Parental Bonding in Childhood and Relationships with Friends and Siblings in Adolescence:

A Correlational Study

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Abstract

According to attachment theory, the quality of the early child-parent bond determines the child's interpersonal relationships later in life. Utilising data from the First Intervention Study in Transference - In Teenagers (FEST-IT), this paper investigates the reported relationship between parental bonding in childhood and the importance of friendship and relationship with siblings, in depressed adolescents. The scales employed were the Parental Bonding Instrument (PBI) and the Adolescent Relationship scale (ARS). A Pearson's correlation was run in order to test the relationship between maternal and paternal care and control, and the measured importance of friendship and relationship with siblings. Results revealed a statistically significant negative correlation between high levels of maternal control and reported importance of friendship, and a statistically significant positive correlation between high levels of paternal care and reported importance of relationships with siblings.

Introduction

The importance of interpersonal relationships is one of the main tenets of psychodynamic therapy, and one of the "active ingredients" reliably distinguishing it from other therapy forms (Shedler, 2010, p. 103). Apparently, early patterns of interaction between the child and primary caregiver become internalised and determine the child's relationship patterns later in life. These patterns tend to emerge in the patient's relationship with the therapist, and psychodynamic therapy aims to identify and rework known and unknown recurring themes in patients' relationships *in vivo*. Known in theoretical terms as transference, a person who fears abandonment may be wary of dismissal from the therapist, or a distrustful person may be skeptical to the therapist.

Research has shown that psychodynamic therapy has an effect on adolescents (Abbass et al. 2013; Midgley & Kennedy, 2011), and that adolescents with depression benefit from psychodynamic therapy (Driessen et al., 2015; Goodyer et al., 2017; Trowell et al., 2007). Adolescence is a developmental period in which social roles change and interpersonal relations are of growing importance (Martin, Carlson & Buskist, 2007). It is also a developmental period in which the prevalence of depression has increased during the recent years (Bakken, 2018). Due to the central role interpersonal relationships has in psychodynamic therapy, and the positive effect psychodynamic therapy has on adolescents with depression, it is important to understand the patterns and themes that govern adolescent relationships.

A substantial amount of research has looked at the connection between the early child-parent bond and relationship with friends in childhood (eg. Cohn, Patterson & Christopoulos, 1991). Although less focus has been given to this connection in adolescence (Booth-LaForce et al., 2006), research has documented a link between the parent-adolescent attachment and the quality of friendships in adolescence (Boling et al., 2011; Lieberman, Doyle & Markiewicz, 1999). The quality of the sibling

relationship changes during adolescence, but research on this relationship lags behind research on other familial relationships (Whiteman, McHale & Soli, 2011). However, connections have been found between the parent-adolescent bond and relationship with siblings (Voorpostel & Blieszner, 2008). This paper seeks to further the understanding of adolescent relationships, by looking specifically at the reported parental attribution of the child-parent bond, and its connection to relationships with friends and siblings in adolescence. It aims to do so in four sections.

Attachment theory has provided a theoretical framework of understanding interpersonal relations. The first section of this paper will present John Bowlby's attachment theory and Mary Ainsworth (1978) and Bartholomew and Horowitz's (1991) identification of attachment styles. It will present attachment theory's explanation of how an attachment bond is created and internalised, shaping a person's *internal working model* of self and other, and determining future relationships. Adolescence is a developmental stage in which interpersonal relations are of particular importance, and research made on adolescents' relationships with parents, siblings and friends will be presented. In the second section the method of this paper will be presented. A Pearson's correlation will utilise data from the First Intervention Study in Transference - In Teenagers (FEST-IT), and reveal correlations between parentings styles and the reported importance of friends and siblings. In the third section the findings will be discussed in relation to attachment theory and future research questions.

John Bowlby's Attachment Theory

Attachment theory was first developed by the British psychiatrist John Bowlby. Within attachment theory, attachment means a social and emotional bond between two people (Martin, Carlson & Buskist, et al., 2007). According to Bowlby (1969), human beings are born as social and communicating beings prepared to become attached.

The person to whom the infant becomes attached is not preset. Rather, attachment is learned, and the person who functions as the infant's primary caregiver or "attachment figure" is usually the object of attachment. Through special behaviours such as sucking, cuddling, looking, smiling and crying infants are innately able to produce special behaviours that shape and control the behaviour of their attachment figure. The attachment figure responds sensitively and appropriately to the infant's changing needs, providing stability and security for the infant. It is through this transactional pattern between the infant and caretaker that the attachment bond is created. The interaction must work both ways in order for the bond to be strong and durable.

Once the attachment bond has been created, it may serve as a safe base for the infant from which it can explore unfamiliar environments. Within a successful attachment bond, a child will balance between exploring the unknown and seeking closeness and safety from the attachment figure. When anxious or tired, a child will seek proximity and security from the attachment figure. When the child feels calm and safe, it will continue to explore its new surroundings. Interestingly, Bowlby hypothesises that this balanced interaction pattern between with the infant and its attachment figure is innate, automated and finely tuned. Inspired by psychobiological systems such as homeostasis and feedback, he places this interaction within an *attachment behavioural system*, in which the attachment behavioural system obtains an inner balance, a *homeostasis*, where the child either approaches or increases its distance to the attachment figure, who again sends behavioural signals back to the child, or *feedback*, regulating the child's behaviour (Hart, 2009). In this sense, attachment is placed in a behavioural system where the main goal of the attachment bond is to secure the availability of the attachment figure when the child is exploring.

Mary Ainsworth's Strange Situation

The child's experience within the attachment behavioural system affects its style of attachment with its caregiver. Mary Ainsworth and her colleagues (Ainsworth et al.,

1978) created a method to observe infants and their interaction with their caretaker when exploring new surroundings and exposed to new settings. The method was called the Strange Situation and consisted of eight episodes, including separation and reunion between infant and caretaker, and interaction between the infant and a stranger. The infant's reaction to these situations, and the quality of their exploration in a new environment, were used to identify three attachment patterns, namely secure, avoidant and resistant attachment.

