Which Aspects of Early Childhood Experience Predict Romantic Jealousy?
An Investigation of the Effects of Parental Treatment, Sibling Jealousy, and Adult Attachment Style on Adult Romantic Jealousy

Erken Dönem Çocukluk Deneyimlerinin Hangi Yönleri Romantik Kıskançlığı Öngörür?
Ebeveyn Davranışı, Kardeş Kıskançlığı, ve Yetişkin Bağlanma Stillerinin Yetişkin Romantik Kıskançlığına Etkileri Üzerine Bir Araştırma

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ABSTRACT

The purpose of this study was to investigate the developmental origins of romantic relationship jealousy and to explore the extent of the effect of early familial influences in terms of sibling relationships on young adulthood functioning in romantic relationships. The relationships between perceived differential treatment by parents, sibling relationships in childhood, adult attachment style in romantic relationships, and romantic relationship jealousy were examined in a developmental and theoretical context. With this aim, 162 subjects, between the ages of 19-29, who had one sibling, completed Romantic Relationships Scale (RRS), The Marlowe Crowne Social Desirability Scale, Experiences in Close Relationships Scale (ECR), and Sibling Relationships Scale. The first hypothesis proposing that early sibling jealousy would be related to romantic relationship jealousy was not supported. The propositions that relate romantic jealousy specifically to early jealousy over mother or early jealousy over opposite sex parent did not receive encouragement, either. Contrary to expectations, differential treatment was not found to predict romantic jealousy; but what predicted romantic jealousy was found to be anxious attachment only. Anxious attachment, on the other hand, was predicted directly and specifically by perceived maternal differential treatment, which

was also found to predict avoidant attachment through its effects on sibling jealousy. Anxious attachment was also predicted by paternal differential treatment trough its effects on sibling jealousy. As hypothesized, differential treatment was found to be related to sibling jealousy. With regard to the effect of covariates, firstborn individuals and secondborn individuals did not differ significantly in terms of either differential treatment or sibling jealousy, in contrast to expectations. Similarly, the hypothesis that firstborn individuals would report higher levels of romantic jealousy compared to secondborns was not supported, either. The birth order was found to have a significant effect only on perceived paternal differential treatment, with firstborns reporting higher levels compared to secondborns. Gender, also did not have a significant effect on the variables except that females reported significantly higher levels of jealousy over their mothers in the context of sibling relationships compared to males in childhood. Lastly, sex constellation of the sibling dyad, as another potential covariate in the study, failed to have a significant effect on any of the variables of interest.

ÖZET

Bu çalışmanın amacı, romantik ilişkilerdeki kıskançlığın gelişimsel kökenlerini araştırmak ve kardeş ilişkileri açısından erken dönem aile ilişkilerinin genç yetişkinlik dönemindeki romantik ilişkiler üzerine olan etkilerini incelemektir. Ebeveynlerin algılanan kardeşler arası ayrımcı davranışları, erken dönem kardeş kıskançlığı, çocukluktaki kardeş kıskançlığı, romantik ilişkilerdeki bağlanma stilleri, ve romantik ilişkilerdeki kıskançlık arasındaki ilişkiler gelişimsel ve teorik bağlamda incelenmiştir. Bu amaç doğrultusunda, 19-29 yaş arası, bir kardeşi olan 162 kişi Romantik İlişkiler Ölçeği, Marlowe-Crowne Sosyal Beğenilirlik Ölçeği, Yakın İlişkilerde Yaşantılar Envanteri, ve Kardeş İlişkileri Ölçeği'ni doldurmuştur. Sonuçlar, erken dönem kardeş kıskançlığı ile ileriki yaşlardaki romantik kıskançlık arasında bir ilişki olduğunu öne süren ilk hipotezi desteklememiştir. Romantik ilişkilerdeki kıskançlığı erken dönemdeki kardeş ilişkileri bağlamında anne kıskançlığı ya da karşı cins ebeveyn kıskançlığı ile ilişkilendiren önermeler de doğrulanmamıştır. Beklenilenin aksine, romantik ilişkilerdeki kıskançlık ile ebeveynlerin ayrımcı davranışları arasında bir ilişki bulunamazken, romantik ilişkiyi tek öngören etkenin kaygılı bağlanma olduğu bulunmuştur. Kaygılı bağlanmayı ise spesifik ve direkt olarak annenin ayrımcı davranmasının

öngördüğü görülmüştür. Öte yandan, annenin ayrımcı davranması kardeş kıskançlığı üzerindeki etkisi yoluyla da kaçınan bağlanmayı öngörmektedir. Babanın ayrımcı davranması ise kardeş kıskançlığı etkisi yoluyla kaygılı bağlanmayı öngörmektedir. Beklenildiği gibi, ebeveynlerin ayrımcı davranmaları kardeş kıskançlığı ile ilişkili bulunmuştur. Eşdeğişkenlerin etkileri açısından bakıldığında, beklenilenin aksine, ilk çocuklar ile ikinci çocuklar arasında ebeveylerinin ayrımcı davranışları ya da kardeş kıskançlığı açısından bir fark bulunamamıştır. Benzer şekilde, ilk çocukların ikinci çocuklara kıyasla romantik ilişkilerinde daha fazla kıskançlık hissettikleri yönündeki hipotez de doğrulanmamıştır. Doğum sırasının sadece babanın ayrımcı davranışı üzerine anlamlı bir etkisi olduğu bulunmuş; buna göre ilk çocukların ikinci çocuklara oranla babanın ayrımcı davranışını daha fazla deneyimlediklerini bulunmuştur. Cinsiyetin de çalışmanın bütün değişkenleri arasından sadece anne kıskançlığı üzerine anlamlı bir etkisi olduğu bulunmuş; buna göre kadınlar çocukluktaki kardeş ilişkileri bağlamında erkeklere oranla daha fazla annelerini kıskandıklarını belirtmişlerdir. Yine bir eşdeğişken olan kardeş çiftlerinin cinsiyet dağılımının ise çalışmanın hiçbir değişkeni üzerine anlamlı bir etkisi olmadığı bulunmuştur.

Dedicated to my other half,
my beloved sister,
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Life would have been incomplete without her..

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INTRODUCTION

Everybody in the world must have felt jealous at one time or another. Being such a universal emotional experience, it can be a problem both for people who experience it and for those who are the target of reactions of jealous persons. It is such a powerful experience that it can play a part both in the dissolution of relationships and in the fostering of emotional ties between parties in a relationship. Though there is a negative side of jealousy, such as being frequently connected to domestic violence most of the time (Schmidt, Kolodinsky, Carsten, Schmidt, Larson, & MacLachan, 2007; Stets & Pirog-Good, 1987), it is also found to be related to strong love, especially in romantic relationships (e.g. Russell & Harton, 2005).

The universality and prepotency of jealousy as an emotional experience necessitate a general definition of its own in order to differentiate it from another emotional experience, so-called envy, the one that is frequently wrongly called jealousy in everyday language. Envy is a negative feeling directed at another who has something one desires, while jealousy is an emotional experience that takes place when a person fears that he can lose an important relationship or that he has already lost an important relationship to someone else, namely, to a rival (Pines, 1998; Parrott, 1991). It is also defined as a protective reaction against the threat of losing a valued relationship (Clanton & Smith, 1998). Related thoughts, feelings, and/or behaviors constitute these protective reactions whose primary intention is to protect the

relationship or the ego of the partner who perceives threat to the relationship. Envy, on the other hand, is said to arise when a person cannot tolerate what the other has that is lacking in him and also wishes that the superior other would not have it or would lose it (Pines, 1998; Parrott, 1991). The most important distinction between the two is that envy takes place between two people whereas jealousy occurs in a triangular relationship (Pines, 1998). Envy comes about when someone else has what one lacks himself whereas jealousy is related to the loss of a relationship one has. Moreover, jealousy is about the relationships with other people while envy is much more related to the possessions and characteristics of other people. In short, envy is related to not having, while jealousy is a result of having (Anderson, 1987). However, it is crucial to state that the two emotional experiences may co-occur in the form of envy being part of jealousy episodes or each leading to the other (Parrott, 1991).

As for jealousy, the threat of losing an important and valuable relationship to a rival is considered to be a distinctive feature of it since a loss that does not result in the beginning of a similar relationship with a rival is not considered to produce jealousy as in the case of the death of one's partner or rejection by the partner (Mathes, Adams, & Davies, 1985; Hansen, 1991). Similarly Pines (1998) argues that in order for a relationship to generate jealousy, it has to be 'valuable' emotionally, economically or socially such as providing a standard of living and a general lifestyle on the part of the partner. The fact that for some people jealousy consists of fear of being abandoned

while for others it consists of loss of face or the experience of being betrayed demonstrates the varieties in this experience depending on what is valued by individuals (Pines, 1998).

Being such a universal emotional experience, the most common form of jealousy is said to take place between partners in a romantic relationship. However, it is crucial not to underestimate jealousy in other kinds of relationships, such as between siblings, friends, students, etc. (Parrott, 1991). In his conceptualization of jealousy, Tov-Rauch (1980) emphasized the fact that the relationship does not have to involve love and that the rival does not need to be a person in all jealousy situations. For instance, a man can be said to be jealous of his wife's love of school. Thus, the most important definitive feature of jealousy and also the feature that differentiates it from envy is considered to be the existence of a triangular relationship in order for jealousy to come about. The three sides of this triangle are the relationships between the jealous person and the partner, the relationship between the partner and the rival, and the attitudes of the jealous person toward the rival (Tov-Rauch, 1980). The threat that is found in this triangular relationship common to all types of relationships that can produce jealousy is the 'loss of another's attention', rather than the loss of romantic love or public appearance of the relationship (Neu, 1980; Tov-Rauch, 1980). Especially, the loss that is common in all jealousy relationships is formulated to be the loss of 'formative attention' (Tov-Rauch, 1980). Formative attention refers to a kind of attention that maintains part of one's self-concept such that people think of their own qualities and aspects as a result

of their interactions with others. For instance, one can consider himself as a funny person as long as he is in interaction with other people since otherwise, if there are no persons to be funny with, this self-conceptualization would be meaningless. Then, one can argue that 'the need to be needed' is what lies beneath the experience of jealousy as people need others not only in order to confirm but also to create these aspects of themselves. As a result, the threat of losing a stable relationship involving interactions that provide self-definitions means, in fact, the threat of losing the self (Tov-Rauch, 1980).

The preponderance of cases of jealousy in romantic relationships can be clarified with the fact that in romantic jealousy the aspects of self that are threatened are significant and fundamental parts of self-concept. For instance, if a person is jealous of his chess partners' interest in another player, the aspects of self that are said to be threatened are not as significant as the ones in the case of one's partner's interest in a romantic rival. Likewise, in sibling jealousy the threat is said to be on the most significant one, namely the one with parents. The decline of sibling jealousy as one grows older and the rise of romantic jealousy can thus be explained by the decline of parents and increase of romantic partners in maintaining the most significant aspects of the self (Parrott, 1991).

It is known that people desire to be liked by others in addition to their need for feeling accepted and approved by others. In this conceptualization, human relationships make up the core of the self. In line with this, the need for self-integrity moves people to form significant relationships through which they

can obtain self-enhancement and self-verification (Swann, 1987). Jealousy, in this picture refers to a situation in which a partner who is very significant in terms of self-definition behaves in a way that disrupts the integrity of the person and the relationship (Bringle, 1991). In a similar vein, jealousy is characterized by the threats to or loss of aspects of the self; in other words, the threats to self-esteem and the threats to self-concept (White & Mullen, 1989; as cited in White, 1991). Hence, the threats to the self-esteem lie at the heart of jealousy experiences. Denial, derogation or devaluation of the rival are just some of the coping strategies that individuals use in order to decrease these threats and maintain a stable self-system (White, 1991). Altogether, these outline why jealousy is such a powerful and painful emotion for individuals.

The threat that leads to jealousy could also be loss of time or attention due to the intrusion of someone else, i.e. the rival, into the relationship (Aune & Comstock, 1997). The main concern here is "the perceived loss of control over another person's feelings" (Duck, 1986; as cited in Aune & Comstock, 1997, p. 23). However, the loss that is mentioned here is different than grief as the jealousy is a kind of objection to the situation rather than accepting it whereas grief is the result of the acceptance of a loss (Durbin, 1998). Durbin (1998) says that "all jealousy, finally, is a cry of pain" (p. 45).

Jealousy, in general, is an emotional experience that is slightly different from other emotions since, as a word, it is thought to be "explaining" a compound emotional state composed of various negative emotions rather than "describing" a primary emotional state such as "anger" (Hupka, 1984; as cited

in Hansen, 1991, p. 212; Sharpsteen, 1991). As a compound emotional state and a multifaceted construct, it is composed of some components that define it; namely the situation, beliefs and perceptions, affective state(s), and behaviors. The situation is made up of three parties-the person who is jealous, the partner, and the rival. The perceptions and beliefs of the jealous person in this situation are that the person is in an established relationship and that the rival constitutes a threat to their relationship. Affective aspects of jealousy refer to some negative emotions such as fear, anxiety, and helplessness, depending on the characteristics of the situation and perceptions and beliefs of the individual. The behavioral aspect of jealousy includes various types of behaviors ranging from obsessively watching the behaviors of the partner and questioning every action of the partner to blaming the partner angrily and sometimes using physical violence, especially in the case of romantic jealousy (Arnold, 1960; Bowman, 1965; Bringle, Roach, Andler, & Evenbeck, 1977, 1979; as cited in Clarke, 1988; Speilman, 1971; Bryson, 1991). Being a very rich emotional experience, jealousy also includes a kind of resentment toward the rival who, either actually or as imagined by the person, is thought to be a threat in terms of stealing away the partner and leaving the person devoid of what is provided with the relationship (Clanton & Smith, 1998).

Romantic Jealousy

Romantic jealousy appears to be a widespread experience in relationships (Pines & Aronson, 1983). In line with this, several studies report individual differences with regard to the occurrence, intensity and frequency of jealousy experiences in romantic relationship, though there are inconsistencies with respect to their results.

One of the frequently investigated areas of concern appears to be the effect of the length of the relationship on the experience of romantic jealousy. As such, it is asserted that as the relationship develops over time, the experience of jealousy, its expression and perceived appropriateness of expression increases as couples become more dependent on each other, a condition in which threats may lead to more intense feelings (Aune & Comstock, 1997). In contrast, a study by Knox and his colleagues (1999) using college students found that jealousy is more experienced in relationships with shorter duration (a year or less) than in relationships with longer duration (thirteen months or more) consistent with the finding of McIntosch (1989) which asserted that the longer the duration of a relationship, the more secure the individuals involved in the relationship are; and hence the more secure, the more the individuals may become aware that these feelings will dissolve away over time (Knox, Zusman, Mabon, & Shriver, 1999).

