types of mental disorders (Dozier, Stovall, & Albus, 1999). Previous research has demonstrated that childhood recollections of parents' acceptance and encouragement of autonomy are linked to secure attachment styles in young adults (Carnelley, Pietromonaco, & Jaffe, 1994; Feeney & Noller, 1990). These attachment styles have been found to be related to the perceived satisfaction with partner relationships as well (Collins & Read, 1990; Simpson, 1990). Similar results have emerged from research using the Parental Bonding Instrument (Parker, Tupling, & Brown, 1979), which showed that parental care was related to higher satisfaction levels in later partner relationships (Truant, Herscovitch, & Lohrenz, 1987).

Although it might be expected that parental bonding contributes to the development of mental disorders through its effect on individuals' later partner relationships, most previous research has exclusively examined direct associations between parental bonding and the prevalence of alcohol and narcotic addictions (Bernardi, Jones, & Tennant, 1989), depression (Burbach, Kashani, & Rosenberg, 1989; Mackinnon, Henderson, & Andrews, 1993) and anxiety and phobic disorders (Arrindell, Emmelkamp, Monsma, & Brilman, 1983; Gerlsma,

Emmelkamp, & Arrindell, 1990). Results from these previous studies have consistenly indicated that low-quality parental bonds, as is expressed in a perceived overprotection by parents and a lack of parental warmth, are cross-sectionally associated with a higher risk for the prevalence of both internalizing and externalizing types of psychopathology. Most recently, cross-sectional results from a large-scale epidemiological survey (i.e., US National Comorbidity Survey; Enns, Cox, & Clara, 2002), demonstrated that parental care and overprotection were significantly, but modestly associated with the lifetime prevalences of DSM-III-R disorders, explaining about 1% to 5% of the total prevalence rates. Only a limited number of studies have employed a longitudinal design in examining parental bonds - mental disorder links, and these have found only weak or insignificant cross-lagged relationships between low-quality parental bonding and - the frequency of - psychiatric symptoms (MacKinnon, Scott, & Duncan-Jones, 1989; Rodgers, 1996). Until now, no previous study has explicitly tested the *prospective* associations between parental bonding and full-blown *mental disorders* in the general population. Such a prospective examination is of crucial importance, however, as it controls for the influence of previously experienced mental disorders.

Moreover, despite the fact that previous research has shown the quality of a partner relationship in adolescence and young adulthood to be associated with internalizing and externalizing forms of mental health problems (e.g., Cramer & Donachie, 1999; McLennan & Omodei, 1988; Mudar et al., 2001; Simons et al., 2002), relatively little knowledge has been gained with regard to the question whether individuals' experiences in partner relationships *mediate* the relationship between parental bonding and mental health problems. In a sample of 1,022 adults aged 20 to 43, Gittelman et al. (1998) found one - rather weak, cross-sectional - mediation effect in women: maternal care predicted depressive moods via the insecurity of adults' attachment styles. Another study among 1,622 adults (Rodgers, 1996) showed that emotional support in adults' relationships accounted for a considerable part of the covariance between parental bonding and psychiatric symptom frequency. In addition, Bartholomew and Horowitz (1991) found that the relationship of early family experiences with later emotional adjustment was mediated by warmth and dominance in subsequent peer relationships. Certain methodological characteristics of these studies limit their generalizability, however. Two studies (Bartholomew & Horowitz, 1991; Gittleman et al., 1998) had a cross-sectional design and did not control for earlier adjustment problems and two studies (Bartholomew & Horowitz, 1991; Rodgers, 1996) did not specifically focus on adults' partner relationships, but rather examined a category of 'intimate relationships' which also comprised friendships.

In the present study, we used longitudinal data of 1,581 young adults aged 18 to 34 in order to examine (1) whether parental bonding in the first 16 years of life would be longitudinally related to the prevalence of mental disorders (DSM-III-R) in young adulthood, and (2) whether the quality of young adults' partner relationships would mediate these longitudinal associations. With regard to the first question, we assumed that parental bonding would be significantly – but modestly – negatively related to the later prevalence of mood, anxiety, and substance disorders. For the second question, we assumed that the quality of young adults' partner relationships would mediate the longitudinal association between parental bonding and the prevalence of mood, anxiety, and substance disorders. The present study provides a more stringent test of possible mediation effects, because the longitudinal design allows us to control for an earlier presence of mental disorders and the earlier quality of partner relationships which, in the cross-sectional studies discussed earlier, were not assessed. Moreover, this study is the first to examine parent-partner linkages in the prediction of clinically relevant, mental disorders in young adulthood.