Among the three attachment styles, secure attachment was seen as the ideal pattern. Ainsworth observed that securely attached infants had caretakers that would respond quickly and consistently to their needs. The infant would therefore learn that their caregiver was dependable, and use the caregiver as a safe base for exploration. The infant would cry upon separation with the caretaker, but be comforted at the caretaker's return. Infants with insecure attachments would either have an avoidant or resistent attachment. The caretakers of avoidant attached infants would be unresponsive to the infant's needs, whereas the caretakers of resistant attached infants would vary between satisfactory and inadequate responses to their needs. Avoidant attached infants would therefore learn to believe that their communication of needs had no influence on the caregiver or situation. They would not cry on separation with the caregiver, and would ignore the caregiver when the caregiver returned after the separation. Resistant attached infants, on the other hand, would cry when its caregiver left, and be difficult to comfort at the caregiver's return.

The Internal Working Model of Self and Other

Attachment patterns, such as those identified by Ainsworth, are according to attachment theory internalised and become a part of a persons *internal working models of self* and *other* (Bretherton, 1991). The child's expectations of the caretaker's availability and responsiveness to its needs are internalised, and forms the child's cognition about its lovableness and worthiness, hence becoming a part of the

child's *internal working model of self* (Cassidy, 1990). Furthermore, the child's experiences creates a prototype for expectations and interpretations of future relationships, forming the child's *internal working model of other*. In this way, through the child's experiences with its attachment figure during childhood, the child eventually constructs an image of itself and the world (Bretherton, 1991). Although not completely static, attachment patterns are assumed to operate rather automatically, and can be difficult to change (Hart & Schwartz, 2009).

Based on the theory of internal working models of self and other, Bartholomew and Horowitz (1991) developed an attachment model in adults differentiating between a positive or negative view of self and a positive or negative view of other. Their dichotomisation of the self and other, lead them to propose four attachment styles: 'Secure', 'Dismissive', 'Preoccupied' and 'Fearful'. A positive internal working model of self would indicate a 'Secure' or 'Dismissive' attachment style. An individual with a positive internal working model of self, who also has a positive internal working model of other, would have a 'Secure' attachment form, and be comfortable with intimacy and autonomy. On the other hand, if that positive internal working model of self were combined with a negative working model of other, this would indicate a 'Dismissive' attachment style. A person with a 'Dismissive' attachment style would have a sense of valuableness, but hold negative assumptions of others, leading to dismissal of intimacy and counter-dependence in their relationships.

A negative internal working model of self would indicate either a 'Preoccupied' or 'Fearful' attachment pattern. An individual with a negative internal working model of self, but a positive internal working model of other, would adapt a 'Preoccupied' attachment style. This individual would have a sense of unworthiness, but a positive evaluation of others, and hence become preoccupied with relationships, striving for validation from others in order to feel a sense of loveability. An individual with both a negative working model of self and other would have a 'Fearful' attachment style.

This combination of characteristics would include a sense of unworthiness and negative expectations of other, and lead to a fear of intimacy and social avoidance in relationships.

Adolescent Relationships

Adolescence is a developmental period in which interpersonal relations and social roles change. Described by Erikson (1968) as a "psycho social moratorium", it is a period of time in which the adolescent seeks an identity from outside the family unit and in a broader context. Although parents continue to provide a "secure base" for adolescents (Allen et al., 2003), focus shifts from the parental relationship to the relationship with friends and peers. In this sense, adolescence marks a transition from dependence on parents to an "interdependence", where the adolescent learns to depend on a greater network of attachment figures (Daniel, Wassell, & Gilligan, 1999).

In order to map the changes in interpersonal relationships during adolescence, Hersoug and Ulberg (2012) developed a self-report instrument capturing adolescents' reported importance of relationships with friends, siblings and parents. The instrument is called the Adolescent Relationship Scale (ARS), and asks the respondents to evaluate the mutuality of their relationships. For example, when assessing the relationship with friends, it asks the respondent to measure both "how much your friends mean to you", and "how much you mean to your friends". In this way, the ARS captures both the respondents perceived quality of the relationship and the respondents expectation of the reciprocity in the relationship.

In theoretical terms, the ARS can be viewed through the lenses of the internal working model of self and other. The item measuring "how much your friendship mean to you" can be understood as an indication of the individual's working model of self, and

the item measuring "how much you mean to your friends" can be understood as an indication of the individual's working model of other. In this sense, the ARS can be used to indicate an individual's attachment style as defined by Bartholomew and Horowitz (1991), and determine a 'Secure', 'Dismissive', 'Preoccupied' and 'Fearful' attachment style in that individual. For example, a high score on the item "how much your friendship means to you" combined with a low score on "how much you mean to your friends", could indicate a positive internal working model of self and a negative internal working model of self. This combination of characteristics could be seen through the lens of Bartholomew and Horowitz's 'Preoccupied' attachment style, and could indicate that an individual strives for validation from their friends in order to feel a sense of self-worth.

The Relationship with Siblings and Friends

One of the relationships that changes during adolescence, is the sibling relationship. From being close in childhood, adolescence marks a shift towards a more distant relationship (Kim et al. 2006), before finding back to one another in adulthood (Cicirelli, 1995). The adolescent sibling relationship has been tied to the parent-adolescent relationship both empirically and theoretically. Research has found that a secure attachment between the parent and adolescent is associated with increased warmth and intimacy in sibling relationships (Feinberg et al. 2003; Schneider, Atkinson, & Tardif, 2001; Voorpostel and Blieszner, 2008), and that negative parent-child relationships are associated with negative sibling relationships (McGuire, McHale & Updegraff, 1996). This finding has theoretical backing in attachment theory, stating that the parent-child relationship shapes an internal working model of self and other, that determines the relationship with other, including siblings (Boer, Goedhart & Treffers, 1992). Interestingly, however, it has also been found that siblings who are neglected by their parents, tend to have warm and intimate relationships (Voorpostel and Blieszner 2008). These findings support a theory called

the compensation hypothesis of siblings, stating that siblings who are victims of harsh parenting may become close as a result of seeking comfort in one another (Bank and Kahn, 1982).