Self-esteem, that is, perceived self-worth, has been considered to be one of the most important factors in jealousy with jealous feelings being linked to low self-esteem (McIntosch, 1989; Rauer & Volling, 2007). Accordingly,

Tedeschi anf Lindskold (1976) maintained that people who have low levels of self-esteem are much more likely to be involved in relationships in which they are evaluated positively; and hence, the intrusion of a third party into the relationship is much more threatening for a low self-esteem person as compared to a high self-esteem person who does not need positive evaluations and this kind of a relationship as much as low self-esteem people do (McIntosh, 1989). Moreover, low self-esteem people who have shorter and less stable relationships are more vulnerable to jealousy as their partners are thought to have more opportunities in terms of extradyadic tendencies (Melamed, 1991). However, the relationship between self-esteem and jealousy seems to be somewhat complicated as there are also findings which demonstrate no relationship between the two variables (Mathes & Severa, 1981; as cited in Clarke, 1988; as cited in Buunk, 1997). Likewise, Clanton (1989) maintains that having a high level of self-esteem does not prevent the individual from experiencing jealousy; and moreover, the direction of effect could be the reverse such that jealousy could lead to low self-esteem as well (Pines, 1998).

Another commonly investigated notion in relation to jealousy has been insecurity, which is implied by a position in a relationships dominated by a fear of losing the partner (McIntosh, 1989). It is thought that being in a constant position of insecurity might lead the person to counterbalance these unbearable and uncomfortable feelings of insecurity with feelings of jealousy (e.g. Mead, 1998). Consistently, a positive relationship between levels of insecurity and levels of jealousy has been noted (McIntosch, 1989).

Developmental Conceptualizations of Romantic Jealousy

Developmental theories long ago emphasized the significance of childhood experiences in the formation of adulthood romantic relationships (e.g. Freud, 1905/1962). In this section, psychoanalytic and attachment-related explanations of romantic jealousy will be presented.

Explanations from Psychoanalytic Perspective

The psychoanalytic literature on jealousy mainly centers on the etiology and intrapsychic factors associated with jealousy. The first and foremost explanation in this literature belongs to Freud (1922) who provided a framework for psychoanalytic understanding of jealousy. According to Freud (1922), jealousy is rooted in the Oedipal complex and childhood experiences associated with it or the sibling complex where the central issue is obtaining the love of the opposite sex parent (Pines, 1998). In other words, the child's intrapsychic solution in order to deal with the oedipal conflict with his/her parents leads to different variations of jealousy in terms of quality and quantity with sexual partners when grown up. It is his most widely known proposition that, as children spent nearly all of their time with their parents, they will direct their first sexual stirrings to the closest opposite sex figure, namely the parent of the opposite sex. In the resolution of this crisis, the child has to lose the opposite sex object to his/her rival, to the same sex parent. The existence of a successful rival, namely the same sex parent, the experience of loss of the love object to the rival, the associated feelings of grief and pain are all thought to be

etched into children's inner worlds and then become reactivated in a similar triangular situation in adulthood (Pines, 1998). In adulthood, if a third person appears as a threat to a valued romantic relationship, it is maintained that this old and hurtful wound is opened again and consequently, jealousy is experienced (Freud, 1922; Seidenberg, 1952). Hence, Freud (1922) states that "jealousy is a continuation of the earliest stirrings of the child's affective life" (p. 223).

One of Freud's (1922) major contributions to the understanding of jealousy has been his classification of it into three categories; namely, normal jealousy, projected jealousy, and delusional jealousy. Normal jealousy refers to a reaction in response to an actual threat to one's relationship with a sexual partner. It owes its roots to the Oedipal complex and thus it is not considered to be totally rational or conscious either. A more detailed account of normal jealousy would include grief due to losing the love object, a narcissistic injury, anger at the rival, and self-criticism with regard to the loss. For Freud, normal jealousy is the foundation upon which other types of jealousy come about. Projected jealousy, a more powerful form compared to normal jealousy, is thought to be the reflection of one's own guilt due to the fact that the person has either been unfaithful or had a longing for someone else other than the partner but did not become involved in a relationship; rather he/she projects this betrayal to the partner and blames him/her for his/her own unconscious desires (Freud, 1922). Delusional jealousy, on the other hand, is a type of paranoia and similar to projected jealousy, stems from attraction toward the parent and

repressed wished toward infidelity, however, this time the object is the same sex as the person who experiences jealousy. As this homosexual impulse leads to more anxiety than a heterosexual one, the person uses a defense mechanism through which he/she distorts reality in order to deal with this anxiety (Freud, 1922). Hence, delusional and projected jealousy can be considered as functional in that they protect the person from admitting the guilt related to the unconscious wishes about the members of the opposite or same sex. However, normal jealousy includes a more real concern over the partner's infidelity just like the concerns over the loss of opposite sex parent's attention and love (Freud, 1922).

Following Freud, Jones (1930) made contributions to the understanding of jealousy by explaining the link between the way the feelings are treated with regard to Oedipal issues in childhood and the way issues in similar situations in adulthood are treated (Clarke, 1988). Similar to Freud, Jones (1930) defined the experience of jealousy in terms of grief, hate toward the rival, and a decreased sense of self-worth. Most importantly, he explained the development of jealousy as the inevitable result of repressed guilt due to impulses aimed at possession of the mother. In other words, the relationship between longing for the idealized love and feeling morally bad due to repressed guilt results in the development of jealousy (Clarke, 1988).

As regards the genetic roots of jealousy, Freud and Jones emphasize the oedipal source of jealousy while Fenichel and Riviere take a stance that focuses much more on the preoedipal origins of jealousy (Spielman, 1971). Spielman

(1971) states that although oedipal situation involves three persons, which is a prerequisite for jealousy, the main concern at this stage is sexual, yet, jealousy could be relevant for triangular relationships that are nongenital and that occur before genital development. As such, Riviere (1932) and Fenichel (1935, 1953) added preoedipal strivings to the psychoanalytic understanding of jealousy that centered on the oedipal period (Clarke, 1988). Accordingly, jealousy has been conceptualized as being experienced by people who are fixated in the oral stage, in that they need external sources who provide love so that they can manage and balance their self-esteem. For these people, since narcissistic needs are more crucial than genital-stage needs, the threat of loss of this love is perceived as a narcissistic injury (Fenichel, 1935, 1953; as cited in Clarke, 1988; Riviere, 1932).

The main criticism with regard to the predominance of males in the conceptualizations of psychoanalytic theory is also applicable to the psychoanalytic understanding of jealousy since the very first explanations of it have been centered on a male perspective as apparent in Freud's writings (1922), in Jones' (1930; as cited in Clarke, 1988). What is so crucial about an oedipal difference, namely the fact that the boy does not change his sexual orientation related to his first love object while the girl has to leave her primary love object on the road to her father during development, is underestimated in general in both the theory and its plausible effects in the development of jealousy (Clarke, 1988). Moreover, most psychoanalytic ways of understanding jealousy focus on the definition of it rather than explaining the mechanisms and

etiological factors through which jealousy develops. As everyone goes through oedipal stages, it is not very clearly stated what is needed for a specific person to develop normal, projective or delusional jealousy. However, more recent psychoanalytic writers have shown efforts to explain the intrapsychic mechanisms for understanding why certain people differ from others in terms of experiencing jealousy. Schmideberg (1953), for example, maintains that the degree of dependency, possessiveness and jealousy in parental behaviors toward the child have a determinative effect on the extent of jealousy that a person experiences. Additionally, a study by Docherty and Ellis (1976) found that jealous husbands' reports of their wives' behavior are parallel to their accounts of their own mothers whom they have witnessed as being involved in an act of infidelity to the husband during adolescence (Clarke, 1988). Subsequently, the writers suggest that in addition to witnessing an actual act of infidelity, fantasies related to a seductive parent may also account for jealousy besides the commonly held belief of intrapsychic conflicts. Hence, parent-child relationships are conceptualized to provide a framework to interpret the effects of intrapsychic conflicts in the development of jealousy (Clarke, 1988).

In later conceptualizations, the psychoanalytic focus of attention has turned from drives to the child's intrapsychic development through the relationships with others, as evident in a number of 'object relation' theories, which put emphasis on pre-oedipal stages of development much more than oedipal stages (e.g. Fairbairn, 1954; Mahler, 1968; as cited in Clarke, 1988). These theories, in general, focus on the internalized representations of self and

other that are generated as a result of interactions with others and the relationship between these internalized objects and our behavioral and emotional reactions to the external world (Greenberg & Mitchell, 1983). For Krawer (1982), the main point of interest in these theories has been on the pre-oedipal issues such as attachment, caring, trust, separation and individuation that take place between the mother and the child (Clarke, 1988).

Among these theorists, Melanie Klein (1997; Segal, 1981) can be considered as the first person to write about envy and jealousy issues. She argued that envy can be considered as the forerunner of jealousy in that envy, as belonging to the pre-oedipal period, comes about whenever the infant realizes that the source of food and comfort (i.e. the breast of the mother) is outside of him/her and that the mother can control whether or not the needs of the infant are fulfilled, independent of the infant (Klein, 1997). It is maintained that this realization leads to anger and resentment on the part of the infant; yet the loving and appreciation of parents enable the infant surmount these feelings and reduce the so-called envy. On the other hand, jealousy was argued to come about in the oedipal stage, and in contrast to envy, was formulated to occur in a triangular relationship rather than occurring between the breast and the infant, according to Klein. She divided jealousy into two as composed of normal and pathological forms, the former of which refers to the love of the object and hate of the rival while the latter is considered to involve the ownership of the other as an extension of the person so that the other cannot stay as a separate other (Klein, 1997). She stated that "jealousy is mainly concerned with love which

the individual feels is his due and which has been taken away, or is in danger of being taken" (Klein, 1986, p. 212; as cited in Pines, 1998, p. 11). However, in Klein's work, it is not apparent why for some people love overcomes envy and for some it does not (Clarke, 1988). All in all, it appears that the early ties between the mother and the infant include the building blocks of the baby's relationship with the world in the future (Klein, 1986; as cited in Pines, 1998).

Fairbairn's model (1954), in contrast to Klein's work, focused much more on the real interactions of the infant in the external world (Clarke, 1988). He maintained that the motivation of the ego from birth on is to look for objects. Satisfactory and unsatisfactory experiences with the mother lead to the split of the object (i.e. the mother) as satisfactory and rejecting before these separate parts are internalized with the aim of protecting the satisfying parts of the object that would enable maintaining relationships with others who are needed. As a result of unsatisfactory experiences that predominate satisfactory experiences with early objects, the ego is thought to be attached to an unsatisfactory internal object throughout life. He argued that love relations in adulthood exhibit the quality of object relations with parents that have been internalized (Fairbairn, 1954; as cited in Clarke, 1988). Guntrip (1961) and Dicks (1967), extending Fairbairn's work, maintained that people will select their love objects on the basis of satisfactory and unsatisfactory qualities so that they can sustain similarity to internal object relations and they can recreate the desires of the ego (Clarke, 1988). In line with these, a jealous person was conceptualized as a person who regards the other as a representation of both

satisfaction and the disappointment of rejection. Thus, in terms of jealousy, the person who holds predominantly split self-object internal representations is worried about the threat of disappointment and loss of the object. In other words, "his model would predict that people who have never learned to be securely attached will seek out others who will allow them to re-enact their desires for security, their expectations for disappointment, and the projection of corresponding affects" (Clarke, 1988, p. 80).

Mahler (1968, 1972), one of the leading object relations theorists, worked on the psychological birth of the human infant, which follows a sequence from a realization of his/her symbiotic togetherness with the mother through the development of a separate self and the realization of the separateness of others (Clarke, 1988). This progressive development, called "separation-individuation", is a process which involves a well-known rapprochement crisis during which the child oscillates between his/her desires to unite with the mother and to become a separate identity from the mother. Schechter (1968), who provided a model of the oedipal complex, used Mahler's theory while incorporating the impact of parental behavior on the final resolution of the crisis. He argued that as the child becomes aware that, there are threats to his/her possession of the mother, such as the mother's own interests in the father and siblings, he/she starts to experience jealousy for the first time in his/her life, although the child wants to discard these so-called rivals (Clarke, 1988). When looked from this point of view, it seems quite plausible to argue that the oedipal crisis is nearly a re-performing of the

rapprochement crisis in that both are composed of trying to attain a balance between the development of sense of self and self-in relation to-others (Clarke, 1988). Consequently, if the child experiences satisfactory and consistent parenting, he/she will be able to internalize a basic sense of trust and security enabling him/her to go over the developmental crises involving a sense of loss and betrayal mentioned previously less problematic. However, parental failures of responsiveness to the child's needs would result in the deterioration of the internalization of feelings of security and trust, in a way making it less tolerable and more conflictual to deal with the feelings of loss associated with the oedipal stage. Clarke (1988), thus, maintains that jealousy should be conceptualized in general relational terms and that those children whose experiences of security in their relationships with parents during pre-oedipal, oedipal and post-oedipal lives are predominant compared to more negative experiences are the ones who will experience less difficulties with regard to relational jealousy since they will be able to handle issues related to abandonment of the object better than the other children with more negative object relations (Clarke, 1988).

Jealousy, as experienced in childhood years in the family, has been a central issue in the psychoanalytic literature from very early on. However, there seems to be a state of intertwining in terms of the definitions of rivalry and jealousy in this literature. Neubauer (1983) defines rivalry as "the competition among siblings for the exclusive or preferred care from the person they share….it also involves competition, an ongoing struggle for the exclusive possession of the object" (p. 326). This is a form of struggle to obtain the basic

needs from the mother (Neubauer, 1982). Jealousy, on the other hand, corresponds to the competition with a sibling or parent for the love of the person whose love and affection they have to share. The basis of jealousy is considered to be the fear of losing this object's love (Neubauer, 1983). For Neubauer (1982), rivalry is an action with the aim of not losing the object to the rival; whereas jealousy corresponds to the bitterness in response to the love the third person other than the dyad gets or expects. He maintains that jealousy takes place in the oedipal period and can be considered as a form of rivalry for the opposite sex parent's love (Neubauer, 1982). When looked at through the lenses of psychoanalytic tradition, rivalry is placed earlier than jealousy in the line of progression from fear of losing the object to fear of losing the object's love. According to Fenichel (1953), jealousy is a universal experience as the intrusion of someone else such as the father, a sibling, or others into the relationship between the mother and the child is inevitable (Pao, 1969). Thus, every child is expected to know jealousy feelings right after his ego development allows him to conceptualize it (Fenichel, 1953; as cited in Pao, 1969). However, unresolved rivalry, envy and jealousy in childhood are thought to leave their marks on a person's character, as evident in analytic experiences with children and adults (Neubauer, 1983). Moreover, psychoanalytic findings suggest that early object relations have a significant effect on later object choice, especially on the choice of romantic partners (Neubauer, 1983). Related to this, the turning against the intruder in the case of a partner's having an extramarital affair is conceptualized as the repetition of the early rivalry

reaction which appears as the activation of libidinal strivings toward the mother in response to the birth of a sibling (Neubauer, 1982). Similarly, in the case of siblings, it is safer to experience negative affects toward siblings rather that directly experiencing them toward the parents on whom the child must depend (Kernberg & Richards, 1988).