METHODS

Sample and Procedure

All subjects taking part in NEMESIS (the Netherlands Mental Health Survey and Incidence Study) were selected using a multi-stage, stratified, random sampling procedure. First, a sample of 90 Dutch municipalities was selected based on the level of urbanization and dispersion over the 12 provinces of the Netherlands. Second, a sample of private households was drawn from the post office registers. The number of households selected in each municipality was determined by the size of its population. Third, selected households were sent a letter of introduction and were contacted by telephone shortly thereafter (households with no telephones or unlisted numbers were visited in person). In all households, members with the most recent birthday were selected, on the condition that they were between 18 and 64 years of age and sufficiently fluent in Dutch to be interviewed. Those respondents who were not immediately available due to circumstances such as hospitalization or imprisonment were contacted again later in the year. Interviewers made a minimum of 10 phone calls or visits to a given address. Respondents were interviewed in person, and received a small token of appreciation at the end of the interview. In total, 7,076 individuals were interviewed at the first wave in 1996 (T_1) – initial response rate 70%. This baseline-sample was representative for

the Dutch population in terms of gender, marital status, and degree of urbanization of the residential municipality. The age group of 18-24 year olds, however, was slightly under-represented. Of all respondents interviewed at baseline, 5,618 (79%) were interviewed again at the second wave in 1997 (T_2), and of these a total of 4,848 (85%) were interviewed again in the third wave of 1999 (T_3).

Of all people who were interviewed at each of the three waves, we selected a subsample of 1,581 young adults aged 18 to 34. We selected this age group because individuals' intimate bonds with parents were expected to be especially relevant in the prediction of mental disorders among young adults, for whom – in comparison with older adults – the memories of parental behaviors may be more accurate (i.e., less time elapsed since the first 16 years of life), reducing the effects of recall-bias. Further, parental bonds may be more relevant for the emotional functioning of young adults in comparison with older adults, because many young adults have not yet established a complete shift in primary attachment figures from parents to partner (Ainsworth, 1989), or experienced a complete transference of attachment needs from the bond with parents to the bond with partners (Fraley & Davis, 1997). The young adult-sample included 698 men (44%) and 883 women (56%). At T_1, 335 young adults (21%) were aged 18 to 24, while 563 respondents (36%) were aged 25 to 29, and 683 (43%) were aged 30 to 34. The mean age was 28,1 (*SD* = 4.41). About 16% had finished or were currently enrolled in lower levels of education, 49% had an intermediate level of vocational or general education, and 34% were involved in professional or scientific studies. An attrition analysis showed that respondents aged 18-24 were more likely to drop out of the sample from T_1 to T_3 [*OR* = 1.67, *p* < .01] than young adults in the age range of 25-34 years, and that the presence of mood disorders [*OR* = 1.66, *p* < .05] and substance disorders [*OR* = 1.65, *p* < .01] one year before baseline were related to dropping out of the sample.

Measures

DSM-III-R Diagnoses. Diagnoses were based on the Diagnostic and Statistical Manual of Mental Disorders, third revised edition (DSM-III-R; American Psychiatric Association, 1987). The instrument used to determine the diagnoses was the Composite International Diagnostic Interview, computerized version 1.1 (CIDI; Smeets & Dingemans, 1993), which is a structured interview developed by the World Health Organisation on the basis of the Diagnostic Interview Schedule (DIS) and the Present State Examination (PSE), and was designed for use by trained interviewers who are not clinicians. The CIDI has been employed in studies

worldwide, and WHO research has provided evidence for a high inter-rater reliability as well as a high test-retest reliability (Wittchen, 1994), and an acceptable validity for most diagnoses (Farmer et al., 1991). The diagnoses examined were made with the imposition of hierarchical exclusion rules. We focused on three dimensions of pathology that underlie the diagnoses assessed by the CIDI: (1) substance disorders - drug and alcohol abuse and dependency, (2) mood disorders - major depression, bipolar disorder, and dysthymia, and (3) anxiety disorders - panic disorder, social, simple, and agoraphobia, generalized anxiety disorder, and obsessive compulsive disorder. For these categories of mood, anxiety, and substance disorders we examined the two-year prevalence rates between 1997 (T_2) and 1999 (T_3), controlling for earlier lifetime prevalence rates before 1997 (T_2).

Parental Bonding. Young adults' recollections of the relationship with their parents during their first 16 years of life were measured at T_1 using the Parental Bonding Instrument (PBI; Parker et al., 1979). The PBI consists of 50 items tapping into two main dimensions of 'care' and 'protection', separately assessed for relationships with father and mother during the first 16 years in life. The care dimension involves two poles - one characterized by affection, empathy, and closeness, the other by indifference and neglect (e.g., 'My father/mother spoke to me in a warm and friendly voice' versus 'My father/mother seemed emotionally cold to me'). Similarly, the protection dimension assesses two poles - one pertaining to intrusiveness, overprotection, and infantilization, the other to encouragement of autonomy (e.g., 'My father/mother invaded my privacy' versus 'My father/mother let me dress in any way I pleased'). Respondents answered all items on a 4-point scale (0 *not true* to 3 *true*). In this study, high scores on the PBI reflect high levels of care and high levels of encouragement of autonomy. The PBI has been employed in many previous studies and has been found to possess a high test-retest reliability (see Parker, 1990; Wilhem & Parker, 1990). Moreover, the two-factor structure of the PBI has been replicated in many studies (Lopez & Gover, 1993) and is also applicable to Dutch samples (Arrindell et al., 1989). Cronbach's alpha was .93 for maternal care, .84 for maternal overprotection, .92 for paternal care, and .80 for paternal overprotection.