Another relationship that changes during adolescence is the relationship with friends. As focus shifts from the parental relationship to the relationship with friends and peers, adolescents seek an identity in the context of their friendships (Erikson, 1968). Research has documented a link between parent-adolescent attachment and the quality of friendships in adolescence (Boling et al., 2011; Lieberman, Doyle & Markiewicz, 1999). Research supports a connection between secure attachment in childhood and higher quality friendships in adolescence (Zimmermann et al., 1997) and that adolescents' thoughts and feelings about close relationships are "powerfully influenced by their early as well as their later relationships with mother and father" (Grossmann, Grossmann & Kindler, 2005, pp 98). A connection has been found between the attachment with father and the attachment with friends in adolescence (Zimmerman, 2004), and more attention to the different roles of paternal and maternal attachment in adolescent is required (Liu, 2006).

Parental Bonding

In 1979 Gordon Parker and his colleagues offered a lens through which to understand the parental attribution of the child-parent relationship. Through two dimensions of care-neglect and control-autonomy, he proposed four styles of parenting. The first dimension of care-neglect is about the degree of affection, warmth and closeness shown by the parent. The second dimension of control-autonomy is about the degree to which the parent allows independence. The ideal parenting style would indicate a combination of high levels of care and a low levels of control exhibited by the parent, and would lead to what Parker referred to as 'Optimal Bonding' with the child. However, if the parent exerts high levels of care combined with high levels of control, this would indicate a bonding patterns called 'Affectionate constraint'. A parent with a

parenting style that contains low levels of care, can either lead to bonding patterns of 'Absent Bonding', which consists of low levels of care and low levels of control, or the parenting style associated with worst outcomes, namely 'Affectionless Control', which consists of low levels of care and high levels of control (Parker, Tupling & Brown, 1979).

Parker et al. (1979) developed a self-report form complementing his theory that levels of parental care and control determine the nature of the child-parent bond. The form is called the Parental Bonding Instrument (PBI), and retrospectively measures the levels of care and control an individual received in childhood. Research has found that the reported levels of care and control in parenting styles, as measured by the PBI, have been theoretically and empirically linked to children's mental health and future relationships. Connections have been made between parental 'Affectionless control' and depression (Parker, 1983). Adults with 'Optimal bonding' in childhood are thought to have a higher quality in intimate relationships in adulthood (Parker, Tupling & Brown, 1979). The connection between parenting styles in childhood and relationship quality in adolescence, however, requires further clarification.

Based on prior research showing a connection between parenting styles in childhood and relationships with others later in life, this paper will look at the relationship between parentings styles, characterised as warmth and control, and the reported importance of relationships with friends and siblings in adolescents.

It will look at the following questions:

- a) Whether there is a correlation between reported level of parental care and control and the reported importance of friendship in adolescents.
- b) Whether there is a correlation between the reported level of parental care and control and the reported importance of relationships with siblings in adolescents.

By addressing these questions, this paper aims to contribute to reducing the gap in knowledge regarding the connection between parenting styles in childhood and relationships in adolescence.

Method

Study design

In the current study, data from The First Experimental Study of Transference Work -In Teenagers (FEST-IT) was used (Ulberg, Hersoug & Høglend, 2012). FEST-IT is a randomised, controlled study of psychodynamic psychotherapy for adolescents with depression, and a collaborative study between the Institute of Clinical Medicine at the University of Oslo and the Clinic for Mental Health and Addiction at Vestfold Hospital. Ethics approval for the current study was obtained from the Regional Committee for Medical and Health Research Ethics (REC).

Link to the FEST-IT study protocol: https://www.med.uio.no/klinmed/forskning/prosjekter/fest-it/pdf/fest-it protocol.pdf.

Patients

The patients were the 70 adolescents included in FEST-IT. One patient withdrew consent, and one patient did not fill in the PBI and ARS self-report forms relevant for the current study. Hence, there were 68 patients, of which 57 patients were female and 11 were male. They attended lower- or upper secondary school and were aged 16–18 years. The patients were recruited through their referral to the Child and Adolescent Outpatient Clinics in the South-Eastern Health Region, Norway, which represents both urban and rural areas.

Adolescents with a current Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, (DSM-IV; American Psychiatric Association, 2000) unipolar Major Depressive Disorder diagnosis were included, whereas patients with generalised learning difficulties, a pervasive developmental disorder, psychosis or substance abuse were excluded. Patients with a Beck Depression Inventory (BDI)-score above

10 and/or a Montgomery and Åsberg Depression Rating Scale (MADRS)-score above 15 were selected. All patients signed an informed consent. Some pre-treatment characteristics that were assessed at baseline are summarised in Table 1.

	Total (n=68)
	Mean (SD)
Age	17.3 (0.7)
PFS	61.0 (4.9)
GAF	59.5 (5.3)
IIP-C	1.3 (0.4)
GSI	1.3 (0.5)
BDI	28.6 (9.1)
MADRS	22.2 (5.5)
	N (%)
Female	57 (84)
Axis I diagnoses*	68 (100)
Depressive disorder	68 (100)
Social Phobia	19 (28)
Panic Disorder	13 (19)
General Anxiety	17 (25)
Eating disorder	2 (3)
PTSD	2 (3)
More than two axis I diagnoses	17 (25)
Axis II diagnoses*	30 (44)
Depressive	24 (35)
Avoidant	19 (28)
Negativistic	3 (4)

Obsessive compulsive	3 (4)
Paranoid	3 (4)
Dependent	2 (3)
Borderline	1 (1)
Histronic	1 (1)
Schizoid	1 (1)
More than one axis II diagnoses	17 (25)

Table 1. The patients' pre-treatment characteristics at baseline. Mean scores (standard deviation) of Psychodynamic Functioning Scale (PFS); Global Assessment of Functioning (GAF) (n = 47), Inventory of Interpersonal Problems—Circumplex (IIP-C), Global Severity Index (GSI), Beck Depression Inventory (BDI) and Montgomery and Åsberg Depression Rating Scale (MADRS)-score. Diagnoses as percentage, according to *Mini International Neuropsychiatric Interview.