Freud (1922) believed that jealousy is universal because it is unavoidable. It is impossible to avoid or flee from it as it has roots in childhood experiences common to all individuals. These experiences are thought to reemerge in adulthood when jealousy is triggered. If, in the case of a threat to a valuable relationship, the person admits that he/she does not experience jealousy, according to Freud (1922), there must be something going wrong with him, as in the nonexistence of grief in the case of a death of a loved person. Here, the only explanation is argued to be related to the person's struggles to hide his/her feelings of jealousy from the self and others. Situations in which there is no jealousy even though the situation should trigger it are also considered to be pathological, as evident in Pinta's (1979) work, who called this clinical syndrome Pathological Tolerance (Pines, 1998). Similarly, another clinical syndrome that is proposed for people who are surprisingly unable to interpret the signs of jealousy triggers that are very obvious to everyone else except themselves is called psychological schotoma (Pines, 1998).

In general, psychodynamic approach proposes that unconscious forces are at work in various behaviors of individuals. The basic premise of psychoanalytic understanding centers on the assumption that emotional

attitudes of persons to other people in life are grounded very early in life, especially the first six years of life are considered to be very significant in terms of giving shape to the relations to other people and people from the opposite sex (Colonna & Newman, 1983). Though the person can develop new ways of relating to the world and other people, he can never totally refrain from the old ways of relating to parents and siblings. These prototypical ways of relating represent the imagos of the parents and siblings, which constitute an emotional heritage that shapes relationships with later love objects (Colonna & Newman, 1983).

As people are thought to be active forces in choosing their mates and creating their relationship according to this perspective, a person who has a pathologically unfaithful partner does not have bad luck, rather he/she somehow unconsciously finds this mate to fill some specific role. To put it in other words, especially childhood memories constitute a very big influence on the choice of mates in that most people choose their partners in a way that would fulfill what is lacking in them emotionally in their childhood (Pines, 1998). This mechanism can be captured by what is referred to as repetition compulsion in the psychoanalytic literature, as first proposed by Freud (1920). Accordingly, it was argued that individuals live through scenarios that resemble their childhood circumstances with a repetitive character in their behaviors (Weiss, Sampson, & the Mount Zion Psychotherapy Research Group, 1986; as cited in McWilliams, 1994). In repeating a similar scenario, the unconscious hope of the individual becomes the attainment of a happy ending and hence

fulfilling what is lacking (Holmes, 2007). When a person finds such a mate, he/she is thought to project his /her personal schema that was formed as a result of childhood experiences (Pines, 1998). Correspondingly, a person, who had experiences that have provided safe and trusting environments during childhood, is expected to have a personal schema that is thought to produce emotionally positive circumstances. However, when a person had abusive or neglecting experiences during the early years of life, he/she is expected to unconsciously recreate similar circumstances with the aim of psychologically mastering them (Weiss, Sampson, & the Mount Zion Psychotherapy Research Group, 1986; as cited in McWilliams, 1994). Of course, this is not to say that jealousy experiences in childhood cause adult jealousy; nonetheless, these kinds of experiences become active in analogous situations and play an important role on the extent of response to jealousy triggers (Pines, 1998). Consequently, some people choose mates and develop relationships in which jealousy is likely to be experienced and some develop relationships in which jealousy is not very much likely to be triggered (Pines, 1998). Related to these, it seems that the most important contribution of the psychoanalytic point of view to our understanding of jealousy is its provision of explanation for situations that are puzzling and difficult to comprehend such as some people's continuous choice of unfaithful partners or some others' efforts at moving their partners to a rival (Pines, 1998).

Pines (1987), in one of her studies, found that people who responded that they are jealous and that they had many relationships that have ended due

to jealousy related problems described themselves as being jealous persons from very early in childhood (Pines, 1998). The fact that people who are more jealous compared to others during childhood appear to be more jealous than others when they grow up can be considered as support for the idea of predisposition for jealousy. According to developmental psychologists, other than psychoanalytically oriented scholars, adult jealousy stems from sibling rivalry. For example, Neill (1998), states that the first experience of jealousy due to feeling of threat to the relationship with the mother by the existence of a sibling has a determining role in the activation of jealousy in later life.

Most psychoanalytic writings on jealousy seem to focus on its close relationship with the threat of losing the opposite sex parent's love to the rival, be it the same-sex parent or the sibling. An alternative view with regard to the developmental origins of romantic jealousy focuses on the importance of the relationship with the first love object, namely the mother, in determining later jealousy experiences for both sexes. Accordingly, jealousy is first experienced in relation to the exclusive love of the mother and then is re-evoked whenever there is a threat with regard to the loss of love of a loved object (Downing, 1998; Vollmer, 1998). Hence, early experiences of jealousy seem to shape the way individuals respond to similar situations rather than directly causing them. The explanations of jealousy that would follow from psychoanalytic understanding contribute to our understanding in recognizing "how much in my present feeling is 'displaced' from earlier, never accepted experiences of loss, and particularly from a deeply ingrained sense that if I was betrayed by my

mother's infidelity (over the father or the sibling) I somehow *deserved* it, that I am not worthy of love, and so am destined to be betrayed over and over again" (Downing, 1998; p. 75).

In that sense, sibling birth has been considered to be a crucial event in a child's life as pointed out by several scholars, one of which is Levy (1940) who likens the jealousy of mother to the jealousy in adult romantic relationships by stating that the adult version of jealousy can be considered as the derivative of the jealousy among siblings for the mother's love and attention. He makes an analogy between a child who does not let her mother direct her attention to someone else with a lover who wants exclusive devotion of the partner and who can start quarrels even from a quick glance at someone else.

Levy (1940) maintains that a child would be jealous because he would want to be the recipient of his mother's exclusive attention or want more attention than is paid to the baby sibling by the mother. He would also be envious of sibling's talent or good work and thus be jealous of him due to the praise he gets and the attention that is directed to the sibling rather than him as a result of these. Thus Levy (1940) uses the word jealousy as including envy. He continues by stating that "jealousy is largely a derivative of the relationship to the mother" (Levy, 1940, p. 515). Here, jealousy refers to the jealousy of the mother's love.

From Clanton and Smith's (1998) point of view, jealousy is a common experience of childhood. As explained by Simpson (1966), from the eyes of a baby, the mother is the fundamental love object (Clanton & Smith, 1998).

However, with the arrival of a new baby into the family, the older one, who has been the center of love and attention provided by the mother until that day, finds himself in a situation in which he has to struggle with a rival for what he used to have before, especially feeling that he has lost his mother to someone else (Clanton & Smith, 1998). Agger (1988) states that "children believe that they somehow disappointed their parents through their developing independence, and that the new births represent the parent's effort to obtain a more satisfactory child, of a different sex, or a more malleable persuasion" (p. 22). Related to this, the work of Winnicott (1964) also illustrates the fact that siblings are of crucial importance in understanding a person's fantasies and anxieties with regard to having been replaced (Colonna & Newman, 1983).

One of the most striking statements included in Freud's (1900, 1916) work has been that the intensity of antagonistic feelings toward siblings in childhood is much more than one can imagine since a child who has been put to second place after the birth a sibling would not forgive his/her sibling for the loss of mother. He continued by saying that many children regard siblings as intruders (Freud, 1916).

All in all, it seems that jealousy is a problem usually encountered in childhood and that reappears in adulthood; however, probable connections between the two have not been very much investigated (Clanton & Smith, 1998). A popular argument in terms of the origins of jealousy has been one that centered on the idea that adult jealousy is rooted in childhood sibling conflict (e.g. Clanton & Smith, 1998; Freud, 1922; Levy, 1940). However, in spite of

the reputation of this argument, it seems that there has been no evidence that supports it (Bringle, 1991). Accordingly, a study by Bringle and Williams (1979) found no support for the assumed relationship between some family structure variables such as birth order and family size and jealous feelings, behaviors, or frequency of jealousy as well as dispositional jealousy (Bringle, 1991).

Despite the popularity of the belief in the association of childhood sibling jealousy as a form of a conflict and adult romantic jealousy, the literature has not been rich in terms of studies that looked at the impact of developmental correlates of adult jealousy, except for Clanton and Kosins (1991) who, in line with Bringle and Williams' (1979) study, tested the psychoanalytic idea that early sibling conflicts may increase the intensity of adult jealousy (Freud, 1922; Reik, 1945; Schmideberg, 1953). However, they also failed to find evidence for the association between the self-report of jealousy and childhood conflict including early envy and jealousy among siblings. Likewise, there were no significant effects of birth order, age spacing, and family size on the intensity of adult jealousy in spite of the early research that revealed correlations between family constellation variables and childhood jealousy (e.g. Foster, 1927; Ross, 1931; Sewall, 1930; as cited in Clanton & Kosins, 1991). There was no significant effect of gender across groups, yet women appeared to score higher on the jealousy measures compared to men.

Explanations from the Attachment Theory Perspective

As stated by Waters and Cummings (2000) attachment theory can be used "as a secure base from which to explore close relationships" (p. 164). As one the most significant relationships in one's life, romantic relationships has been an area where attachment theory provided insight and shed light onto their dynamics.

An obvious concern inherent in romantic relationships is considered to be reactions to separations or loss, or threats to an attachment relationship, the situations that are more likely to be encountered in the case of partner's leaving for someone else (Sharpsteen & Kirkpatrick, 1997). The usual response to such situations is considered to be jealousy. Thus, it is suggested that attachment theory can provide a comprehensive framework in order to study the experience of romantic jealousy in terms of individual differences (Sharpsteen & Kirkpatrick, 1997).

Attachment theory is first proposed as a framework to understand the bond between child and the parent and the way this bond affects the development of the child (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1969, 1973, 1980). Attachment behavior of an infant was considered to be an instinctive way of making sure that the infant gets parental care and preventing risks to survival from infancy through maturity. This behavior is thought to result in the development of emotional ties between the infant and the parent and among individuals later in development (Bowlby, 1969, 1973, 1980; Ainsworth, 1969, 1982). According to attachment theory, separation from and

reunion with the caregiver lead the child to experience several emotions and engage in several behavioral reactions, the intensity of which differs with the kind of bond between the child and the caregiver. Observations by Ainsworth, Blehar, Waters, and Wall (1978) resulted in the identification of three different categories of attachment styles; namely, secure, anxious-ambivalent, and avoidant. The first group of infants was observed to look for attainment of contact after being separated from the mother while anxiously ambivalent ones were seen as displaying anger and resistance in addition to looking for contact after separation. The anxiously avoidant group, on the other hand, clearly stayed away from their mothers and refrained from any contact with the mothers in the reunion.

Ainsworth (1982) widened the scope of her perspective by stating that the attachment bond between the infant and the mother might be seen as a model for later relationships in adulthood such that individuals might look for same amounts of security and anxiety they had in their relationships with parents in their later relationships.

Bowlby (1969) proposed that the attachment system is developed in the first one or two years of an infant's life with the aim of providing the child with security and ability to explore the environment safely by keeping the infant close to the attachment person and away from the dangers of the environment. According to him, although the attachment system changes in line with one's development and experiences, the attachment figures change, too, as romantic partners becoming the primary attachment object in adulthood (Main, Kaplan,

& Cassidy, 1985; Hazan & Shaver, 1987; Sharpsteen & Kirkpatrick, 1997). This is a portrayal of the view that attachment is a lifelong process (Bretherton, 1985; Ainsworth, 1985, 1989). With respect to the whole lifespan, Bowlby (1973) asserted that disturbed attachments with early caretakers often lead to "anxious attachment" that makes the individual "excessively sensitive to the possibility of separation or loss of love" (p. 238). Hence, attachment theory proposes that individuals with disturbed attachment patterns due to disturbed bonds with primary caregivers would be especially vulnerable to adult jealousy. In line with this theory, it is assumed that a disturbed attachment history would increase one's susceptibility to jealousy through increasing the possibility of perception of threat to the relationship.

In this attachment system, the primary function of attachments appears to be that of sustaining "psychological proximity" and "security" much more than a physical one. In a similar vein, jealousy is argued to function as a sustainer of the relationship by encouraging people to deal with the problems of their relationships, especially when their commitment to the relationship is high (Clanton, 1981; Constantine, 1976; as cited in Sharpsteen & Kirkpatrick, 1997). Hence, it is argued that jealousy and attachment work with the same aim; namely "the maintenance of relationships and a sense of security about them" in times of threats related to separation from the attachment figure (Sharpsteen & Kirkpatrick, 1997, p. 628). This is also supported by the arguments of many psychoanalytic and object relational theorists that love relationships that take place later in life are a partial replica of early parent-child relationships

(Chodorow, 1999; Freud, 1989). Even though attachments in adulthood have some features that are different from parent-child attachments, both lead to looking for security and comfort that would be provided by the partner under stressful conditions (Ainsworth, 1985). Likewise young adults who remember having had positive relationships with mothers and fathers were reported to be more likely to trust and to ask for comfort from their partners when under stress (Black & Schutte, 2006).

Attachment theory proposes that people establish new relationships through their repertoire of beliefs and expectations that are developed in encounters with close others, a phenomenon called internal working models that are based on relationships with caregivers early in life (Bowlby, 1973; Bretherton, 1985). These working models, most importantly, are argued to play a crucial role in guiding perceptions and emotional regulation in addition to behaviors in close relationships (Collins & Allard, 2001; Shaver, Collins, & Clark, 1996; as cited in Collins, Cooper, Albino, & Allard, 2002). As internal working models are the byproducts of experiences with attachment related experiences, situations that call for attachment behaviors such as relationships with romantic partners should be affected by these internal working models (Bowlby, 1988; Main, Kaplan, & Cassidy, 1985). In line with this, Hazan & Shaver (1987) argued that adults do have attachment styles just like children have. They showed that perceptions of self, others, and relationships show themselves in attachment patterns of individuals such that secure people define themselves and others as loveable, approach love positively, and assume that

there will be ups and downs in the course of a relationship. Anxious-ambivalents, though, are suspicious of themselves and the love and care of others; they also fall in love very easily and have relationships that are very much dominated by feelings of obsessiveness, jealousy, and inadequacy. Avoidants, on the other hand, have a moderately good relationship with themselves and define love as something that is very hard to find and that would not last very long while avoiding closeness (Hazan & Shaver, 1987).