Quality and Type of Partner Relationship. Respondents' evaluation of the quality of their partner relationship was assessed at each of the three waves using the Grongingen Social Behavior Questionnaire (GSBQ; De Jong & Van der Lubbe, 1994). The GSBQ consists of 8 subscales pertaining to respondents' general satisfaction with different social roles, one of which is the partner role. The partner-subscale contains 11 items about different relational topics, such as support (e.g., 'I was able to discuss personal problems with my partner'), conflicts ('My

behavior has clearly irritated my partner'), shared activities ('My partner and I did a lot of things together lately'), and sex ('My partner and I fit well together in sexual respect'). Respondents answered all items on a 4-point scale (1 *never* to 4 *always*). Previous studies employing the GSBQ have demonstrated both a sufficient reliability and validity (De Jong & Van der Lubbe, 1994; Matthys & Rietvelt, 1995). In the present study, Cronbach's alpha was .80 at T1, .83 at T2, and .83 at T3. In addition to the quality of partner relations, we differentiated partner relationships according to type. For all respondents who were involved in an intimate partner relationship [N = 1198 (75,8%) at T_1, N = 1237 (78,2%) at T_2, and N = 1291 (81,7%) at T_3], two types of partner relationships were defined at each of the three waves: (a) those in which the partners were married or cohabited [T_1: N = 946 (79,0%); T_2: N = 1010 (81,6%); T_3: N = 1101 (85,3%)], and (b) those in which partners did not live together [T_1: N = 252 (21,0%); T_2: N = 227 (18,4%); T_3: N = 190 (14,7%)].

Strategy of Analyses

In a first set of descriptive analyses, we examined the mean levels of parental bonding across gender, age, and relationship status in a MANOVA with paternal bonding (i.e., father's care and overprotection) and maternal bonding (i.e., mother's care and overprotection) as dependent variables. A relatively large number of respondents (N = 401) were raised exclusively by their mother in one-parent families. as was indicated by the lower number of young adults with valid scores for paternal care and overprotection. In order to avoid the confounding of results as a consequence of diffences in family background, we selected respondents with scores on both maternal and paternal subscales of the PBI. To study the mean levels of partner relationship quality, we performed a MANOVA - repeated measures in order to control for the stability in partner relationship quality across timepoints (within-subjects) in examining mean differences between gender and age groups and relationship types (between-subjects). Next, we investigated the two-year prevalences of mood, anxiety, and substance disorders in young adults, and the concurrent and longitudinal bivariate associations of these two-year prevalences with young adults' bonds with parents and partner relationship quality. These correlational findings were used as input for structural equation modeling analyses, which we carried out using the LISREL 8.30-program (Jöreskog and Sörböm,1993). Because of the non-normal distribution of the scores, polychoric correlation matrices were calculated in PRELIS 2.30, which were used as input for LISREL estimations. Identical path models were

examined for the prediction of the 2-year prevalence of mood, anxiety, and substance disorders.

For each type of disorder, we tested a *mediation* hypothesis by comparing the fit and path coefficients of two different models: a 'direct linkages–model' (Model A) and a 'mediation-model' (Model B). Model A identified structural relationships from *(a)* parental bonding at T_1 to the 2-year prevalence of mental disorders between T_2-T_3, and *(b)* the earlier presence of mental disorders before T_2 to the later 2-year prevalence of mental disorders between T_2-T_3. In contrast, the extended Model B identified strucutral relationships from *(a)* parental bonding at T_1 to the 2-year prevalence of mental disorders between T_2-T_3, *(b)* parental bonding at T_1 to partner relationship quality at T_2, *(c)* partner relationship quality at T_2 to the 2-year prevalence of mental disorders between T_2-T_3, *(d)* partner relationship quality at T_1 to partner relationship quality at T_2, *(e)* the presence of mental disorders before T_2 to partner relationship quality at T_2, and *(f)* the presence of mental disorders before T_2 to the later 2-year prevalence of mental disorder between T_2-T_3 (see Figure 5.1). The latent variable parental bonding loaded on 2 observed factors (i.e., paternal and maternal bonding), as did the latent variable 'partner relationship quality' (i.e., split half-factors of 5 and 6 items of the 11-item scale). Cronbach's alphas for these 2 split-half factors were .65 and .65 at T_1, and .70 and .72 at T_2, respectively. Each of the models were examined in the total sample, and in multigroup analyses to assess possible differences across gender, age, and relationship type. Model fit was assessed with the χ^2:df ratio, GFI, AGFI, NFI, NNFI, and RMSEA.

RESULTS

Young Adults' Parental Bonds and Partner Relationship Quality

Overall, respondents indicated to have received high levels of care and low levels of overprotection from their father and mother (see Table 1). Women rated their bond with mother to be of higher quality than men did [F (1, 1,163) = 5,94, p < .05]. Further, Bonferroni contrasts indicated that 30-34 year olds in comparison with the younger age groups rated their bonds with father and mother to be of lower affective quality [paternal bonds: F (2, 1,163) = 6,71, p < .01; maternal bonds: F (2, 1,163) = 6,98, p < .01]. No significant differences were observed between respondents who were or were not currently involved in a partner relationship at T_1.