Instruments

Parental Bonding Instrument

The Parental Bonding Instrument (PBI) is a psychometric retrospective self-report measure used to assess the parental contribution to the parent-child bond (see appendix A). It asks respondents to recall the level of care and protection shown by their parents during the first 16 years of their lives. Each parent is rated separately. It consists of 25 items, where each statement is scaled with a 4-point Likert format ranging from "very like" to "very unlike" the parent that is being rated. 12 items assess the degree of care, i.e. the degree of affection, warmth and closeness shown by the parent, and 13 items assess the degree of protection, i.e. the degree to which the parent allows autonomy and independence. Two scores are obtained for each parent: one care and one control score.

In the present study, a Norwegian-validated PBI was used (see appendix B). Parker, Tupling & Brown's (1979) scoring manual was used to assess the degree of parental bonding (see appendix A). The Norwegian-validated PBI is incompatible with the scoring manual on two points. Hence, adjustments to the original data were made. First, the numbers assigned to the 4-point Likert format in the scoring manual are Very like =3, Moderately like=2, Moderately unlike =1, Very unlike=0. In the applied PBI they are Very like =1, Moderately like=2, Moderately unlike =3, Very unlike=4. Therefore, the Likert format was changed from 1-4 to 3-0 in order for the data to fit Parker et al.'s scoring instructions. Secondly, in Parker's et al.'s original PBI items 1, 5, 6, 8, 9, 10, 11, 12, 13, 17, 19, 20 and 23 are positive statements and items 2, 3, 4, 7, 14, 15, 16, 18, 21, 22, 24, 25 are negative statements. In the Norwegian translation, however, items 1, 2, 5, 6, 9, 10, 11, 12, 13, 14, 17, 18, 19, 20, 23, 24 were positive statements and items 3, 4, 7, 15, 16, 21, 22, 24, 25 where negative statements. For example, in Parker et al.'s original PBI item 2 is worded as a negative statement: "[my mother/father] did not help me as much as I needed". In the Norwegian-validated PBI, however, the same item is worded as a positive statement: "[my mother/father] helped me as much as I needed". Therefore, when scoring the Norwegian-validated PBI, items 3, 4, 7, 15, 16, 21, 22, 24, 25 were inverted, rather than 2, 3, 4, 7, 14, 15, 16, 18, 21, 22, 24, 25 as is instructed in Parker et al.'s scoring manual.

Adolescent Relationships Scale

The Adolescent Relationship Scale (ARS) is a visual analogue self-report scale from 0–10 that assesses the mutual quality of relationships (Hersoug & Ulberg, 2012) (see Appendix C). It consists of nine statements, of which eight statements are presented in pairs and assess the importance of the patient's relationship with their mother, father, siblings and friends. The patients assess both their own view on the importance of the relationship (i.e. "How much do your siblings mean to you?") and their view on the relationship's reciprocity (i.e. "How much do you mean to your siblings?"). The

ninth statement assesses the participant's perceived quality of life ("What is your quality of life at the moment").

In the present study the first four patients included in the study filled in a version of the ARS that assessed the importance of parents as a unit, rather than the importance of mother and father separately. These were discarded and there are therefore 64 patients, rather than 68, that have filled in the four statements assessing their relationships to their mother and father. Furthermore, seven of the patients reported having no siblings, and the assessment of importance of siblings therefore had 61 patients.

Procedure

At the first encounter, the patients filled in a BDI self-report form and the therapist assessed the patient through MADRS. Patients with a BDI-score above 10 and/or a MADRS-score above 15 were selected. The selected patients were then informed of the study and gave written informed consent. After consent was given, the participants partook in a pre-treatment evaluation (baseline) with an external evaluator blinded for randomisation, where they were diagnostically interviewed using the Mini International Neuropsychiatric Interview (M.I.N.I.) 6.0.0, (Sheehan and Lecrubier, 2010), an interview tool used to diagnose psychiatric symptoms according to DSM-IV, and the Structured Interview for DSM-IV Personality (SIDP-IV) (Pfohl, Blum & Zimmerman, 1997). Patients that met the criteria for major depression on the M.I.N.I. were selected and later randomised. In addition to the M.I.N.I. and the SIDP-IV, the patients were during the pretreatment evaluation assessed through a number of measures, therapist questionnaires and self-report questionnaires, such as PBI and ARS. The patients were asked to complete the questionnaires individually in the presence of an evaluator.

Statistical analysis

The software in the study was SPSS 18. Variables from the PBI were maternal and paternal care, and maternal and paternal control. High care and control levels were determined according to cutoff points established by Parker, et al. (1979). Scores above 27/24 indicate high levels of maternal/paternal care, and scores above 13.5/12.5 indicate high maternal/paternal overprotection. Variables from the ARS were individual items such as "What is your quality of life like now". A Pearson's correlation was run to assess the relationship between the variables from the PBI and the items of ARS. The correlation between each variable was analysed.

Role of the funding source

The FEST-IT study was funded by grants from Vestfold Hospital Trust, The University of Oslo, The MRK Foundation and Josef and Haldis Andresens Legat. The funder of the study had no role in study design, data collection, data analysis, data interpretation, or writing of the report. The corresponding author had full access to all the data in the study and had final responsibility for the decision to submit for publication.

Results

The mean PBI scores are shown in table I. The mean scores of both maternal and paternal care/control are below/above cut-off levels, indicating low levels of care and high levels of control in both mothers and fathers. Mothers are perceived as both more caring and more controlling than fathers.