Through increasing age and cognitive development, secure base experiences become mentally organized in such a way that the child becomes able to represent the world and significant people according to the extent of danger of the situation and "availability" and "responsiveness" of the significant person (Bowlby, 1969). Ultimately, the resulting internal working models become the layouts for one's expectations about how much one can trust other partners, which, in return, affects the way these individuals behave towards these partners (Kerns, 1994). The continuity in terms of attachment style differences is generally explained by the existence of internal working models, which refers to beliefs and anticipations about one's self and the responses of the significant other (Sharpsteen & Kirkpatrick, 1997).

A more comprehensive framework for the relationship between working models and attachment styles has been provided by the work of Bartholomew (1990; Bartholomew & Horowitz, 1991) who asserted that there are four attachment categories differentiated according to the way the individual views self and others. Secure people are those who hold positive views of themselves

and others and believe that others are dependable, and will love and support them; preoccupied individuals hold a negative view of themselves but a positive view of others and are reported to be relatively dependent on external validation from others and generally preoccupied with their relationships. Dismissives, on the other hand, have a positive view of themselves but a negative view of others, thereby leading to lack of interest in others and relationships. Finally, fearful avoidant individuals hold negative views of both themselves and others, and generally seek close relationships, but they cannot trust others and fear rejection very much (Bartholomew & Horowitz, 1991; Griffin & Bartholomew, 1994)

It seems very meaningful and comprehensible to associate jealousy experiences and expressions with attachment styles. As such, jealousy obviously involves a stressing and threatening situation which can be thought to set attachment system into motion through the activation of the individual's working models of self and others (Guerrero, 1998). People who have negative view of themselves are reported to experience more jealousy compared to the ones with more positive views, while jealous people with a more negative view of others are found to fear less and adopt avoidance behavior more than jealous people with more positive view of others (Guerrero, 1998).

Various attachment theorists have asserted that an individual's internal working models in romantic relationships can be thought of as lying on two dimensions that correspond to three attachment styles and the four-group model of adult attachment; namely anxiety and avoidance (Brennan, Clark, & Shaver,

1998; Fraley & Shaver, 2000). The avoidance dimension refers to being uncomfortable with closeness and intimacy and hence leads to emotional distancing and independency from partners. Accordingly, individuals who obtain high scores on avoidance are expected to have working models that do not aim at closeness with significant others and that help them disengage from situations that involve strong affects (Crittenden & Ainsworth, 1989; Simpson & Rholes, 1994). The anxiety dimension refers to the fear of rejection or abandonment in addition to continuous worries about not being a desirable partner. People who get higher scores on the anxiety dimension are expected to be overwhelmed by intimacy needs in addition to continuous worries with regard to the availability and responsiveness of attachment figures (Hazan & Shaver, 1987; Main, Kaplan, & Cassidy, 1985). In this model, security, defined as being comfortable with closeness and being able to establish and maintain intimate and satisfying relationships, is marked by low scores on both dimensions (Brennan, Clark, & Shaver, 1998). These two dimensions have been investigated by many researchers who concluded that these dimensions make it possible to tap the ways through which people experience romantic relationships as well as the ways in which they regulate their emotions when they feel under stress (e.g. Mikulincer & Shaver, 2007).

Already, there exists some evidence with regard to the association between attachment styles and jealousy experiences. As one can consider a romantic relationship as a sort of attachment relationship, there can be similarities in terms of individual differences in attachment behavior and

individual differences in jealousy experiences (Sharpsteen & Kirkpatrick, 1997). For instance, Hazan and Shaver (1987) reported anxious-ambivalent individuals as experiencing more jealousy compared to individuals with secure and avoidant attachment styles, apparently due to their insecurity about themselves combined with profound involvement in relationships. Contributing to this, Sharpsteen and Kirkpatrick (1997) reported that people with avoidant attachments were more likely to blame the rival than to employ jealousy while secure attachment was found to be associated with less jealousy and fear but with more security and control after the appearance of a rival in the relationship (Radecki-Bush, Farrell, & Bush, 1993; as cited in Guerrero, 1998). As put forward by White (1981), individuals who believe that they are somehow insufficient as partners and who view their partners as having less commitment to the relationship, namely the ones with anxious-ambivalent attachment styles, demonstrate jealousy with highest frequencies and levels (Sharpsteen & Kirkpatrick, 1997; Hazan & Shaver, 1987). With regard to jealousy, studies that use jealousy scales asking the subjects to rate the degree to which the items relate to their romantic relationship in their current or most recent relationship or presenting the subjects with situations that are thought to produce jealousy, anxious-ambivalent people are found to be the most jealous group followed by the avoidants and, the secure ones being the least jealous (Buunk, 1997; Rauer & Volling, 2007). Likewise, individuals with secure attachment styles turned out to be the ones who reported the least amount of jealousy in romantic

relationships in comparison to the preoccupied or fearful individuals (Rauer & Volling, 2007).

It is demonstrated that different attachment styles predict both differences in the frequency and intensity of jealousy experience and differences in the thoughts, feelings, and behaviors that are related with jealousy experience (Sharpsteen & Kirkpatrick, 1997). In their study, Shapsteen and Kirkpatrick (1997) asked subjects to recall past jealousy experiences and to think how they have usually felt in addition to asking them to sort some cards that have prototypic jealousy features in terms of feelings and emotions that describe the experience of jealousy. Altogether, it was found that secures were reported to feel angry predominantly compared to other emotions and tend to convey it to their partners while anxious ones were not likely to express it toward their partners although they, too, feel very angry. Avoidants, on the other hand, were reported to feel sadness very strongly and to try to regain their self-esteem quickly compared to others (Sharpsteen & Kirkpatrick, 1997).

The already established internal working models are argued to affect the ways in which people foresee and deal with stressful interactions with intimate others (Simpson & Rholes, 1994). Consistent with this, Seiffge-Krenke (2006) reported that it was secure adolescents who appeared to experience less stress in their relationships with parents, peers, and romantic partners and manage stressful conditions by active use of their social network and continued to do so in young adulthood in contrast to adolescents who display preoccupied working models and thus experiencing high levels of relationship stress with less

adaptive coping styles over time through young adulthood. It is proposed that the attachment system gets activated in times of stress and the resulting feelings of distress can be considered as a derivative of one's attachment style (Bowlby, 1969). Securely attached people evaluate stressful events as less threatening in comparison to individuals who are insecurely attached in relation to their beliefs in themselves that they can deal with these circumstances (Belsky, 2002). Insecure people who obtain high scores on the anxiety dimension of attachment use less effective strategies for coping with stressful situations such as ruminating on their own negative thoughts in addition to being unable to direct their attention away from their own stress (Belsky, 2002). On the other hand, people who score high on the avoidance dimension of attachment direct their attention away from the stressful situation both cognitively and behaviorally besides not being aware of their own feelings such as anger (Belsky, 2002).

Affect regulation can be a regarded as a comprehensive framework in order to understand the experience of jealousy. According to Mikulincer and Shaver (2005) attachment provides a perspective for comprehending affect regulation. Bowlby (1969, 1973) emphasized the functions of attachment relationships in defending against anxiety and providing physical protection besides identifying attachment behavior such as proximity seeking as a way of regulating distress. Most importantly, his emphasis was on the significance of attachment related past experiences in understanding individual differences with regard to regulation of affect during a lifetime (Bowlby, 1969, 1973). At

times when the attachment figure is not available and responsive, strategies other than proximity seeking, that is avoidance or anxiety, appear to take place in order to reduce the distress since proximity seeking fails to function as it does when the attachment figure is available and supportive and when the attachment system functions properly so that a secure attachment has been established (Bowlby, 1973). Extending Bowlby's propositions, Shaver and Mikulincer (2002) devised a three stage model of attachment system which is thought to be triggered in reaction to a perceived threat and which aims to regulate affect in relation to the availability and responsiveness of the attachment figure. Accordingly, securely attached people are described as having optimistic beliefs about the availability of others and their capability in dealing with stressful situations (Shaver & Hazan, 1993). Perceived unavailability of the attachment figure, on the other hand, is thought to lead to hyperactivating strategies (Cassidy & Kobak, 1988) that imply a continuous effort at maintaining security through the availability of the attachment figure accompanied by overdependence, clinging and controlling behaviors with regard to the partner, a well-known characteristic of people who score high on attachment anxiety (Shaver & Hazan, 1993). The other strategy to deal with stress is considered to be deactivating strategies which imply a deactivation of the attachment system in order to prevent further distress in reaction to the unavailability of the attachment figure (Cassidy & Kobak, 1988). Being used by people who score high on attachment avoidance, this strategy entails the denial of attachment needs and suppression of thoughts and feelings regarding the

perceived threat (Mikuliner & Shaver, 2003; as cited in Mikulincer & Shaver, 2005). It can be seen that each strategy has the aim of regulation of affect and these strategies are thought to affect emotional experiences in close relationships (Mikulincer & Shaver, 2005).

Gender Differences in Romantic Jealousy

The existing literature contains several studies that focus on the relationship between gender and differences in terms of concerns and reactions in response to jealousy in romantic relationships. However, it appears that there are inconsistencies in terms of the results. Some studies found that jealousy is stronger for men in conditions where there is sexual involvement of the partner, whereas the intensity of jealousy is higher for women when it is attributed to the willingness of the partner or in conditions where the partner is spending more time with a rival (Schackelford, Buss, Bennett; 2002; Buunk, 1991). Moreover, the same pattern of results was replicated even with samples consisting of old individuals (mean age= 67) with an additional finding that old women are found to be significantly less likely than younger women (mean age= 20) to feel distressed in reaction to a partner's emotional infidelity (Shackelford, Voracek, Schmitt, Buss, Weekes-Shackelford, & Michalski, 2004). On the other hand, some other studies failed to find a gender difference in jealousy experience. For instance, in Russell and Harton's (2005) study, both men and women stated that they would be more upset in relation to a scenario

in which their partner is involved in sexual infidelity as compared to a scenario involving emotional infidelity (Russell & Harton, 2005; Bassett 2005).

As regards responses to jealousy evoking events, it appears that men and women react differently when jealous, as evident in a study with college students which reported that men were significantly more likely to take alcohol, think that jealousy is a demonstration of love and become aggressive while women were significantly likely to turn to their friends or to eating, as assessed by an anonymous questionnaire that is designed to find out how they react when they feel jealous (Knox, Breed, & Zusman, 2007). Similarly, in De Weerth and Kalma's study (1993), which relied on a comprehensive questionnaire involving hypothetical situations that provoke jealousy, men reported that they would usually get angry or drunk in situations that would call for jealousy. Interestingly, however, De Weerth and Kalma's study (1993) demonstrated that both women and men expected women to behave verbally and physically aggressive in response to an infidelity of their partner and those women also declared that they would behave aggressively toward their partner besides crying and trying to look more attractive in the eyes of their partners. However, in contrast to De Weerth and Kalma (1993) aggressive reactions to jealousy were more likely to be employed by men compared to women in most of the studies. For instance, a study with a group of college students who were asked to remember a time that they were jealous demonstrated that men are more likely to be involved in counter actions such as going out with other people or getting involved in sexual relationships with other people while

women reported that they were more likely to react more emotionally when they feel jealous (Bryson, 1976; as cited in Bryson, 1991). A similar cross-cultural study by Bryson (1991) revealed that males were more likely to become aggressive such that they threaten the other person or become physically aggressive both with the partner and the rival compared to women who obtained higher scores on emotional responses such as feeling insecure or crying when alone, consistent with Pines (1998) who demonstrated that men are more likely to express their feelings through anger bursts while women tend to cry. These differences in reactions to jealousy between the sexes were explained by social learning of the relationship roles (Clarke, 1988). The finding that women generally try to maintain their relationship with their partners while men work to maintain their self-esteem when jealous explain some of the differences between the reactions of different genders (Pines & Friedman, 1998). Different that the most of the studies in the area, the higher levels of aggressive reactions of women compared to men in De Weerth and Kalma's (1993) study were explained by probable changes in traditional sex-roles in modern times.

Another line of investigation has focused on finding out which gender is more jealous compared to the other; yet there are contradictory findings as well. Some studies failed to find a significant difference among between sexes in the frequency and intensity of jealousy as well as regarding jealousy experiences in earlier periods of life (Hansen, 1985; White, 1981; Pines & Friedman, 1998; McIntosh, 1989; Pines & Aranson, 1983) while some have reported that men

are more jealous compared to women (Mathes & Severa, 1981; as cited in Hansen, 1985) and others have found that women are more jealous than men (Buunk, 1982; De Weert & Kalma, 1993; Hansen, 1985).

Even though existing literature displays conflicting results regarding the relationship between gender differences and jealousy experiences, a systematic understanding of these differences is provided by explanations based on sociobiological and sociocultural conceptualizations, literatures which concentrated on the effects of biology on social relations and the effects of social structures on jealousy (Clarke, 1988).

Sociobiological Explanations

Jealousy, according to sociobiologists, is a genetic endowment that helps protect the person's genetic transmission into the offspring in line with our basic motivation of reproduction or continuation of our genetic heritage as human beings (Clarke, 1988). This point of view is helpful in terms of understanding gender differences both in terms of quantity and quality of jealousy that is observed cross culturally. The main idea behind sociobiological explanations is the maintenance of evolutionary survival (Symonds, 1979; van der Berghe, 1980; as cited in Clarke, 1988). Pines (1998) cites Darwin who could provide an evolutionary explanation for jealousy by stating that jealousy, also appearing in animals, is an instinctual response to protect the pair bond and keep the pair together so as to produce their offspring, and thus reproduce their genes. It can be maintained that evolutionary psychology has become one of the

most popular frames from which jealousy has been explained. However, it should be noted that Buss and his colleagues play a large part on the reputation of this approach with their argument based on the relationship between sex differences and jealousy as a result of different kinds of infidelities (Buss, 1991, 1995; Buss, Larsen, Westen, & Semmelroth, 1992). In line with their argument, one of their leading studies demonstrated that men were more annoyed with the possibility of their partners' sexual infidelity whereas women were reported to be more distressed with the idea of their partners' emotional infidelity (Buss, Larsen, Westen, & Semmelroth, 1992). These reported sex differences were attributed to "fitness-enhancing capabilities", meaning that in order to be able to pass on one's genetic materials men should be alert with the aim of preventing cuckoldry. For Daly, Wilson, and Weghorsts (1982), jealousy is a kind of defense for males against wasting their resources for offspring that do not belong to them (Hupka, 1991). Women, on the other hand, being confident of the ties with their offspring, focus on the continued existence of their partners in order to receive the resources that are needed for the upbringing of their offspring (Buss, Larsen, Westen, & Semmelroth, 1992; Daly & Wilson, 1983). As stated by Buss, Larsen, Westen, and Semmelroth (1992), the major threat for a woman lies in the fact that the partner is developing an emotional attachment with someone else, a situation which is thought to lead to the partner's probability of investing the resources in someone else other than her or the offspring. The finding that in men feelings of jealousy are generally triggered by the social dominance of the rival whereas a rival's physical

attractiveness is what triggers a jealousy response in women also supports this argument (Buss et al., 2000; Dijkstra & Buunk, 1998, 2002; as cited in Buunk & Dijkstra, 2004; Buunk & Dijkstra, 2004).