Figure 5.1

Conceptual Relationships for Model A (Direct Linkages) and Model B (Mediation)

Model A: Direct Linkages

Model B: Mediation
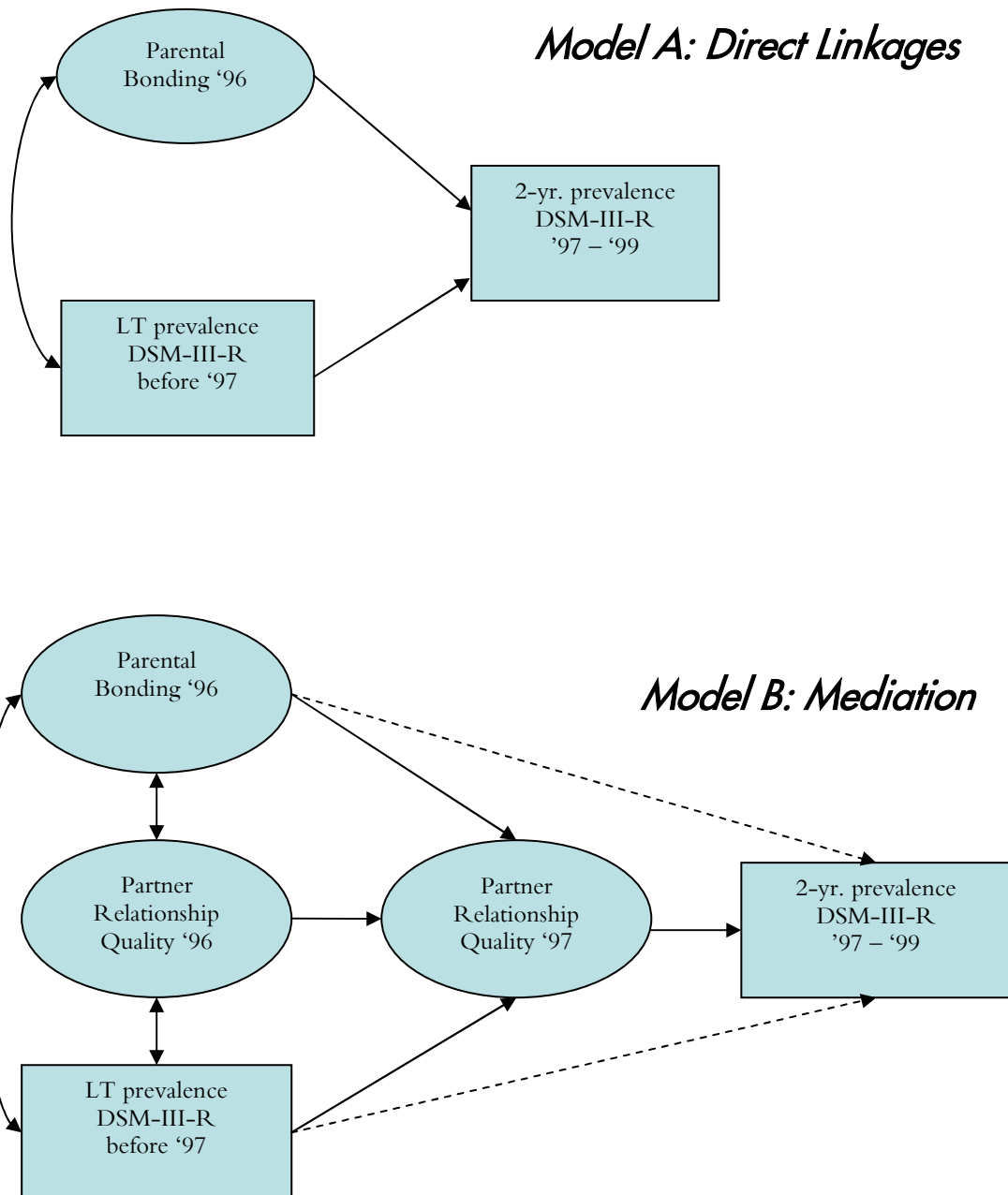
Next, we examined the mean levels of partner relationship quality at T_1 and T_2 with a MANOVA repeated measures. At each wave, the means were equally high for men and women. In contrast, significant age differences were found [$F_{(2, 1,144)} = 6,88$, $p < .01$]. Bonferroni contrasts showed that young adults aged 30-34 rated their partner relationship to be of lower quality in comparison with young adults aged 25-29. A similar was observed in comparison with young adults 18-24, although this remained insignificant. Even after controlling for earlier partner relationship quality, we found significant differences between relationship type at T_2. Respondents with a cohabitation/marriage perceived their relationship to be of higher quality than those involved in a partner relationship other than cohabitations/marriages [$F_{(1, 1,144)} = 7,98$, $p < .01$].

Prevalence of Mental Disorders - Links with Parental Bonding and Partner Relationships