Care	Overprotection
Mean (SD)	Mean (SD)

Maternal	26,2 (7)	15,6 (7,5)
Paternal	22,7 (7,9)	12,8 (5,8)

Table 2. Parental Bonding Instrument mean scores (standard deviations) in the First Experimental Study of Transference Interference - In Teenagers (FEST-IT).

Based on their maternal and paternal care and control scores, patients were assigned to one of four PBI quadrants. Table 3 presents PBI score distributions for the four types of parental bonding. The distribution among affectionate constraint and affectionless control is similar for paternal and maternal bonding. However, more patients reported optimal bonding with their mother, and more participants report absent bonding with their father.

	Optimal	Absent	Affectionate	Affectionless
	bonding N (%)	bonding N (%)	constraint N (%)	control N (%)
Maternal	28 (41)	6 (9)	14 (21)	20 (29)
Paternal	21 (31)	14 (21)	13 (19)	20 (29)

Table 3. Parental Bonding Instrument score distribution as percentage for the four types of parental bonding in the First Experimental Study of Transference Interference - In Teenagers (FEST-IT).

The mean ARS scores are shown in table 4. There is an even distribution in the importance of siblings and parents among the participants. However, the statement regarding quality of life and how much you mean to your friends have lower means.

	N	Mean (SD)
What is your quality of life like now?	68	4,5 (1,6)

The importance of friends

How much do your friends mean to you?	68	8,5 (1,5)
How much do you mean to your friends?	68	6,8 (2,1)
The importance of siblings		
How much do your siblings mean to you?	61	8,7 (1,8)
How much do you mean to your siblings?	61	8,0 (2,1)
The importance of mother		
How much does your mother mean to you?	64	8,7 (1,8)
How much do you mean to your mother?	64	9,1 (6)
The importance of father		
How much does your father mean to you?	64	8,4 (2,1)
How much do you mean to your father?	64	8,4 (2,2)

Table 4. Adolescent Relationships Scale (ARS) mean scores and standard deviations in the First Experimental Study of Transference Interference - In Teenagers (FEST-IT).

In table 5, the correlations between ARS scores and parental bonding are presented. There is a statistically significant correlation between maternal bonding and reported quality of life. Furthermore, there is a statistically significant negative correlation between maternal overprotection and reported importance of friends, and a statistical significant positive correlation between paternal care and reported importance of siblings. There is a statistically significant positive correlation between maternal care and reported importance of both mother and father, and between paternal care and reported importance of both mother and father. There is a statically significant negative correlation between maternal control and reported meaning to mother.

Maternal	Maternal	Paternal	Paternal
Care	Control	Care	Control

What is your quality	0,308*	-0,266*	-0,041	0,035
of life like now?				
How much do your	0,145	-0,352**	0,089	0,080
friends mean to				
you?				
How much do you	0,196	-0,269*	-0,034	0,073
mean to your				
friends?				
How much do your	-0,067	-0,139	0,278*	-0,183
siblings mean to				
you?				
How much do you	0,175	-0,157	0,314*	-0,127
mean to your				
siblings?				
How much does	0,600***	-0,094	0.505***	0.083
your mother mean				
to you?				
How much do you	0,541**	-0,248*	0,351**	-0,024
mean to your				
mother?				
How much does	0,398**	-0,31	0,625**	-0,085
your father mean to				
you?				
How much do you	0,571**	-0,011	0,583**	-0,057
mean to your				
father?				

Table 5. Correlation coefficients (Pearson r) between Adolescent Relationship Scale and maternal and paternal care and control in the First Experimental Study of

Transference Interference - In Teenagers (FEST-IT). *=Statistically significant at p < .05 level (2-tailed). **=Statistically significant at p < .001 level (2-tailed).

Discussion

The main aim of the current study was to determine the relationship between parentings styles, characterised as warmth and control, and the reported importance of relationships with friends and siblings.

Regarding the question on the relationship between parenting styles and the reported importance of relationships with friends, a correlation was found between high control in mother and reported low importance of relationships with friends. This finding supports arguments in attachment theory that parental control and care are related to the child's development of an internal working model of self and other, which determines their ability to create meaningful relationships later on in life. It further indicates that the attachment biological system developed in childhood, provides the child with the tools to, and a safe base from which to, explore. There was not, however, found a negative correlation between paternal control and relationships with friends, supporting previous findings that high maternal control has a greater negative affects on children than high paternal control, and that high maternal control is less tolerated in mothers than in fathers (Overbeek et al., 2007, Thomasgard & Metz, 1993). It is however, important to note that research has found that the attachment to the same-sex parent has a stronger connection with relationship to peers than the opposite sex-parent (Liu, 2006). As 84 % of the patients in this study are female, this could provide an alternative explanation model to why maternal, and not paternal, control had a negative correlation with relationship with friends.

The measurement of control in the PBI has limitations. Firstly, it has been suggested that high levels of high maternal care may be able to temper the negative affects of maternal control, and that the exertion of control can vary in nature, from intrusiveness to consistent boundary setting (Wilhelm, Gillis & Parker, 2016). This is an important aspect that the PBI does not differentiate. Another interesting finding regarding the dynamics of control is that in a family where one parent is overly-controlling, the other parent is often "effectively absent" from the parent-child relationship (Green & Beall, 1962). In research, it can thus be difficult to identify whether it is the high control in the one parent or the absence in the other parent that has a negative affect on the child.

With respect to the question regarding the relationship between parenting styles and the reported relationship with siblings, a positive correlation was found between high paternal care and reported importance of relationships with siblings. This finding supports attachment theory's suggestion that behaviours in the parent-child relationship are replicated in the sibling relationship. Although research has found an association between secure parent-adolescent attachment and increased warmth and intimacy in sibling relationships (Feinberg et al. 2003; Schneider, Atkinson, & Tardif, 2001; Voorpostel and Blieszner, 2008), no relationship has previously been found between sibling relationship and paternal parenting style specifically, to the best of my knowledge. Therefore, this paper offers an original finding, and calls for future research to look at the maternal and paternal attributes to the parental bond separately, rather than one entity, when determining its connection with adolescent relationships.