Despite the popularity of sociobiological perspective, there have been other attempts to explain sex differences in jealousy. DeSteno and Salovey (1995) explain the findings reported by Buss and his colleagues by arguing that especially in the case of emotional infidelity, many people may perceive it as including sexual infidelity at the ultimate point (Desteno & Salovey, 1996). They conclude that these perceptions, which are thought to be acquired as a result of socialization and previously held beliefs with regard to the implications of different kinds of infidelities, might shed light on women's greater distress in response to emotional infidelity reported in studies that involve forced-choice paradigms such as the one carried out by Buss and his colleagues since greater threat to the relationship would be expected to lead to greater distress of the person (Buss, Larsen, Westen, & Semmelroth, 1992).

Other critics of evolutionary perspective center on the idea that social power, that is the dependency on the other in a relationship, accounts for gender differences, as evident in the fact that due to life circumstances women may not have as many alternatives as men other than their marriages as in the case of spending their whole lives rearing children and helping their husbands' career development. These women are thought to respond with more jealousy in the case of threat to the relationship compared to men who are thought to have

more social power (White, 1977, 1980; White & Mullen, 1989; as cited in Pines, 1998).

Social cognitive theories also provide alternative explanations of sex differences in romantic jealousy, suggesting that the differences are due to socially learned beliefs about jealousy and genders with respect to romantic relationships (Harris & Cristenfeld, 1996; as cited in Ward & Voracek, 2004; DeSteno & Salovey, 1996). Related studies show that although people from both sexes believe that being in love might involve having sex, men are found to believe that when women have sex, this might imply love while the same does not hold for men in the eyes of women (Harris & Cristenfeld, 1996; as cited in Ward & Voracek, 2004; Desteno & Salovey, 1996). However, the study by Ward and Voracek (2004) failed to find support for a social cognitive explanation for sex differences in romantic jealousy as they reported that the difference is not accounted by the schemas and beliefs about genders and jealousy.

Sociocultural Explanations

Understanding jealousy from the sociocultural perspective relies on a conceptualization of it as a product of one's culture in that it is argued to play a role on determining the situations that will be regarded as jealousy-evoking or not (e.g. Buunk & Hupka, 1987; Hupka et al., 1985; as cited in Bryson, 1991).

Kingsley Davis (1936), as the first theorist in sociocultural field to work on jealousy, maintained that relationships that are considered important and

valuable by society, such as sexual relationships, are protected through the expressions of jealousy and that the defining of these relationships in return makes it possible to decide on what kind of behaviors would be threatening for the relationship so that it would lead to jealousy (Salovey & Rothman, 1991). Hupka's (1981) identification of cultures in terms of their experiences of jealousy is also in line with this argument as he maintains that cultures which value marriage, family, and personal property are high in jealousy compared to cultures which pay little importance to parental certainty and marriage (Salovey & Rothman, 1991). Hupka (1981) proposes that experiences of jealousy in a domain are related to the importance the society attributes to that specific domain (Salovey & Rothman, 1991). In other words, whether a person would interpret a situation as threatening to the relationship or not depends on the cultural values that support the survival of the culture.

It is maintained that a cultural point of view with regard to jealousy would be incomplete without mentioning the survival value of pair-bonding between mates. Accordingly, Lovejoy (1981; as cited in Hupka, 1991) argues that with pair-bonding the mother pays more attention to the infant while letting males provide food since the most frequent reasons for death were reported to be due to falling from the mothers in the case of chimpanzees (Van Lawick-Goodall, 1967; as cited in Hupka, 1991). Hence, Hupka (1991) argues that jealousy, like other emotions, is evolved through learning. The biological makeup enables the physiological fire of jealousy, but for a person to experience jealousy, he needs to learn to value the relationship, the situations

that evoke it, when and how to express it, etc. (Hupka, 1981; as cited in Hupka, 1991).

The explanation of jealousy as a product of learning in a society is in contradiction with sociobiologists who argue that the motive for the evoking of jealousy resides in our biological heritage. Hupka (1991), in contrast to sociobiologists, proposed that the motive for jealousy is a production of culture that can show variances in accord with the elements of social organizations, especially the elements that regulate sexual behavior and define the extent of importance men and women play in the lives of each other. Just as the values and significance levels of men and women to each other are defined, the consequences of actions are also defined with the help of these structures. In short, it can be said that "whatever is valued, people hate losing to rivals" (Hupka, 1991, p. 263). Thus, in the case of infidelity, whatever is obtained through the relationship is threatened by the appearance of a rival. That is why whatever is threatened is argued to differ among cultures in line with their own social structures but the phenomenological response to such threat would not differ since it is a production of human genetic pool, but the motives for jealousy are created by humans (Hupka, 1991).

As one of the most prominent studies in the area, Buss, Larsen, Westen, and Semmelroth's (1992) findings with regard to gender differences have been interpreted differently by other scholars; while some attributed the gender differences much more to gender roles defined by culture rather than innate mechanisms related to survival (Hupka & Bank, 1996) others such as Harris

and Cristenfeld (1996) argued that gender differences in terms of jealousy should be explained by the interpretations of the situation made by the two sexes (Pines, 1998). For instance, a man believing that women engage in sexual relationship only with men they love, have grounds for reacting with jealousy since there would be threat in terms of losing the love of the partner. On the other hand, the scholars argued that a woman believing that men's engagement in sexual relationship does not necessarily mean that they are in love, may not be worried as much as men do by sexual infidelity of their partner (Harris & Cristenfeld, 1996; as cited in Pines, 1998).

It seems that the major contribution of the sociocultural view to the understanding of jealousy is its emphasis on the belief that jealousy is a social phenomenon as much as it is psychological (Pines, 1998). All in all, however, both sociobiological and sociocultural views fail to provide explanations for how jealousy develops for a given individual in a relationship or in a family or why some people experience jealousy more intensely compared to others, although they analyze jealousy in a broader sense (Pines, 1998; Clarke, 1988).

Sibling Jealousy

It is emphasized that sibling envy, rivalry, and jealousy are very much entangled, and that it is very difficult to totally differentiate them according to their dynamics and to observe one without the accompaniment of the other (Moser, Jones, Zaorski, Mirsalimi, & Luchner, 2005). Hence, in the following

section, especially the concepts of rivalry and jealousy will be used as interchangeably in line with the literature.

Sibling relationships

The importance of sibling relationships in an individual's life seems to be undeniable in many respects, especially in terms of fostering the development of a child in many different areas, such as in emotional development and development of social skills, improvements in psychological well-being, particularly in early childhood (Dunn, 1988; as cited in Kaminsky, 1998; Brody, 1998; Volling & Blandon, 2003). During middle childhood, abilities of perspective taking, social reasoning, and participation in social role play have been considered to be some of the contributions to children's development through the effects of their siblings' behaviors (Dunn & Munn, 1986; as cited in Kaminsky, 1998). Moreover, siblings also serve as avenues of social support such that positive relationships with siblings act as barriers against negative life events and various stresses (Jenkin & Smith, 1990; as cited in Kaminsky, 1998). Besides, the sibling relationship has also been viewed as a significant predecessor of peer and adult relationships in later life, with warm and positive relationships being related to more emotional control and more social competence in contexts outside the home (Lobato, Faust, & Spirito, 1988; as cited in Maleki-Tehrani, 2006; Stormshak et al., 1996; as cited in Volling & Blandon, 2003).

The sibling relationship has been considered as the longest relationship that a person can experience throughout one's lifetime (Cicirelli, 1995). It is also not selected but ascribed and is also a continuous one (Cicirelli, 1995). As siblings spend most of their time together in the early years of their lives, this close and continuing relationship is multifaceted with features that range from love, harmony, and support to competition, rivalry, envy, and jealousy (McKeever, 1983; as cited in Maleki-Tehrani, 2006). In terms of the changes in the quality of sibling relationships throughout development there seems to be constancy in terms of the quality from middle childhood well into adolescence (Dunn, Slomkowski, & Beardsall, 1994; Dunn, 1996) with feelings of rivalry, though decreasing, continuing their existence through adulthood (Ross & Milgram, 1982; as cited in Brody, 1998). With adolescence, however, the relationship becomes more symmetric and egalitarian due to the increase in similarities with respect to competence and developmental position (Buhrmester, 1992; Buhrmester & Furman, 1990). As such, siblings can provide emotional support especially in adolescence during which they become sources of alliances that help with dealing problems with parents (Lempers & Clark-Lempers, 1992; Cicirelli, 1995) and as they are closer in status and power in the family they are much more likely to talk with and ask for help from each other rather than their parents, especially for certain issues like dating or sexual relationships (Moser, Paternite, & Dixon, 1997; as cited in Yeh & Şempers, 2004; Cotterell, 1996; Tucker, Barber, & Eccles, 1997). Likewise, a warm and

positive relationship with siblings has been reported to be associated with higher self-esteem among adolescents (Yeh & Lempers, 2004).

One of the most important changes in the quality of sibling relationships has been reported to be a decrease in rivalry with age as the intensity of competitive feelings decline though they do not disappear altogether from the relationship (Allan, 1977; Scott, 1983; as cited in Connidis, 1992; Cicirelli, 1980, 1985; as cited in Cicirelli, 1996; Bedford, 1989; as cited in Cicirelli, 1996; Goetting, 1986; Cicirelli, 1996). This change is generally attributed to the fact that as children grow in age, their levels of competency become more similar and hence the relationship becomes more egalitarian (Buhrmester & Furman, 1990). Moreover, some studies suggested that even very rivalrous siblings try to establish more harmonious relationships in adulthood as a way of repairing their relationship (Ross & Milgram, 1982; as cited in Cicirelli, 1996; Goetting, 1986). Longitudinal research, however, demonstrates that conflict between siblings shows an increasing trend whereas positive sibling involvement appears to have a decreasing trend as children go through the period from middle childhood to adolescence (Brody et al., 1994; as cited in Volling & Blandon, 2003).

Transition into Siblinghood

It appears that although the sibling relationship is an enriching experience, rivalry has been one of its most emphasized components, especially starting from the birth of a new child (Berdie, 1952). One can say that one of

the most well-known situations in which sibling rivalry and jealousy demonstrates itself is the birth of a sibling for an only child. In fact, the birth of a sibling is a transition in and of itself in the sense that the only child becomes an older sibling and after the birth of a sibling, he/she enters into siblinghood (Volling, 2005).

Being a familiar event for many children, sibling birth can be a very traumatic event for many families in different degrees according to the variation in the older child's reaction to this event (e.g. Dunn & Kendrick, 1982; Legg, Scherick, & Wadland, 1974; as cited in Volling, 2005; Field & Reite, 1984). It appears that while some children pass through this transitional stage in a welcoming manner, some experience it as very traumatic and become very distressed after the birth of a sibling (Volling, 2005). However, the older child's experience in reaction to a newcomer is usually described to be a state of ambivalence which is the combination of both positive and negative feelings with regard to the event as demonstrated by a regression in one area of development (e.g. toilet training), becoming more clinging and aggressive in physical terms besides several changes in toilet, sleeping and eating rituals during and after separations from the mother for the birth of a sibling (Field & Reite, 1984; Dunn & Kendrick, 1982, Dunn, Kendrick, McNamee, 1981) accompanied by a progression in another area of development (e.g. helping behaviors toward the baby) (Dunn & Kendrick, 1982; as cited in Volling, 2005).

The experience of being a firstborn has also been emphasized by Harris (2006), too, who wrote that the firstborn is born to parents who are generally very anxious but proud of such an experience and that every reaction of the child is responded to immediately, and "every smile is an occasion for fetching the camera" (p. 89). Obviously, until the birth of a sibling, the firstborn is usually confident about the exclusive attention and love of the mother. Even during the pregnancy period, however, the older child starts to feel the first nuances of displeasures with regard to the relative decrease in the attention of mother (Kris & Ritvo, 1983). As long as the firstborn is young, his/her explanations for this painful experience would be limited and thus would lead his/her into fantasies. In response, the older child usually shows some regressive behavior and becomes more difficult to deal with, responds to this traumatic event by demanding that the mother throw the baby- usually referred to as 'it'-away, a situation which is often responded with more irritability by the mother, unfortunately (Kris & Ritvo, 1983). Though it is not very easy to foresee the effect of sibling birth in a family, the age of the firstborn in addition to the psychological well-being of the mother and the whole family seems to be crucial in defining what to expect in such a situation (Rosner, 1985).

When a new sibling arrives into the family, the only child has to leave its central position with regard to the attention of his parents to a situation in which he has to share whatever he used have until that time (Neubauer, 1983). The firstborn is usually thought to regard himself as an outcast who is dethroned by the arrival of a new baby (Kris & Ritvo, 1983; Adler, 1927; as

cited in Harris, 2006). Freud (1937) also stressed the importance of sibling birth for the firstborn by stating that the older child, who has been the only owner of the mother until that time, faces the loss of mother for some time, and whenever the mother reappears, she is no longer dedicated to the firstborn exclusively (Rosner, 1985).

In sibling jealousy, the valuable relationship that is threatened is the one with the parent and the rival is the sibling, the most crucial and "formative" for a child's life (Parrott, 1991; Miller, Volling, & McElwain, 2000; Volling, McElwain, & Miller, 2002). Freud and Dann (1951) highlight the nature of sibling relationships as characterized by feelings of rivalry, envy, and jealousy in relations to the attainment of parents' love. For Harris (2004), jealousy could have evolved in reaction to the competition between siblings for the love and attention of parents rather than as a result of mating situations as argued by evolutionary theorists since sibling rivalry exists in many species in nature, too.

Naive theory, which has been proposed by Heider (1958) to refer to implicit belief organizations, has been applied to the understanding of childhood jealousy implying that children believe that affection that can be given to someone is limited in quantity. Consistent with this, affection, whether attention, recognition, love, care, etc., given to a child in a family, is perceived to be that much less for the other child. Josselyn (1935), in one of his popular books, emphasized the fact that "it is almost inevitable that the first child will be jealous of the second. He has had all the parental attention; now he must share it. He considers parental love as 'a measurable quantity that must now be

divided in half' (p. 344, as cited in Robey, Cohen, & Epstein, 1988, p. 2). Hence, the birth of a sibling triggers aversive reactions especially in the firstborns since firstborns are exposed to the sharp difference while moving from the status of the sole owner of the affection to a status of a competitor (Robey, Cohen, & Epstein, 1988). Similarly, sibling jealousy can be conceptualized as a way of reacting to the loss of formative attention, as suggested by Tov-Rauch (1980), in the case of a parent who turns his/her attention to the other sibling. Many studies demonstrate that even children as young as 1 year old are responsive to the loss of attention on the part of their mothers to a doll which has the size of an infant (Hart, Field, DelValle, & Letourneau, 1998). Likewise, Dunn (1988; Dunn & Kendrick, 1982) asserted that toddlers and preschool children are very sensitive to the contacts between their parents and siblings and that they can disturb a continuing communication between them. Even children as young as six months can be observed to be drawn to toys that the other children are playing with as a demonstration of the wish to possess what the other has (Parens, 1988). The same mechanism is thought to be at work in sibling rivalry, that is, siblings want what the other has, especially the mother's attention, which is thought to be better or more when provided to the sibling than when provided to oneself (Parens, 1988).