In total, 8,3% of the young adults reported the presence of at least one mood disorder during the past two years. For anxiety and substance disorders, these percentages were 6,9% and 6,1%, respectively. Mood disorders were more prevalent among women than among men [$\chi^2_{(1, 1581)} = 13,78$, $p < .001$; 5,4% in men vs. 10,6% in women], as were anxiety disorders [$\chi^2_{(1, 1581)} = 27,27$, $p < .001$; 3,2% in men vs. 9,9% in women]. Substance disorders were more prevalent among men than among women [$\chi^2_{(1, 1581)} = 37,91$, $p < .001$; 10,3% in men vs. 2,8% in women]. Also, substance disorders were more prevalent among 18-24 year olds in comparison with the oldest age group [$\chi^2_{(2, 1581)} = 22,82$, $p < .001$; 11,6% in 18-24 year olds vs. 4,2% in 30-34 year olds]. As for the associations between these 2-year prevalences and young adults' perceptions of parental bonds and partner relationship quality, Spearman correlations presented in Table 5.2 showed that parental bonds were significantly, positively related to the quality of one's partner relationship in young adulthood, correlations ranging from .18 to .27 [$p < .001$]. Both paternal and maternal bonding had moderately strong, negative assocations with lifetime mood and anxiety disorders – correlations ranging from –.20 to –.24 [$p < .001$] – and less strong negative associations with the 2-year mood and anxiety disorders, with correlations ranging from –.11 to –.14 [$p < .01$]. Smaller associations were observed between paternal and maternal bonding and substance disorders, with only significant correlations for lifetime prevalence rates [paternal bonding: $R = .09$, $p < .01$; maternal bonding: $R = .10$, $p < .01$].

Table 5.1
Mean Levels and Standard Deviations of Parental Bonding: MANOVA for Gender, Age, and Relationship Status (*N* = 1,163)

	Total	Gender		Age			Relationship Status	
		Men	*Women*	*18-24*	*25-29*	*30-34*	*Involved*	*Not Involved*
Paternal Bonding	3,30 (0.48)	3,33 (0.46)	3,27 (0.50)	3,39 (0.42)[a,b]	3,29 (0.48)	3,26 (0.50)	3,29 (0.50)	3,31 (0.47)
Maternal Bonding	3,41 (0.46)	3,44 (0.41)	3,37 (0.49)	3,49 (0.38)[a,b]	3,40 (0.45)	3,37 (0.50)	3,41 (0.45)	3,40 (0.49)
		Multivariate F = 3,20*		*Multivariate F* = 4,40**			*Multivariate F* = 0,29	

Note. Superscript letters refer to significant age differences as observed with Bonferroni post-hoc tests; Overprot. = Overprotection

[a] Significant age difference between 18–24 versus 25–29 year olds (*p* < .05)

[b] Significant age difference between 18–24 versus 30–34 year olds (*p* < .05)

* *p* < .05, ** *p* < .01, *** *p* < .001

Table 5.2

Cross-sectional and Longitudinal Associations of Parental Bonding, Partner Relationship Quality, and Mental Disorders (*N* = 809)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) Bond with Father – T1										
(2) Bond with Mother – T1	.60***									
(3) Relationship Quality – T1	.27***	.25***								
(4) Relationship Quality – T2	.20***	.18***	.59***							
(5) Life Prev. Mood Disorder – T2	-.24***	-.27***	-.17***	-.12***						
(6) Life Prev. Anxiety Disorder – T2	-.22***	-.20***	-.13***	-.14***	.40***					
(7) Life Prev. Substance Disorder – T2	-.09**	-.10**	-.18***	-.09**	.07	.08				
(8) 2-Yr. Prev. Mood Disorders – T2/3	-.12***	-.14***	-.14**	-.11**	.28***	.19***	.02			
(9) 2-Yr. Prev. Anxiety Disorders – T2/3	-.14***	-.11**	-.06	-.07	.24***	.29***	.01	.31***		
(10) 2-Yr. Prev. Substance Disorders – T2/3	-.02	-.05	-.08	-.12**	.01	.08	33***	.02	.03	

Note. We examined the 2-year prevalence of mood, anxiety, and substance disorders from T2 (1997) to T3 (1999), and the lifetime prevalences in the period before T2; Analysis was performed with a missing listwise – procedure; Alpha-level was set to p < .01; Life Prev. = Lifetime Prevalence; 2-Yr. Prev. = 2-Year Prevalence

** p < .01, *** p < .001

We observed a similar pattern of associations with regard to young adults' partner relationship quality: moderately strong, negative links with lifetime prevalences - correlations ranging from -.09 [$p < .01$] to -.18 [$p < .001$] - and smaller links with subsequent 2-year mood and anxiety disorders - except for the insignificant link with the 2-year anxiety disorders. As expected, auto correlations between the measures of partner relationship quality at the different waves were relatively high, ranging from .51 to .57 [$p < .001$]. The correlations between the lifetime and 2-year prevalence rates across waves were moderately strong, ranging from .28 (mood) to .29 (anxiety) and .33 (substance).

## Mediation - Partner Relationships in the Link from Parental Bonds to Mental Disorders

The results from the LISREL analyses, presented in Figure 5.2 and Table 5.3, demonstrated that a parsimonious, direct linkages-model for the structural relations between young adults' bonds with parents and the prevalence of mood and anxiety disorders provided a better fit to the data than the mediation-model, which also comprised measures of partner relationship quality at T_1 and T_2 (see Table 5.3).