As the patients in the study were all diagnosed with a major depressive disorder, attention must be paid to the means of the patient's PBI-scores. The means of the levels of parental care and control were below and above cut-off values respectively, suggesting generally low levels of care and high levels of control in the parents of

depressed adolescents. This finding supports the suggestion of attachment theory that parenting style shapes an internal working model of self and other in the child, that affect's ones disposition to mental health problems such as depression later in life. Furthermore, when looking and the relationship between the items of ARS and PBI, a correlation was found between the adolescents' reported quality of life and maternal parenting style. This finding suggests that high levels of care and low levels of control in mother are related to the adolescent's wellbeing. No correlation was found, however, between reported quality of life and paternal parenting style. These findings support previously theoretical (Bowlby, 1969) and empirically grounded (Heider, et al., 2006) arguments stating that maternal parenting style has a greater effect on the child's well-being than paternal parenting style. This argument however, is strongly disputed, as fathers are underrepresented in research on parenting and the parentinfant relationship (Flouri & Buchanan, 2003).

Focus must also be given to the mean scores of the ARS. The ARS scores of the patients in the current study were fairly similar to the ARS scores of non-depressed adolescents, as found by Hersoug and Ulberg (2012). This finding contrasts with literature stating that depression may have a negative impact on adolescents' interpersonal relationships (Hersoug & Ulberg, 2012). Two items of the ARS in the current study had seemingly lower scores than the findings made by Hersoug and Ulberg (2012). Firstly, and perhaps unsurprisingly, the mean scores of the item regarding the patients' quality of life now were lower than in non-depressed adolescents. Secondly, and rather interestingly, the patients in the current study had lower mean scores of the item asking how much they mean to their friends, but not of the item asking how much their friends mean to them. This finding could indicate that adolescents with depression have a negative internal working model of self, but a positive internal working model of other, with respect to friendships, and seek validation from others in order to feel a sense of self-worth. In future research, further attention could be paid to the relationship between a 'Preoccupied' attachment

style with friends, as defined by Bartholomew and Horowitz (1991), and depression in adolescence.

There are methodological limitations to this study. The first limitation concerns attachment methodology in general, which has adopted a large variation in research designs, making the determinants of attachment unclear. (Martin, Carlson & Buskist, 2007). Secondly, this study has used the PBI as a means to obtain attachment information. According to Manassis et al. (1999) using the terms 'bonding' and 'attachment' interchangeably result in confusion, and that the Adult Attachment Interview (AAI) is a more suitable method in which to study attachment. It would therefore be of interest to see if the current paper's finding would be corroborated using the AAI instead of the PBI.

Although the PBI is thought to be robust and has been "evaluated extensively for its psychometric properties, has been used with a variety of populations, and has demonstrated good retest reliability, internal consistency, and validity" (Murphy, Wickramaratne & Weismann, 2010), the study did not incorporate gender, age, cultural, or socioeconomic differences in the patients, and age and gender differences between siblings. Furthermore, as a self-report questionnaire, it may be subject to personal bias and faulty memory (Gillham, Putter & Kash, 2007). This is of particular relevance in the current study, as the patients were all diagnosed with a major depressive disorder, and depression can bias memory towards negative events (Beck, 2002). Furthermore, the study did not incorporate the patients' developmental period. Adolescents have been found to have a more negative perception on their relationship with their parents, and have reported higher levels of conflict and lower levels of warmth than they did a few years prior to adolescence (McGue et al., 2005). It has been argued that adolescence, and its inherent mission to seek an identity outside of

the family unit, is incompatible with a warm relationship with parents and inevitably leads to conflict (Martin, Carlson & Buskist, 2007).

It is of importance to remember that this study offers a take on correlation, but not causality. This study examined the relationship between parenting styles and relationship with friends and siblings, and the directionality of the influence cannot be determined. For example, the finding of a relationship between high levels of paternal care and a close relationship with siblings, may reflect the possibility that a close relation between sibling leads to seeing a father in a warmer light. It is further important to note that less patients reported on their sibling relationships than on other relationship. This should be adjusted in future research.

Conclusion

Through the lense of attachment theory, the current study has aimed to further the understanding of the connection between parenting styles in childhood and relationships in adolescence. Understanding patterns in interpersonal relationships are important in psychodynamic theory, and can have clinical significance in the treatment of adolescents with depression. Results revealed a statistically significant negative correlation between high levels of maternal control and reported importance of friendship, and a statistically significant positive correlation between high levels of paternal care and reported importance of relationships with siblings. These findings support attachment theory's argument that the child-parent bond becomes internalised, and creates an internal working model of self and other that determines relationships later in life.

Interestingly, the findings illuminate a difference regarding paternal and maternal parenting styles and their connection to the adolescents' relationships with friends and siblings. Maternal parenting style was linked to the adolescents' relationships with friends, whereas paternal parenting style was linked to adolescents' relations with their siblings. To the best of my knowledge, this pattern of relationships has not been found in previous research, and should be investigated further. The current paper calls for paternal and maternal parenting styles to be studied separately, rather than as one unit, in future research regarding adolescent relationships.

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Appendix A, Parker, Tupling & Brown's (1979) original Parental Bonding Instrument and scoring manual.

PARENTAL BONDING INSTRUMENT (PBI)



Authors

Gordon Parker, Hilary Tupling and L.B. Brown

Variables measured

Two scales termed 'care' and 'overprotection' or 'control', measure fundamental parental styles as perceived by the child. The measure is 'retrospective', meaning that adults (over 16 years) complete the measure for how they remember their parents during their first 16 years. The measure is to be completed for both mothers and fathers separately. There are 25 item questions, including 12 'care' items and 13 'overprotection' items.

Scoring instructions

Unlike the Intimate Bond Measure (IBM), not all items are scored in the same direction.