Lewis (1980) interprets the frequently observed reaction of regression on the part of the firstborns in reaction to the birth of a sibling as way of strengthening attachment as an evidence of increased possessiveness of the mother, following the observation that attachment behaviors such as clinging

appear to increase in the case of stress (Neubauer, 1982). Hence, the first reaction of the firstborn to the birth of a sibling can be thought of as heightened attachment to the mother (Neubauer, 1982).

Dunn and Kendrick (1982) point to the importance of great changes in the parent-child relationships after sibling birth, which, then, is thought to be related to the quality of the sibling relationship later on (Dunn, 1992). As pointed out by clinicians, the attitudes and behavior of the firstborn toward the newly arrived baby is very much affected by the relationship between the mother and the firstborn child (Levy, 1937; as cited in Dunn & Kendrick, 1981).

It has been said that the closer the child is to his mother, the more he would find it difficult to deal with the relative loss of attention due to the birth of a sibling as the more there would for him to lose and the development of a hostile relationship between the siblings is very likely to be observed (Dunn, 1988; as cited in Jennings, 1998; Levy, 1937; as cited in Dunn & Kendrick, 1981; Levy, 1940). For instance, a twelve year old, who has other sources of social contacts such as father, friends, or other relatives, is thought to be less jealous compared to a three year old child who is more dependent on his mother. Likewise, if the age difference between the siblings is no more than one year, it is argued that there would be less jealousy among the siblings since the child is somewhat like he is arriving to a world of three and hence is thought to adjust to the situation naturally (Levy, 1940).

Together with very positive influences in terms of developmental and social outcomes, the birth of a sibling is known to be a very difficult transition in life (Neubauer, 1983). Hence, the inevitable difficulties in adaptation to the new situation in the family demonstrate themselves in terms of the relationship between the parents and the older child and between siblings. In that sense, the quality of the infant-mother attachment has been indicated as a key factor that is thought to affect the quality of the sibling relationship (Volling & Belsky, 1992). Regarding the relationship between the firstborn and the mother, it is demonstrated that as more securely attached children should be more sure about the emotional availability, responsiveness, and lovingness of their mothers, they should feel less threatened when the mother directs her attention to the other sibling compared to insecurely attached children and that there is more aggression between siblings in the case where both of the siblings are insecurely attached to their mothers (Teti & Ablard, 1989; Volling & Belsky, 1992). This finding is interpreted in such a way that observing the younger sibling who is more favored and who is provided with more affection by the parents can be perceived differently by the older sibling who had relationships with parents that differ in quality (Volling & Belsky, 1992). Moreover, the authors indicate that securely attached children are much more affected by differential parenting as compared to insecurely attached children who are thought to have experienced more nonsupportive parenting (Volling & Belsky, 1992). This is explained by the older children's probable feelings of loss as a result of parents' directing their attention to the younger sibling rather than to

himself/herself as it used to be in their previous supportive relationship (Volling & Belsky, 1992). These feelings of loss are thought to be leading to feelings of jealousy and more incidences of conflict, as a result. However, another line of research by Schino and Troisi (2001) that focuses on the association between the relationship with the mother and the response of the yearling Japanese macaques to the birth of a sibling demonstrates that quality of the relationship with the mother has a predictive value in that yearlings who had spent a great amount of time with their mothers previously were better at adapting to the birth of a sibling by being less likely to show depressive signs compared to the ones who could not compensate for the decreased amount of maternal care and showed signs of depression. The researchers argue that security of attachment could be responsible for the link between the amount of time in contact with the mother and the response to the birth of a sibling (Schino & Triosi, 2001).

Volling (2005) argued that as there appears to be individual differences among children in terms of adaptation to the birth of a sibling, the changes in children's lives should be examined from a developmental ecological systems model. With regard to sibling birth, it is maintained that the parenting styles, the quality of parent-child relationship, and the quality of marital relationship can affect the way the child adapts to the new situation. For instance, the quality of the relationship between the child and the father may gain special importance as the mother becomes overly invested in the newborn, especially right after the birth of the baby. In addition to the quality of the family dynamics and setting, characteristics of the child such as age, gender,

temperament etc. and the quality of the social networks of the family are thought to be important determinants of the way the child gets adapted to these changes (Volling, 2005). As for temperament, for instance, children who are difficult and who used to display frequent negative moods respond to the birth of a sibling with more distress and behavior problems compared to children who have easy temperaments (Thomas & Chess, 1977; Dunn et al., 1988; as cited in Brody, 1998). Also, children's friendships as they provide play interactions and conflict management opportunities are generally very helpful for firstborn children's transition and adaptation to siblinghood (Kramer & Gottman, 1992).

As put forward by Baydar, Greek, and Brooks-Gunn (1997), the birth of a sibling does not have a direct effect on the older child's development of adjustment difficulties, but rather the changes in the quality of the mother-child relationship such as increases in her employment of physical punishment mediates its effect along this period. Research has demonstrated changes in the quality of mother-child relationship after the birth of newborn which includes increases in control (Dunn & Kendrick, 1980; as cited in Teti, Sakin, Kucera, Corns, & Das Eiden, 1996; Baydar, Greek, & Brooks-Gunn, 1997; Kendrick & Dunn, 1980) and decreases in attention (Dunn & Kendrick, 1980; as cited in Teti, Sakin, Kucera, Corns, & Das Eiden, 1996; Baydar, Greek, & Brooks-Gunn ,1997; Kendrick & Dunn, 1980; Stewart, Mobley, Van Tuyl, & Salvador, 1987), affection and play (Baydar, Greek, & Brooks-Gunn, 1997; Dunn & Kendrick, 1980) with the older child due to increases in the demands of the

baby (Volling, 2005). The authors explain their findings by stressing the mediator role of changes in the economic conditions of the family, especially in cases where the age interval between siblings is relatively small. These reported changes in the interaction of mother and the firstborn together with changes in familial environment is found to be related to lower levels of verbal development, especially in economically disadvantaged families (Baydar, Greek & Brooks-Gunn, 1997). As such, these changes have been linked to changes in the family environment after the arrival of a new baby into the family. Moreover, studies with preschool and school-aged children demonstrated that in cases where mother employs nonpunitive ways of interacting with her older children, usually the older children are found to be less likely to use agonistic behaviors toward their siblings (Brody, Stoneman, & MacKinnon, 1986; as cited in Brody, Stoneman, & McCoy, 1992). However, the results of a study failed to find consistent results with earlier findings that suggest substantial changes in the quality of mother-firstborn interaction; but these inconsistent results are explained by the use of retrospective techniques which might have led to a perception of effects as less dramatic as time goes by (Kojima, Irisawa, & Wakita, 2005).

The child's reaction to the birth of a sibling and the quality of the subsequent relationship between the siblings is argued to be a derivative of the quality of the relationship between the mother and the firstborn since it is believed that the mother's own sibling experience is revitalized during her second pregnancy, according to psychoanalytical approach (Abarbanel, 1983).

As such, it is asserted that when the mother could not resolve her feelings of rivalry with her sibling, this could negatively affect her availability for the firstborn, a condition which would negatively affect the preparation of the firstborn for sibling birth and the attitude of the firstborn towards the new sibling (Abarbanel, 1983). Likewise, a father who has been a firstborn child of his family and who had intense rivalry feelings against his younger brother can provide limitless support to his older child as he is better able to identify with him and can pay less attention to his younger son who is very likely to be identified by the younger sibling of the father (Berdie, 1952). This is explained by the simple reactivation of previously learned reactions to siblings in similar situations of childhood period. Nevertheless, a parent who has worked out his issues on his/her own rivalry issues is expected to be much more aware of his/her attitudes toward the children (Berdie, 1952).

Rivalry, generally taking the form of regression, trying to get attention continuously, and verbal or physical attacks depending on the developmental stage of the children, has been thought to exist in most sibling relationships with some differences in its intensity (Leung & Robson, 1991). Yet, if dealt with properly by parents, especially if the mother talks about the secondborn with the firstborn and engages in fostering of siblinghood, this rivalry is thought to be replaced by less hostile but more friendly relationships and to lead to the development of some skills that are useful in social, cognitive, and interpersonal arenas (Leung & Robson, 1991; Jennings, 1998; Abarbanel, 1983).

Birth Order

Freud (1915) states that "the position of child in the family order is a factor of extreme importance in determining the shape of his later life and should deserve consideration in every life history" (p. 334; as cited in Pollock, 1978, p. 448). Supporting the same argument, Alfred Adler (1927) has come to be known as the first to theorize about the effects of birth order on personality development. With more recent work on the topic, it has been theorized that firstborns are more conforming to the rules and authority and show more leadership qualities, whereas middleborns have more difficulty in finding our their place in the family while trying to establish fairness in the family (Adler, 1927; Stewart, 2004; Sulloway, 1997). Youngest children, on the other hand, are viewed as babies and are also babied by others, and more social and helpful compared to the firstborns (Stewart, 2004; Sulloway, 1997). Only children resemble the lastborns in that they are somewhat like babes who try to obtain all the attention of others but they may also be leaders like the firstborns (Adler, 1927; Stewart, 2004).

Adler (1928) uses the word dethronement to describe the experience of the firstborn, who has been the owner of the exclusive attention of his parents, at the time of his sibling's birth (Adams, 1972). He continues by stating that the firstborn, who has been dethroned, would try to regain his place in the eyes of his parents after all. The finding that among preschool children older siblings are more rivalrous compared to younger ones who appeared to be more cooperative seems to be in line with this assertion (Howe, Bukowski, &

Aquaan-Assee, 1997). Middle children, in contrast to firstborns and only children, are never the sole owners of the attention of their parents and they are simply the ones who came before the arrival of a new sibling, the younger one, who would stay as the focus of attention in the family, and thus would never be dethroned (Adams, 1972). Only children obviously do not experience sibling competition in terms of attainment of parental attention. In general, it seems that the youngest and the only children look similar in the light of monopolization of attention of their parents while firstborns and middleborns are analogous in the sense that they do experience dethronement while firstborns are more traumatized by the sibling birth compared to the middleborns (Adams, 1972). Moreover, it is argued that firstborns are generally encouraged to move towards independence and self-sufficiency besides being more harshly disciplined early in childhood compared to younger ones who receive more unconditional acceptance and spontaneous treatment by their parents (Bank & Kahn, 1997). Besides, the oldest children carry the burdening responsibility of being the oldest and thus sometimes cannot sufficiently live out their own childishness. On the other hand, youngest children are both encouraged and given enough space to behave like a small baby, in a way not allowing them to reach maturity, in sharp contrast to the oldest children (Sutton-Smith & Rosenberg, 1970; as cited in Kernberg & Richards, 1988).

With respect to the birth of the younger child, he/she may not like the environment that he is born into where the older child has a well-established status as the older and more talented child already in the family (Moser, Jones,

Zaorski, Mirsalimi, & Luchner, 2005). It can be argued that the younger sibling only experiences and thus knows life with an older sibling, and therefore the only thing they know is that parents' attention and care should always be shared (Volling, McElwain, & Miller, 2002); however, the younger siblings are also observed to show jealousy responses when playing with their mothers just as older siblings do (Miller, Volling, McElwain, 2000).

Allred and Poduska (1988) looked at the effects of birth order on happiness scores of siblings in families with four or more children and found that both male and female lastborns get lower scores than siblings of other birth orders. This finding can be considered to be in line with Adler's (1958) assertion that lastborns are usually the ones who are spoiled by their parents in that lastborns who used to be cared so much by their parents may expect the same treatment from all other people when they grow up and the failure of the fulfillment of these expectations may lead to unhappiness quite logically (Allred & Poduska, 1988). Moreover, the pampering on the part of the parents might prevent these children from learning to cope with the difficulties of life (Allred & Poduska, 1988).

Some explanations with regard to the reasons for sibling rivalry/jealousy have relied on Darwinian concepts, one of which focuses on the limitations of altruism between siblings (Sulloway, 1995). Accordingly, since siblings share 50% of their genes, although parents try to allocate the resources equally, siblings would prefer to obtain as twice as much they can get by sharing with a sibling. Likewise, in evolutionary terms, parents devote most of their supplies

and resources to the firstborns due to higher reproductive value of older siblings who are thought to have more survival chances in the old days (Daly & Wilson, 1988; as cited in Sulloway, 1995) meaning that laterborns rather than the firstborns should be the ones who would compete for the family resources all through their childhood (e.g. Betzig, 1987). It is argued that "this might have instilled in laterborns more than in firstborns the expectation that one will always have to struggle to obtain and keep the love of another person" (Buunk, 1997,

p. 998). Firstborns, on the other hand, also need to protect their status in the family and thus, do not need constant favoring by his parents in order to behave like that (Sulloway, 1995). However, existing literature appears to provide contradictory results with regard to the effect of birth order such that while some indicated that firstborns are the ones that receive more negative treatment from their parents (e.g. Baskett, 1984), some provide evidence that they report lower levels of depression (Gates, Lineberger, & Crockett, 1988; as cited in Buunk, 1997).

According to Sulloway (1997) the reason underlying sibling rivalry is the competition over parental resources, especially parental attention. In this competition, firstborns being stronger and bigger can defend their status as they are generally dominant and aggressive. Laterborns, on the other hand, try to be nice and good-natured in return although they feel the urge to fight back (Sulloway, 1997). As a result, siblings turn out to be different since they compete for limited resources. This process, known as, deidentification, was

considered as a way of dealing with sibling rivalry through developing abilities at which the sibling is not strong and thereby reducing the probability of competition so that they would not be in competition with their siblings and hence would not be compared (Schachter, 1982, 1985; as cited in Cicirelli, 1995; Schachter, Shore, Feldman-Rotman, Marquis, & Campbell, 1976; Schachter & Stone, 1987; Sulloway, 1997). Related to this, the finding that deidentification has been found to be the highest among the first pairs of siblings of three and lowest in jump pairs and greatest when siblings are close in age implies that it can also be a way of dealing with sibling rivalry in oedipal terms since rivalry in the first pairs would be expected to be higher than the rivalry between jump pairs which is thought to be "mitigated" by the existence of the middle sibling (Schachter, Shore, Feldman-Rotman, Marquis, & Campbell, 1976; Feinberg & Hetherington, 2000). Moreover, the finding that same sex siblings are more likely to deidentify compared to opposite sex siblings can be considered in the light of the psychoanalytic notion of rivalry as same sex siblings would have similar desires and hence would resort more to deidentification as a defense mechanism (Schachter, Gilutz, Shore, & Adler, 1978; Schachter, Shore, Feldman-Rotman, Marquis, & Campbell, 1976). Also, these are generally the conditions where sibling rivalry, competition, or comparison is high, in other words, in first-second pairs and in pairs of the same sex (Schacter, 1982; as cited in Schachter & Stone, 1985; Schachter, Gilutz, Shore, & Adler, 1978; Schachter & Stone, 1985). However, Harris (2006) points to the fact that there exist no studies that figure out the

effectiveness of divergence from the sibling in terms of gaining more attention or affection of the parents. Moreover, she maintains that siblings reared in the same home become neither more alike nor less alike compared to siblings reared separately, as predicted. For instance, adoptive siblings were not found to be less alike in comparison to adoptees reared in different homes (Bouchard & Loehlin, 2001). Hence, Harris (2006) argues that growing up together cannot be responsible for sibling differences.