Table 5.3
Fit Indices of the Direct Linkages and Mediation Models for the 2-Year Prevalence Rates
of Mood, Anxiety, and Substance Disorders

	Mood Disorders		Anxiety Disorders		Substance Disorders	
	Model A	*Model B*	*Model A*	*Model B*	*Model A*	*Model B*
X^2 : df (p-value)	2.01 (0.16)	24.81 (0.000)	5.16 (0.02)	25.95 (0.000)	7.44 (0.001)	24.59 (0.000)
GFI	1.00	0.91	1.00	0.91	0.99	0.91
AGFI	0.99	0.76	0.97	0.75	0.96	0.77
NFI	1.00	0.87	0.99	0.87	0.98	0.87
NNFI	0.99	0.73	0.97	0.73	0.96	0.74
RMSEA	0.04	0.17	0.07	0.17	0.08	0.17

Note. Model A denotes the direct linkages model, Model B denotes the mediation model; GFI = Goodness of Fit Index; AGFI = Adjusted Goodness of Fit Index; NFI = Normed Fit Index; NNFI = Non Normed Fit Index; RMSEA = Root Mean Square Error of Approximation.

Figure 5.2

Standardized Parameter Estimates for 'Direct Linkages' between Parental Bonding and DSM-III-R Mood, Anxiety, and Substance Disorders
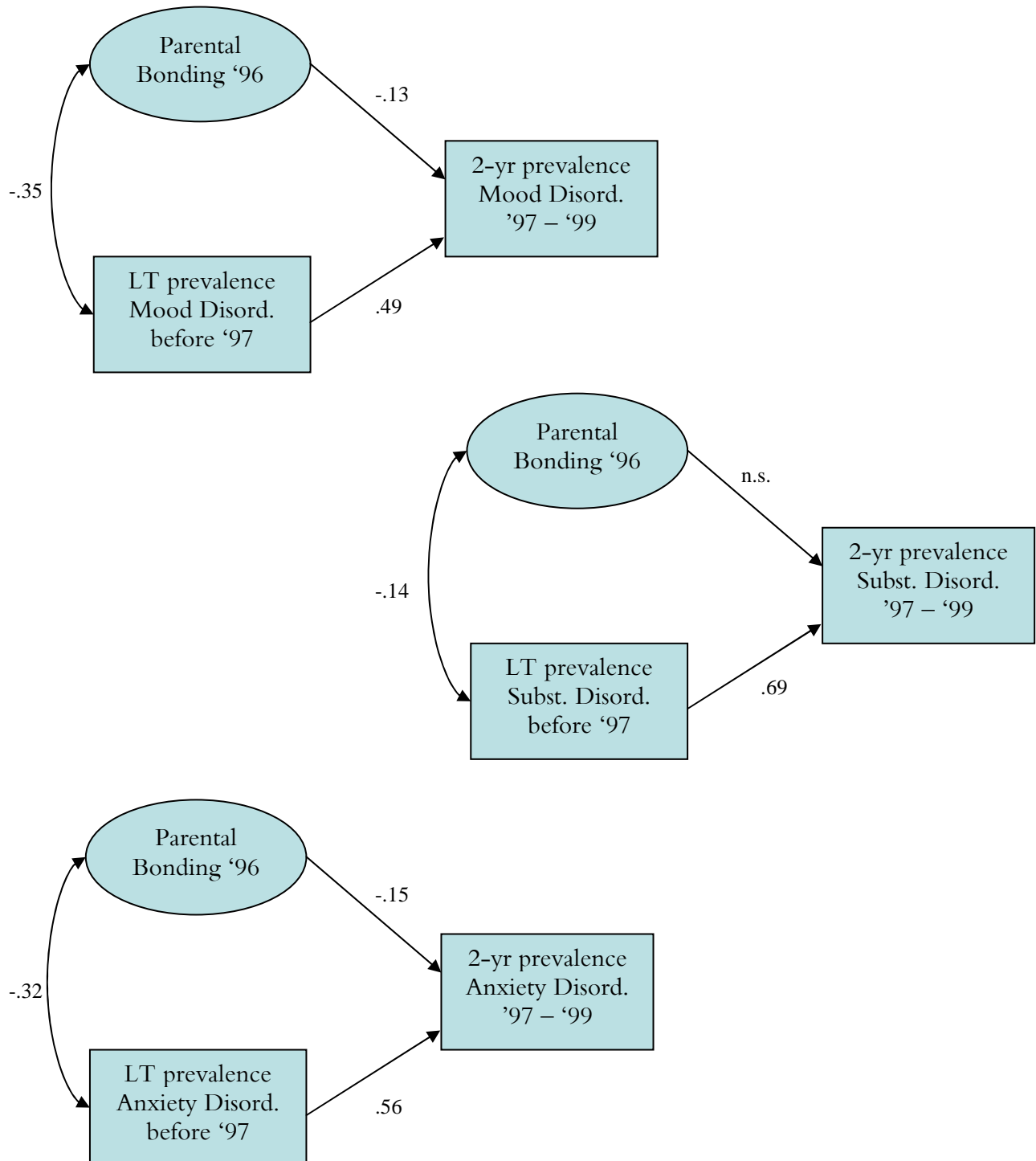
Note. All parameters significant at the *p =* .05 level, except for *n.s. =* not significant