Care	
Items: 1, 5, 6, 11, 12, 17:	Very like = 3 Moderately like = 2 Moderately unlike = 1 Very unlike = 0
Items: 2, 4, 14, 16, 18, 24 Overprotection	Very unlike = 3 Moderately unlike = 2 Moderately like = 1 Very like = 0
Items: 8, 9, 10, 13, 19, 20, 23	Very like = 3 Moderately like = 2 Moderately unlike = 1 Very unlike = 0
Items: 3, 7, 15, 21, 22, 25	Very unlike = 3 Moderately unlike = 2 Moderately like = 1 Very like = 0

Parental bonding quadrants In addition to generating care and protection scores for each scale, parents can be effectively "assigned" to one of four quadrants:							
"affectionate constraint" = high care and high protection	"affectionless control" = high protection and low care						
"optimal parenting" = high care and low protection	"neglectful parenting" = low care and low protection						
Assignment to "high" or "low" categories is based on the following cut-off scores:							
 For mothers, a care score of 27.0 and a protection score of 13.5. For fathers, a care score of 24.0 and a protection score of 12.5. 							

Populations measured

Original data [1] were generated from 150 subjects including students and nurses and 500 general practice attenders. Numerous other populations have been studied subsequently.

Reliability and validity

The PBI has been found to have good reliability and validity based on several studies.

In the original study [1] the PBI possessed good internal consistency and re-test reliability. Further reassuring data have been derived by examining the test-retest reliability of the PBI over extended periods, and we will shortly be publishing data for a 20-year interval. The PBI has been shown to have satisfactory construct and convergent validity and to be independent of mood effects [see 2].

A copy of the full 25-item forms for scoring mothers and fathers is attached below. Please follow the scoring instructions. The standard application asks subjects to score their biological parents (one for each form) as the subject remembers them in their first sixteen years. In some studies, other "parent figures" have and can clearly be rated.

A modified version of the PBI (the MOPS or Measure of Parenting Style) was developed in 1997 for two purposes. It overcame one of the PBI limitations in having some 'double negative' items, and which can cause some confusion. Thus, all items are constructed in a direct way. Secondly, while preserving the 'care' and 'control' scales, they are considerably reduced in terms of the numbers of items. Thirdly, there is an 'abuse' scale. Thus, the MOPS is described after the PBI measure.

The PBI is not held under copyright. Therefore, clinicians and researchers are free to use the measure without obtaining permission.

[1] Parker, G., Tupling, H., and Brown, L.B. (1979) A Parental Bonding Instrument. British Journal of Medical Psychology, 1979, 52, 1-10.

[2] Parker, G. (1983) Parental Overprotection: A Risk Factor in Psychosocial Development, Grune & Stratton, New York. A monograph describing the development of the PBI and its application across a wide range of psychiatric conditions and other disorders, as well as validity studies]

MOTHER FORM

This questionnaire lists various attitudes and behaviours of parents. As you remember your MOTHER in your first 16 years would you place a tick in the most appropriate box next to each question.

	Very like	Moderately like	Moderately unlike	Very unlike
Spoke to me in a warm and friendly voice				
2. Did not help me as much as I needed				
3. Let me do those things I liked doing				
4. Seemed emotionally cold to me				
Appeared to understand my problems and worries				
6. Was affectionate to me				
7. Liked me to make my own decisions				
8. Did not want me to grow up				
9. Tried to control everything I did				
10. Invaded my privacy				
11. Enjoyed talking things over with me				
12. Frequently smiled at me				
13. Tended to baby me				
14. Did not seem to understand what I needed or wanted				
15. Let me decide things for myself				
16. Made me feel I wasn't wanted				
17. Could make me feel better when I was upset				
18. Did not talk with me very much				
19. Tried to make me feel dependent on her/him				
20. Felt I could not look after myself unless she/he was around				
21. Gave me as much freedom as I wanted				
22. Let me go out as often as I wanted				
23. Was overprotective of me				
24. Did not praise me				
25. Let me dress in any way I pleased				

FATHER FORM

This questionnaire lists various attitudes and behaviours of parents. As you remember your FATHER in your first 16 years would you place a tick in the most appropriate box next to each question.

	Very like	Moderately like	Moderately unlike	Very unlike
Spoke to me in a warm and friendly voice				
2. Did not help me as much as I needed				
3. Let me do those things I liked doing				
4. Seemed emotionally cold to me				
5. Appeared to understand my problems and worries				
6. Was affectionate to me				
7. Liked me to make my own decisions				
8. Did not want me to grow up				
9. Tried to control everything I did				
10. Invaded my privacy				
11. Enjoyed talking things over with me				
12. Frequently smiled at me				
13. Tended to baby me				
14. Did not seem to understand what I needed or wanted				
15. Let me decide things for myself				
16. Made me feel I wasn't wanted				
17. Could make me feel better when I was upset				
18. Did not talk with me very much				
19. Tried to make me feel dependent of her/him				
20. Felt I could not look after myself unless she/he was around				
21. Gave me as much freedom as I wanted				
22. Let me go out as often as I wanted				
23. Was overprotective of me				
24.Did not praise me				
25. Let me dress in any way I pleased				

Appendix B , The Norwegian validated Parental Bonding Instrument.

PBIF

FAR

Dette spørreskjemaet er en liste over forskjellige holdninger og atferd hos foreldre. Vær vennlig og angi hvordan du husker din FAR var mot deg de første 16 år av ditt liv. Merk av det tallet som kommer etter hvert spørsmål.