Sex-Constellation & Age-Spacing of the Sibling Dyad

Starting at the birth of a sibling, the reactions of the older children seem to be of different variety depending on many firstborn status variables such as age and sex (Teti, Sakin, Kucera, Corns, & Das Eiden, 1996). As such, firstborns who are very young (e.g. younger than 18 months of age) are found to display relatively little distress in comparison to preschool children (Thomas et al., 1961) as this is related to development of some cognitive skills after the age of 24 months (Hoffman, 1975; Kagan, 1981; as cited in Teti, Sakin, Kucera, Corns, & Das Eiden, 1996). Moreover, mother's reports revealed that firstborns who are of the same sex as the new sibling appeared to show more problem behaviors such as regression or imitation in comparison to firstborns who are of the opposite sex with the new sibling (Stewart, 1990; as cited in Teti, Sakin, Kucera, Corns, & Das Eiden, 1996).

In terms of the qualities of the sibling relationship later on, the amount of sibling conflict appears to be the highest in children with siblings whose age

is closer to oneself and who are of the same sex (Koch, 1960; Minnett, Vandell, & Santrock, 1983; Furman & Buhrmester, 1985). Additionally, sex of the sibling dyad appears to be related to the quality of siblings in that aggressive and dominant encounters were found to be more likely in same-sex dyads compared to opposite sex dyads (Minnett, Vandell, & Santrock, 1983). Moreover, Graham-Bermann's (2001) study with sibling pairs between the ages of 11 and 14 revealed that same-sex sibling dyads showed the higher amounts of conflict with dyads consisted of boys reporting the highest level of frequency among all. Sibling rivalry, on the other hand is found to be the greatest between brothers and the least between opposite sex siblings (Cicirelli, 1980, 1985; as cited in Cicirelli, 1996).

Sibling Conflict as an Indication of Sibling Jealousy

Sibling conflict, as part of children's lives, seems to be more frequent during the early years with a decrease in frequency during childhood and a change in their nature towards being more verbal accompanied by justifications (McHale & Gamble, 1989; Prochaska & Prochaska, 1985; Vandell & Bailey, 1992; as cited in Cicirelli, 1995; Furman & Buhrmester, 1985). These conflicts, ranging from small disagreements to harsh and violent behaviors, can be associated with several factors, one of which is stated to be the differential treatment by parents (Cicirelli, 1995). It is asserted that favoring one child over the other leads to rivalry and resentment between the siblings who in return, rely on aggression and violence. Even if parents try to be fair in their treatment

of all children, it is somewhat unavoidable for children to perceive differential love and acceptance by their parents and thus, sibling conflict is thought to increase whether differential treatment really takes place or it is only the perception of siblings (Vandell & Bailey, 1992; as cited in Cicirelli, 1995).

The decrease in attention provided to a specific child is also related to sibling conflict just as in the case of sibling birth during which the older child experiences a change in the amount of attention provided by the parents or in the case of having a handicapped or an ill sibling during which parents can fail to respond sufficiently to the needs of the other child (Vandell & Bailey, 1992; McHale & Gamble, 1989; Abramovitch, Stanhope, Pepler, & Corter, 1987; as cited in Cicirelli, 1995).

Associating sibling aggression with sibling jealousy/rivalry seems to be a common theme in sibling relationships literature (e.g. Adler, 1927; Podolsky, 1954; Kelly & Main, 1979; Ross & Milgram, 1980; as cited in Felson, 1983). The fact that Furman and Buhrmester (1985) found conflict and rivalry factors as the only two factors that were associated with each other seems to support this, too. Rivalry-based theories propose that competition between siblings in terms of parental attention and love is responsible for sibling conflict (e.g. Faber & Mazlish, 1987; as cited in Raffaelli, 1992; Freud, 1900/1976; Ihinger, 1975). Related to this, the "sibling rivalry model" posits that the older child feels uncomfortable due to losing the parents' attention to the younger sibling starting from the birth of a new sibling. Hence, it is maintained that aggression among siblings could be the natural result of sibling jealousy as shown by

Henry (1940) who studied the hostile behaviors of older sibling toward the newborn (Felson, 1983). From this perspective, sibling aggression is thought to be a form of nonrealistic conflict which arises due to frustration and thus leads to tension reduction in a way (Simmel, 1922/1955; Coser, 1998).

A common cause of conflict appears to be sibling jealousy, as stated before. Specifically, conflict has been considered to be a result of the competition for the mother's attention (Graham-Bermann, 2001). Also, father's equal treatment of siblings during discussions of problem solving is found to lead to relationships that are less conflict-laden, as evident in a study with school-aged siblings (Brody, Stoneman, McCoy, & Forehand, 1992). Likewise, Newman (1994) emphasizes the fact that competition between siblings is unavoidable as children find themselves in a situation in which they have to compete for many resources ranging from toys to parental affection and attention, the latter of which is usually perceived as a limited resource (Robey, Cohen, & Epstein, 1988). This competition for family resources as well as achievement and competence are thought to lead to frequent conflicts between siblings (Newman, 1994).

Differential Treatment

Sibling relationships should be understood as taking place inside a family system that is somewhat dependent on the parent-child relationships (Maleki-Tehrani, 2006). A major example of such interdependency can be portrayed by perceived differential experience in families (Maleki-Tehrani,

2006). The most common approach with regard to understanding sibling experience was to assume that children in the same family experience similar familiar environment such as attitudes of parents, parental characteristic or other living conditions (Daniels & Plomin, 1985). However, the fact that siblings, despite experiencing the assumed same environment, come up to be somewhat different from each other, led to the speculation that the family environment could make siblings different from each other, rather than similar to each other and that siblings do experience different environments (Plomin & Daniels, 1987; as cited in Furman & Lanthier, 1996; Rowe & Plomin, 1981; as cited in Daniels & Plomin, 1985). What this implies is that siblings have been found to be no more similar than children who are genetically unrelated to each other after genetic factors are accounted for (Furman & Lanthier, 1996). As some traits do have genetic constituents (Loehlin, 1992), they may lead to some similarities between them; however, the differences between them seem to be related to differential experiences outside the family as well as differential experiences each child has with parents (Furman & Lanthier, 1996).

Vandell and Bailey (1992) define parental differential treatment as the situation in which one child is paid attention to or provided with some privileges by the parents compared to the other who is generally neglected. In a similar vein, favoritism, more specifically refers to the parents' actual or perceived treatments of some children better than the others (Brody, Copeland, Sutton, Richardson, & Guyer, 1998).

Although siblings live in the same family and are exposed to similar familial conditions, both children and parents frequently perceive parental behaviors and attitudes differently with regard to whether differential parenting takes place or whether it is fair (Kowal, Krull, & Kramer, 2006). It is argued that even if parents try to treat their very different children equally, they cannot prevent their children from perceiving that their parents behave more favorably to one of their children (Bank, & Kahn, 1997; Rauer & Volling, 2007).

The results of many studies appear to be consistent in terms of the finding that parental favoritism is a prevalent phenomenon across many families (Nardine & Zeidle, 1986; as cited in Kiracofe, 1992; Kiracofe & Kiracofe, 1990; Harris & Howard, 1985). In line with this, Zervas and Sherman's (1993) reported that 62% of the subjects in their study revealed the existence of favoritism in their families. Likewise, Brody and her colleagues (1998) found that 65% of their sample of young adults reported the existence of parental differential treatment in their families with moderate consensus among the siblings' reports. It seems that the perceptions of siblings rather than actual treatment appears to be more consistently associated with well-being (Kowal, Kramer, Krull, & Crick, 2002; McHale, Updegraff, Jackson-Newsom, Tucker, & Crouter, 2000). In a similar vein, it is suggested that observing how the sibling is treated may affect the child's fantasies and "self-representation" even though the parents have not behaved the way the child perceives (Rosner, 1985), with an emphasis on the way the child interprets the family environment

and the structure on personality development (Adler, 1956; as cited in Campbell, White, & Stewart, 1991).

Evolutionary psychologists advocate the belief that parents do favor their older children especially in life-threatening circumstances since older ones have a better chance to survive these risky conditions and thus could pay back to their parents as they continue to survive in time (Daly & Wilson, 1988; Wright, 1994; as cited in Harris, 2006). Others, on the other hand, advocate the thought that parents should be more careful about the well-being of the newborn as they need much more care in order to survive as compared to the older ones and that any failure to care for them could result in more harm (Trivers, 1985; as cited in Harris, 2006). Consistently, it is known that the older child is sent to play around after a sibling is born although he used to be carried around the whole day in hunter-gatherer societies (Eibl-Eibesfeldt, 1989; LeVine & LeVine, 1963; as cited in Harris, 2006). Studies with industrialized societies also show that in the case where the parents have more than one child, they show more attention and provide more affection to the younger one who is also loved best according to most parents' admissions (Jenkins, Rasbash, & O'Connor, 2003; Dunn & Plomin, 1990; McHale, Crouter, McGuire, & Updegraff, 1995; as cited in Harris, 2006).

As Harris (2006) points out, although there can be exceptions, it appears that younger children are loved best on the whole. As a result, firstborns, who are dethroned by the birth of a sibling, continue to feel the same as this dethronement seems to continue in the family. However, they are the ones who

are bigger, stronger and who know more compared to their siblings and as suggested by the 'pecking order' in many species bigger and stronger ones are almost always the dominant ones at home (Harris, 2006). That is why, Harris (2006) states, that the laterborns should find a way to deal with the firstborns who are higher in the dominance hierarchy.

Research demonstrates that parents behave differently to their children depending on their birth order such that some of them suggest that parents favor the youngest ones (Furman & Buhrmester, 1985) whereas others report that firstborns always appear to the most privileged ones in addition to their bearing of responsibilities (Hilton, 1967). It is also argued that while firstborns use the comparison processes to protect their already established status within the family, laterborns are thought to use them with the aim of obtaining the privileges that the older ones already have. Moreover, perceived differences in parental treatment appear to be related to one's self-worth (Tesser, 1980) especially in a more steady manner for laterborns since they find themselves in a position in which they compare themselves with an older sibling who has already acquired a higher position in the family. Hence, it is argued that children who are born earlier are more alert to the differences in the treatment of parents than laterborns (Crouter, Head, McHale, & Jenkins-Tucker, 2004). It is maintained that this self-worth, as affected by parental differential treatment, colors the way the person perceives events and relationships in a way to make it compatible with their already established beliefs about themselves and familial relationships (Shebloski, Conger, & Widaman, 2005).

Several studies that relied on naturalistic observation reported significant differences in terms of the mothers' attention, affection, responsiveness and play behaviors toward their two children (Dunn & Munn, 1986; Dunn, Plomin, & Daniels, 1986; Stocker, Dunn, & Plomin, 1989; as cited in Cicirelli, 1995). Brody, Stoneman, and Burke (1987) as well as Bryant and Crockenberg (1980) have also reported similar results with regard to the mothers' differential behavior toward young siblings (Cicirelli, 1995). In line with Bryant and Crockenberg's (1980) and Brody, Stoneman, and Burke's (1987) studies, Stocker and his colleagues found that the younger sibling is more likely to be the recipient of more affection, attention, and responsiveness of mothers as most mothers are observed to be engaged in these behaviors with younger siblings (Stocker, Dunn, & Plomin, 1989). Older children (Furman & Buhrmester, 1985) and adolescents (Daniels, Dunn, Furstenberg, & Plomin, 1985) too, stated that they experience differential treatment in the family.

These differences in the quality of relationships between parents and each child are found to predict conflict or jealousy between the siblings (Brody, Stoneman, & Burke, 1987; Brody et al., 1992; Stocker, Dunn, & Plomin, 1989; as cited in Furman & Lanthier, 1996). One of the causes that lead to sibling jealousy is the child's perception that the sibling is differentially and more favorably treated than the child himself (Kowal, Kramer, & Krull, Crick, 2002). Contributing to these, the results of several studies indicated sibling jealousy, envy, rivalry, and competition besides hostile feelings and frequent conflicts among siblings as inevitable results of differential treatment, in the forms of

differential favoritism and "diverted attention" (Schachter & Stone, 1987; as cited in Brody, Copeland, Sutton, Richardson, & Guyer, 1998; Brody, 1998; Rauer & Volling, 2007; Thompson & Halberstadt, 2008; Furman & Buhrmester, 1985). Similarly, differences in parents' treatment of their children, as emphasized in several theories ranging from social learning (Bandura, 1977), psychoanalytic (1916/1949), self-esteem maintenance (Tesser, 1980), and equity (Walster, Bercheid, & Walster, 1973), have been found to be related to the development of feelings of rivalry and anger through creating negativity in the relationship (Brody & Stoneman, 1996). Supporting these, adult's reports of sibling relationships during childhood seem to portray the effect of differential parental treatment in that when they report negative relationships they generally relate it with the favoritism towards one child over the other in the family (Ross & Milgram, 1982; Vauhkonen, 1968; as cited in Boer, Goedhart, & Treffers, 1992) while equal treatment as perceived by siblings relates to the most positive and least negative qualities of sibling relationships (Boll, Filipp, & Ferring, 2003).

It is stated that the development of children's identity is partly determined by observing the way the parents treat the siblings and themselves such that they would reach a self-definition by concluding that 'I am the one who gets more' or 'I am the one who gets less' (Kernberg & Richards, 1988, p. 56) as a result of a possible internalized message that he is not worthy of equal care and attention, a belief that would continue to its existence in terms of an anticipation that one will always deserve less (Bank, 1988; as cited in Moser et

al., 2005; Openshaw, Thomas, & Rollins, 1983; as cited in Zervas & Sherman, 1994; Kiracofe, 1992; Charles, 1999; Combs, Syngg, 1959). In the reverse condition, the child who feels that he is the favored child of the family may well develop a boosted sense of self that he would expect a differential treatment in interpersonal relationships all the time. Similar to this, siblings who have been the disfavored ones are thought to develop more negative expectations related to the availability of others compared to favored ones (Sheehan & Noller, 2002). With regard to self-esteem, however, there are inconsistent results as some suggest that these nonfavored siblings are low in self-esteem compared to individuals who have received equal treatment from their parents (Zervas & Sherman, 1994; McHale, Crouter, McGuire, & Updegraff, 1995) while some fail to find significant differences in terms of level of global self-esteem pursued by favored and nonfavored children (Neale, 1986; as cited in Zervas & Sherman, 1993).