The standardized loadings of the latent variables on their manifest indicators ranged from .70 to .81 for parental bonding (i.e., paternal and maternal bonding) across the direct linkages-models. Moreover, the negative longitudinal associations between parental bonding at T_1 and the 2-year mood and anxiety disorders between T_2 and T_3 remained significant in the mediation models after inclusion of the paths from parental bonds to partner relationship quality, and from partner relationship quality to mental disorders. Moreover, although the direct negative links from partner relationship quality at T_2 to the 2-year mood [$\beta = -.09$, $p < .05$], anxiety [$\beta = -.11$, $p < .05$], and substance disorders [$\beta = -.10$, $p < .05$] between T_2 and T_3 were significant, we found no significant associations between parental bonding T_1 and partner relationship quality T_2 in the models for anxiety and substance disorders after controlling for earlier levels of partner relationship quality. In all mediation models, direct association between lifetime prevalence rates at T_2 and partner relationship quality at T_2 were significant [mood disorders: $\gamma = -.16$, $p < .05$; anxiety disorders: $\gamma = -.11$, $p < .05$; substance disorders: $\gamma = -.07$, $p < .05$]. The direct linkages-models explained 29% of the variance in mood disorders and 38% of the variance in anxiety disorders. There were no significant direct associations between parental bonding at T_1 and the prevalence of substance disorders between T_2 and T_3. The direct linkages-model explained 47% of the variance in substance disorders and the medation-model 48%.

Multigroup LISREL analyses were performed to examine whether the good fit of the direct linkages-models of mood and anxiety disorders would hold across groups of gender, age, and relationship type. This was done by performing a most conservative test, in which all path values were specified to have equal values in the different groups. Thus, paths from parental bonding at T_1 to the 2-year prevalence of mood or anxiety disorders between T_2 and T_3 was hypothesized to be equal across different groups, as were the parameters for all the other structural relations. For both mood and anxiety disorders, multigroup analyses demonstrated the direct linkages-models to fit the data well for men and women [mood disorders: χ^2 (6) = 12,89, $p = .03$; anxiety disorders: χ^2 (6) = 10,25, $p = .11$] and for young adults who were involved in relationships other than cohabitations/marriages vs. those who *were* involved in cohabitations/marriages [χ^2 (6) = 6,13, $p = .41$, and χ^2 (6) = 12,63, $p = .05$, respectively]. With regard to the 2-year prevalence of anxiety disorders, the direct linkages model fit the data well across the age groups of 18-24 years, 25-29 years, and 30-34 years [χ^2 (15) = 33,85, $p = .004$]. For the 2-year prevalence of mood disorders, however, the direct linkages model did not provide an adequate fit for all age groups [χ^2 (15) = 54,93, $p < .0001$]. Specifically, in the

18-24 year old age group the auto-regression from the earlier presence of mood disorders before 1997 to late 2-year mood disorders between 1997 and 1999 was stronger than in the two older age groups (i.e., .71 vs. .40 and .46). Overall, however, the results demonstrated that in the total sample of young adults partner relationship quality did not mediate the association between parental bonding and mood, anxiety, or substance disorders.

DISCUSSION

The results of the present study demonstrated that, from childhood and adolescence to young adulthood, partner relationship quality did not mediate the negative associations from parental bonding to the later prevalence of DSM-III-R mood, anxiety, and substance disorders. Clearly, a 'direct linkages'-model best represented the longitudinal links between parental bonding in the first 16 years of life and the later prevalence of mood and anxiety disorders. However, lower-quality parental bonds were associated only with anxiety and mood disorders – not substance disorders – and were of a relatively modest strength.

These results partly converge with recent cross-sectional findings from the US National Comorbidity Survey (Enns et al., 2002), which also demonstrated that parental care and overprotection – together with a measure of parental authoritarianism – were significantly associated with the prevalence of mental disorders in a general population. Notably, the present study comprised a more stringent, prospective examination of the parental bonding – mental disorder link, which illustrates that even after controlling for an earlier presence of mental disorders and the quality of current partner relationships, young adults' memories of parental care and overprotection during their childhood and adolescence remain influential with regard to the development of mental disorders. Considering the fact that we exclusively assessed parental care and overprotection in the context of a parent-child dyad, the results may be an underestimation of the actual link between family and parental factors and mental disorders. Had we focused on the dynamics and content of interactions within the broader family context, we might have found the parental context to have a stronger impact on mental disorders and the quality of partner relationships. Marital conflict and disruption in the father-mother dyad might have a relatively large impact on well-being and the development of problem behavior of children (Shaw, Winslow, & Flanagan, 1999) and adolescents (Forehand et al., 1989). Additionally, family climate – to which not only parents but also siblings and the respondents' themselves contribute – may explain some of the variance in problem behaviors

(Delsing, Oud, & De Bruyn, 2001). On the other hand, we should consider that the significant cross-lagged relationships between low-quality parental bonds and problem behavior in the present study may only for a smaller part be ascribed to environmental factors. Specifically, behavioral-genetic studies have shown that measures of parental behavior and child outcomes may be associated because of an underlying shared genotype (e.g., Neiderhiser, Reiss, Hetherington, & Plomin, 1999).

Notably, parental bonding was not significantly associated with the prevalence of substance disorders. It might be, that alcohol and drug dependence and abuse arise mainly as a consequence of young adults' relatively unattached relationship status (Overbeek, Vollebergh, Engels, & Meeus, in press). For example, not being involved in a stable cohabitation/marriage might be linked to a higher number of drinking opportunities and an emphasis on relationships in which drinking is normal (Hajema & Knibbe, 1998), which may increase the risk for alcohol abuse or dependency. Thus, not the affective quality of intimate relationships with parents or partners, but rather the entry into new relationships that diminish the possibilities for alcohol and drug use may be important explanatory factors (e.g., Kandel & Raveis, 1989; Miller-Tutzauer, Leonard, & Windle, 1991).