		Stemmer		
	svært godt	ganske godt	ganske dårlig	dårlig
Snakket til meg med en varm og vennlig stemme	1	2	3	4
2 Hjalp meg så mye som jeg trengte	1	2	3	4
Lot meg få gjøre det jeg hadde lyst til	1	2	3	4
4 Virket følelsesmessig kald mot meg	1	2	3	4
5 Syntes å forstå mine problemer og bekymringer	1	2	3	4
6 Var kjærlig mot meg	1	2	3	4
7 Likte at jeg tok mine egne beslutninger	1	2	3	4
8 Ville at jeg skulle bli voksen	1	2	3	4
9 Prøvde å kontrollere alt jeg gjorde	1	2	3	4
0 Invaderte mitt privatliv	1	2	3	4
1 Likte å diskutere ting med meg	1	2	3	4
2 Smilte ofte til meg	1	2	3	4
3 Hadde en tendens til å behandle meg som en liten unge	1	2	3	4
4 Syntes å forstå hva jeg ønsket eller hadde behov for	1	2	3	4
5 Lot meg bestemme ting selv	1	2	3	4
6 Fikk meg til å føle meg uønsket	1	2	3	4
7 Fikk meg til å føle meg bedre hvis jeg var opprørt	1	2	3	4
8 Snakket ofte til meg	1	2	3	4
9 Forsøkte å gjøre meg avhengig av seg	1	2	3	4
O Følte at jeg ikke kunne passe på meg selv				
uten at han var i nærheten	1	2	3	4
Ga meg så mye frihet som jeg ønsket	1	2	3	4
Lot meg gå ut så ofte som jeg ønsket	1	2	3	4
3 Overbeskyttet meg	1	2	3	4
24 Ga meg mye ros	1	2	3	4
25 Lot meg kle meg slik jeg ønsket	1	2	3	4
beldsensor 3.3.94. Oversum Toro Stales				

MOR

Dette spørreskjemaet er en liste over forskjellige holdninger og atferd hos foreldre. Vær vennlig og angi hvordan du husker din MOR var mot deg de første 16 år av ditt liv. Merk av det tallet som kommer etter hvert spørsmål.

			Stemme	er		
		svært godt	ganske godt	ganske dårlig	svært dårlig	
		gout	gout	daing	dating	
1	Snakket til meg med en varm og vennlig stemme	1	2	3	4	
2	Hjalp meg så mye som jeg trengte	1	2	3	4	
3	Lot meg få gjøre det jeg hadde lyst til	1	2	3 -	4	
4	Virket følelsesmessig kald mot meg	1	2	3	4	
5	Syntes å forstå mine problemer og bekymringer	1	2	3	4	
6	Var kjærlig mot meg	1	2	3	4	
7	Likte at jeg tok mine egne beslutninger	1	2	3	4	
8	Ville at jeg skulle bli voksen	1	2	3	4	
9	Prøvde å kontrollere alt jeg gjorde	1	2	3	4	
10	Invaderte mitt privatliv	1	2	3	4	
11	Likte å diskutere ting med meg	1	2	3	4	
12	Smilte ofte til meg	1	2	3	4	
13	Hadde en tendens til å behandle meg som en liten unge	1	2	3	4	
14	Syntes å forstå hva jeg ønsket eller hadde behov for	1	2	3	4	
15	Lot meg bestemme ting selv	1	2	3	4	
16	Fikk meg til å føle meg uønsket	1	2	3	4	
17	Fikk meg til å føle meg bedre hvis jeg var opprørt	1	2	3	4	
13	Snakket ofte til meg	1	2	3	4	
19	Forsøkte å gjøre meg avhengig av seg	1	2	3	4	
20	Følte at jeg ikke kunne passe på meg selv					
	uten at hun var i nærheten	1	2	3	4	
21	Ga meg så mye frihet som jeg ønsket	1	2	3	4	
22	Lot meg gå ut så ofte som jeg ønsket	1	2	3	4	
23	Overbeskyttet meg	1	2	3	4	
24	Ga meg mye ros	1	2	3	4	
25	Lot meg kle meg slik jeg ønsket	1	2	3	4	
Mate	13.94. Oversen Toro Soles					

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Appendix C, The Adolescent Relationship Scale

ARS												
Sett ring rundt det som passer for deg:												
Jente Gutt												
	Hvor gammel er du?											
	16 17 18											
			HVOR I	MYE BE	TYR VE	NNEN	E DINE	FOR DE	G?			
				(Kryss	av på l	linjen r	edenfo	or)				
Svært lite											Svært mye	
3vært lite	0	1	2	3	4	5	6	7	8	9	10	:
			HV/OB	NAVE D	ETVD N	II EOB	VENNE	NE DIN	IE)			
			HVUK						E			
				(Kryss	av pa i	iinjen r	edenfo	or)				
Svært lite	Luuu										اسس Svært mye	2
Sværente	0	1	2	3	4	5	6	7	8	9	10	•
			HVOR	MYE E	BETYR N	ИOREN	DIN FO	R DEG	?			
				(Kryss	av på l	linjen r	nedenfo	or)				
Svært lite	0	1	2	3	4	5	6	7	8	9	ىسى Svært mye 10	j
			HVOF	RMYE	BETYR I	FAREN	DIN FO	R DEG	?			
(Kryss av på linjen nedenfor)												
Svært lite	سسا										اسس Svært mye	9
	0	1	2	3	4	5	6	7	8	9	10	

HVOR MYE BETYR DU FOR MOREN DIN? (Kryss av på linjen nedenfor) Svært lite Lucustum Svært mye 1 2 3 4 5 6 7 8 9 10 0 HVOR MYE BETYR DU FOR FAREN DIN? (Kryss av på linjen nedenfor) Svært lite Lummun Svært mye 2 3 4 5 6 7 8 9 10 0 1 HVORDAN ER LIVSKVALITETEN DIN NÅ? (Kryss av på linjen nedenfor) Svært dårlig Lunnston Svært god 0 3 4 5 6 8 9 10 DERSOM DU HAR SØSKEN; FYLL UT DISSE TO LINJENE: HVOR MYE BETYR SØSKNENE DINE FOR DEG? (Kryss av på linjen nedenfor) Svært lite Svært mye 2 3 4 5 6 7 8 9 10

HVOR MYE BETYR DU FOR SØSKNENE DINE?

(Kryss av på linjen nedenfor)