The absence of the hypothesized mediation effects of partner relationship quality on the longitudinal relationship between parental bonding and mental disorders corresponds to earlier cross-sectional findings from Gittelman et al. (1998) and Rodgers (1996), which did not provide strong support for the existence of mediation effects in the links between parental bonding and *sub-clinical levels* of mental health-problems. Furthermore, the present study demonstrated that most people who experienced their parents to be emotionally distant and overprotective, still reported their later partner relationships to be of average or high quality. Thus, instead of emphasizing 'cross-relationship continuity' in people's experience and perceptions of intimate relationships from childhood to young adulthood (Simpson, Rholes, & Philips, 1996; Waldinger et al., 2002), it seems important to focus on why representations *change* over time. We may consider, then, the possibility that we have underestimated the true amount of 'cross-relationship continuity' because we studied related, but different constructs across different intimate relationships. Specifically, we examined young adults' perceptions of care and overprotection in the relationship with parents and their perceptions of shared activities, satisfaction with sex, support, and conflicts in the relationship with partners. However, the relatively weak links between individuals' bonds with parents and partners have also been found in research using the PBI in conjunction with the Intimate Bond Measure (Wilhelm & Parker, 1990), a self-report measure tapping into identical dimensions of care and

control perceived from intimate partners (see Parker et al., 1992). A more valid explanation may be, then, that the activation of internalized representations of intimate relationships is, to a large extent, more context-specific than is usually assumed on the basis of attachment theory (Bretherton, 1985) or social-cognitive perspectives (Baldwin, 1992). Young adults may be aware of the unique differences between intimacy experienced in the context with parents or with partners. Intimacy in partner relationships is embedded in a symmetrical-reciprocal relationship with partners, while in relationships with parents there is intimacy in the context of parents' unilateral authority (Younnis & Smollar, 1985). Moreover, partner relationships have an emphasis on romantic love and sexual intimacy. Individuals' awareness of these differences may obstruct the simple generalization of individuals' cognitive representations of the broad construct of 'relationships' and, instead, may lead to the development of more relationship-specific schemas.

This study may contribute to our current knowledge of the link between parental bonding and mental health, because of its three-wave longitudinal design and its focus on DSM-III-R mental disorders, which enabled us to perform a relatively stringent test of the mediation effects of partner relationship quality on the parental bonding – mental health link in young adulthood. Nevertheless, the results should be generalized with caution due to certain limitations in the measurements and research design. First, an attrition analysis over the 3-year time interval had shown that young adults aged 18-24, and young adults suffering from mood or substance disorders in the year before the baseline interview were more likely to drop out of the sample, which might have led us to underestimate the strength of the longitudinal relationships from parental bonding and partner relationship quality to mental disorders. In addition, although we controlled for lifetime prevalences in the prediction of later 2-year prevalence rates between 1997 and 1999, we did not have information about sub-clinical levels of mental health-problems. This may have obscured differences between respondents who had little or no psychiatric symptoms and developed a mental disorder over time (i.e., many new symptoms) versus those who scored just below the clinical cut-off point and developed a mental disorder (i.e., few new symptoms). Furthermore, the PBI was used only at T1, which frustrated an examination of the possible cross-lagged relationships from an earlier prevalence of mental disorders to young adults' later perceptions of parental care and overprotection. This limitation restricts us from making causal inferences regarding the links between parental bonding and mental health-problems, because we do not know to what extent young adults' cognitive representations of the earlier relationship with parents is based on their recent life

experiences or mood states, and are affected by recall-bias (see Gerlsma, Snijders, Van Duijn, & Emmelkamp, 1997).

It is important, therefore, that future longitudinal research on parental bonding or parental attachment allows for an estimation of stability and changes in individuals' representations of their intimate relationships or interactions with parents (e.g., Lopez & Gormley, 2002). In particular longitudinal studies, in which bi-directional cross-lagged relationships between parental bonding and mental health are examined, can help to establish to what extent these representations are stable over time and to what extent they are influenced by people's current emotional states or recent intimate experiences. In addition, future research may benefit from a broader examination of adversity in the family context by focusing not only on uni-directional parent-to-child communications, but instead on the affective quality of *reciprocal* interactions in the broader family context, where parental or sibling dyads may also have an influence on the individual's mental health. Furthermore, in building on the present findings, future studies may focus not on the question to what extent, but instead *under what conditions* young adults' partner relationships mediate the link from parental bonding to mental disorders. An inquiry into specific risk factors for selected subsamples of respondents may be most fruitful. For instance, little is known about why some people, who experienced their parents as emotionally distant and overprotective, later enter partner relationships of a similar quality and style, whereas others have a certain 'resiliency' and develop healthy romantic attachments in young adulthood.

NOTES

[1] Overbeek, G., Vollebergh, W., Meeus, W., De Graaf, R., & Engels, R.C.M.E. (2003). Young adults' parental bonds, partner relations, and mental disorders: Results from the Netherlands Mental Health Survey and Incidence Study. *Submitted for Publication.*