Empirical data show that the differential treatment on the part of the mother in terms of affection, control, and responsiveness leads to more conflictual, aggressive, rivalrous, and competitive sibling relationships (Hetherington, 1988; as cited in Brody, Stoneman, & McCoy, 1992; Stocker, Dunn, & Plomin, 1989; Bryant & Crockenberg, 1980; Brody, Stoneman, & Burke, 1987).

Though the literature is replete with research that display significant relationships between maternal differential treatment and sibling relationship quality, Brody, Stoneman, and McCoy's (1992) study reveals that paternal

direct and differential treatment also accounts for variations in sibling relationships such that paternal differential responsiveness and differential controlling behaviors are associated with higher frequencies of negative behavior on the part of younger sibling toward the older one. Contributing to these, Volling and Belsky (1992) reported a significant relationship between more affectionate behaviors of father directed to the younger sibling and less prosocial interactions between siblings.

As children need different kinds of parenting in accordance with their developmental level and needs and also with different individual characteristics, they somehow have to be treated differently in order for parents to provide responsive and sensitive parenting to them (Brody, 1998). Several other studies suggest that in addition to the amount of parental differential treatment, the attribution of causation for parental differential treatment in children's minds and their thoughts about whether this treatment is fair, and a shared understanding of parental differential treatment in terms of its degree and fairness, especially where there is agreement between siblings, also appear to moderate the effects of differential treatment (Kowal, Krull, & Kramer, 2004; as cited in Kowal, Krull, & Kramer, 2006; Kowal & Kramer, 1997). Kowal and Kramer's (1997) study showed that 75% of children who reported the existence of differential treatment did not approach this issue as an unjust situation as they made justifications of the situation in line with their differences with their siblings in terms of age, personal characteristics and so forth. These children, in turn, are found to appreciate their relationships with their siblings more

positively, suggesting the importance of how children construct meanings out of their experiences in the family.

The Present Study

As Freud (1922) maintained, jealousy is overdetermined, meaning that its origin can be traced back to the interplay of many different sources in many different ways and can be interpreted from several different points of view. Correspondingly, the main aim of this study is to trace back some of the developmental origins of romantic relationship jealousy. In the light of the literature mentioned above with respect to developmental explanations of jealousy, it seems that there is some kind of a relationship among differential treatment by parents, sibling jealousy in childhood, adult attachment, and jealousy in romantic relationships. However, limited existing empirical work and conflicting results create barriers to producing a comprehensive and consistent model that could explain the possible interplay among these variables.

The importance of early familial experiences for the functioning of romantic relationships has become a highly emphasized area of research recently. One consistent result is that high-quality romantic relationships are associated with experiences of parents as nurturing, compared to having experienced familial relationships that are relatively distant (Black & Schutte, 2006; Donnellan, Larsen-Rife, & Conger, 2005). In a similar vein, this study

aims to point to the significance of early familial influences in terms of sibling relationships on young adulthood functioning in romantic relationships.

This study uses a sample consisting mainly of young adults due to the significance of young adulthood as a period in the formation of romantic relationships (Collins, 2003; Erikson, 1968) and as a period dominated by role changes such as becoming an independent adult in the family, able to develop relationships outside the family, i.e. friendships or romantic relationships (Arnett, 2000; Chen, Cohen, Kasen, Johnson, Ehrensaft, & Gordon, 2006). Evidence indicated that most of the individuals in this period of development experience jealousy to differing degrees in their romantic relationships (Larson, Clore, & Wood, 1999; as cited in Rauer & Volling, 2007). Moreover, early adulthood has been considered to be a period of time during which individuals generally engage in more long-lasting romantic relationships (e.g. Arnett, 2000). Therefore, studying individuals at this period of development is thought to provide clues to the way the experiences early in the family environment are linked with romantic relationships later on (Rauer & Volling, 2007; Donnellan, Larsen-Rife, & Conger, 2005).

One of the main objectives of the present study is to test the psychoanalytic assertion that early sibling jealousy is linked to jealousy in romantic relationships (Reik, 1945; Freud, 1922; Levy, 1940; Schmideberg, 1953; Agger, 1988). This assertion has also been shared by some developmental psychologists who have maintained that adulthood jealousy is rooted in childhood sibling jealousy (e.g. Neill, 1998). Specifically, it is

hypothesized that the more the individual perceives that he/she has been jealous of the sibling during childhood; the more jealous he/she is expected to be in romantic relationships *(H1).* This hypothesis is also based on the proposition that people who report sibling jealousy in childhood could be more likely to regard others as probable competitors in significant relationships (Crocker & Park, 2004). In addition to this, the present study will investigate whether romantic jealousy has its roots in the jealousy over the opposite sex parent in the sibling complex as suggested by Freud (1922) or jealousy over mother as suggested by several others (e.g. Levy, 1940) (R1).

The literature is replete with studies that focus on the adverse outcomes of being differentially treated by parents in terms of children's adjustment and emotional well-being (e.g. Dunn, Stocker, & Plomin, 1990; as cited in Sheehan & Noller, 2002). However, individuals' experiences with their parents during childhood may also be related to their later relationship functioning, so that perception of differential treatment is in some ways linked to they way they feel and behave in romantic relationships (Conger, Cui, Bryant, & Elder, 2000; Black & Shutte, 2006). In line with this, it is expected that differential treatment by parents is associated with the experience of jealousy in romantic relationships *(H2)*. In addition to investigating whether there is a direct link between perceived differential treatment and romantic jealousy, the present study also tests whether the proposed relationship is mediated by some developmental variables based on the findings that reported sibling jealousy and attachment styles as mediators of the association between differential

treatment by parents and romantic relationship jealousy (Rauer & Volling, 2007).

Accordingly, this study proposes a developmental model in which differential treatment by parents, early sibling jealousy, adult attachment, and romantic relationship jealousy are related. The first part of the model represents the hypothesis that perceived differential treatment is related to sibling jealousy, as consistently reported by several studies (e.g. Brody, 1998). In other words, it is expected that experiencing more differential treatment will be associated with greater jealousy toward one's sibling *(H3).* The second part of the model investigates the relationship between differential treatment of parents and adult attachment while considering sibling jealousy as a possible mediator of this relationship. The accepted view regarding the importance of early caregiving experiences in the development of internal working models has recently been enriched by the assertion that what differentiates between different working models of self and others appears to be within-family experiences in differential treatment by parents rather than between-family differences (Sheehan & Noller, 2002). The expectation of a relationship between differential treatment and working models of self and others in adulthood is based on the implications of differential parenting in terms of responsiveness, availability, and consistency of parenting. It has been maintained that responsive and consistent parenting is related to secure attachment style, i.e. positive model of self and others, while inconsistently responsive parenting is associated with insecure attachments, i.e. negative views of self and/or others (Ainsworth, Blehar, Waters, & Wall, 1978;

as cited in Sheehan & Noller, 2002). Moreover, following the assertion of Collins, Cooper, Albino, and Allard (2002) that siblings can be considered as important others with whom the continued experience would enable one to compare oneself and the treatment received so that the resulting repertoire of interpersonal experiences will affect the attachment styles, it is hypothesized that being exposed to continuous differential treatment is associated with negative models of others regarding their sensitivity, availability and responsiveness and negative models of self as being unworthy of love compared to their sibling who appears to be the favored child of the family (Rauer & Volling, 2007; Sheehan & Noller, 2002).

The term differential treatment in this study also includes processes of parental "comparisons" between siblings based on the fact that a child develops a sense of self by his/her gender, age, physical outlook, and abilities in several areas which are usually compared with where the sibling who is close in age stands with respect to these characteristics (Bank & Kahn, 1997). Family members also contribute to this organization of self-concept through praising or projecting their view of him/her, which, in turn helps to augment the child's sense of self in relation to basic terms such as 'good boy', 'weak girl' and so forth. (Bank & Kahn, 1997). The important point is that the child takes very seriously the attributes that the parents find attractive in one's self or one's sibling (Bank & Kahn, 1997). This comparison process, as related to one's view of self and others in relation to the sibling, is also considered as part of differential treatment by parents for the purposes of this study.

All in all, it is expected that being exposed to differential treatment by parents is related to a person's internal working models in romantic relationships via its effects on sibling jealousy, meaning that perceived differential treatment of parents will predict insecure attachment in romantic relationships and that this relationship will be mediated by sibling jealousy *(H4)*.

The final part of the model concerns the relationship between adult attachment and jealousy in romantic relationships. Existing literature on the effect of attachment demonstrates the importance of the internalization of early experiences and internal working models in terms of the formation and functioning of later close relationships (Hazan & Shaver, 1987; Collins & Sroufe, 1999; as cited in Rauer & Volling, 2007). As internal working models are the byproducts of experiences with attachment related experiences, situations that call for attachment behaviors such as relationships with romantic partners should be affected by these internal working models (Bowlby, 1988; Main, Kaplan, & Cassidy, 1985). Jealousy in a romantic relationship, being an obviously stressing and threatening situation due to threats of separation and loss, can set attachment system into motion through the activation of the individual's working models of self and others (Guerrero, 1998). As people with negative models of self have been reported to experience more difficulties with respect to the development and maintenance of relationships in young adulthood (Bartholomew, 1990; Feeney & Noller, 1990; as cited in Rauer & Volling, 2007; Guerrero, 1998; Volling, Nataro, & Larsen, 1998), it is expected

that being insecurely attached will be linked with reports of more romantic jealousy. As maintained by Bowlby (1979), through increasing age individuals represent the world and significant people according to the extent of danger of the situation and "availability" and "responsiveness" of the significant person, this expectation is based on the idea that having a disturbed attachment history would increase a person's susceptibility to jealousy through increasing the possibility of perception of threat to the relationship and make that person to be more sensitive to the signals and threats of acceptance, rejection, and loss from the partner due to the established internal working models which are formed as a result of the experiences of inconsistencies in the availability of important others (Bowlby, 1973; Collins & Read, 1990; Hazan & Shaver, 1987). In other words, individuals who obtain higher scores on the anxiety dimension of the attachment scale are expected to have higher scores on romantic relationship jealousy scale *(H5)*.

Altogether, the present study tests the associations between differential treatment and sibling jealousy in early childhood, and attachment styles and romantic jealousy in adulthood, testing whether there is a predictive developmental sequence of relationships starting with the perception of differential treatment and early sibling jealousy through adult attachment style and the development of romantic jealousy. To put it differently as a developmental model, it aims to see if the effects of early experiences of differential treatment and sibling jealousy make individuals more likely to have

insecurities in attachment styles and if altogether these effects show themselves in romantic relationships as jealousy experiences (*H6*)

In addition to the proposed developmental model of jealousy, birth order, being a variable whose relationship with jealousy has been frequently investigated, will be tested as a potential covariate that is expected to help explain the probable association between differential treatment and romantic jealousy. Evidence indicates that older siblings are generally more sensitive to differences in the quality of parenting as demonstrated by studies that focused on reactions to the birth of a sibling (Dunn & Kendrick, 1980; Dunn, Kendrick, & MacNamee, 1981; as cited in Feinberg, Neiderhiser, Simmens, Reiss, & Hetherington, 2000). Moreover, it is maintained that the association between parental relationships and the quality of sibling relationships is stronger for older siblings, especially in terms of maternal responsiveness implying that older siblings seem to be much more likely to be influenced by parental behavior (Bryant & Crockenberg, 1980). With respect to romantic relationships, however, laterborns are found to report greater jealousy compared to firstborns (Buunk, 1997; McGuirk & Pettijohn II, 2008). Although it appears that there are inconsistent findings with regard to the effect of one's ordinal position in the family, firstborns are expected to score higher on sibling jealousy since they have experienced the loss of parental attention due to a sibling birth but the secondborns are born into a world in which they do not know what kind of an experience it is to be the sole owner of the parental love and attention, hence they do not face a loss *(H7).* It is also asserted that the

narcissistic wound in response to the loss of the mother to the newly arrived baby contributes to the developing image of the self (Kris & Ritvo, 1983). Children who think that they are "less than" their siblings in many different areas, including the attention and love of their parents, may build up a sense of self that is inadequate in many respects (Neubauer, 1983). Hence, it is expected that firstborns would be much more sensitive to differential treatment by their parents as compared to laterborns *(H8)*. The threat of loss of formative attention and the experience of being replaced are thought to be more in the experience of firstborns compared to laterborns and this is thought to make firstborns more vulnerable to jealousy in romantic relationships as well. Thus, it is hypothesized that the ordinal position in family with its related personality outcomes could influence the manner in which people live their romantic relationships, too. Specifically, it is expected that firstborns will score higher on romantic relationship jealousy as compared to laterborns, in contrast to existing findings *(H9)*.

In addition to birth order, sex constellation of the sibling dyad, gender, and age spacing between siblings will be investigated as other potential covariates in the proposed developmental model of the study. Finally, social desirability as measured by the Marlowe-Crown Social Desirability Scale will be taken into account in order to determine the extent to which the social desirability response set would bias the self-reports on the variables of interest.

Consequently, ***the hypotheses*** of the present study may be stated as follows:

1. The higher the level of sibling jealousy, the higher the level of jealousy in romantic relationships; that is, scores on the sibling jealousy scale will be positively related to scores on the romantic relationships scale.
2. The stronger the experience of differential treatment by parents, the higher the level of jealousy in romantic relationships; that is, scores on the scale measuring perceived differential treatment will be positively related to scores on the romantic relationships scale.
3. The stronger the experience of differential treatment by parents, the higher the level of sibling jealousy; that is, scores on the differential treatment scale will be positively related to scores on the sibling jealousy scale.
4. Perceived differential treatment of parents will predict insecure attachment in romantic relationships, which will be mediated by scores on sibling jealousy.
5. The higher the level of anxiety in attachment relationships, the higher the level of jealousy in romantic relationships; that is, scores on the anxiety dimension of the attachment scale will be positively related to scores on romantic relationship jealousy scale.
6. The effects of early experiences of differential treatment and sibling jealousy make individuals more likely to have insecurities in attachment styles and these effects will show themselves in romantic relationships

as jealousy experiences; in other words, romantic jealousy will be predicted by differential treatment as well as sibling jealousy after controlling for the effect of differential treatment; and will be predicted by adult attachment dimensions after controlling for the effect of differential treatment and

sibling jealousy (see Figure 1).

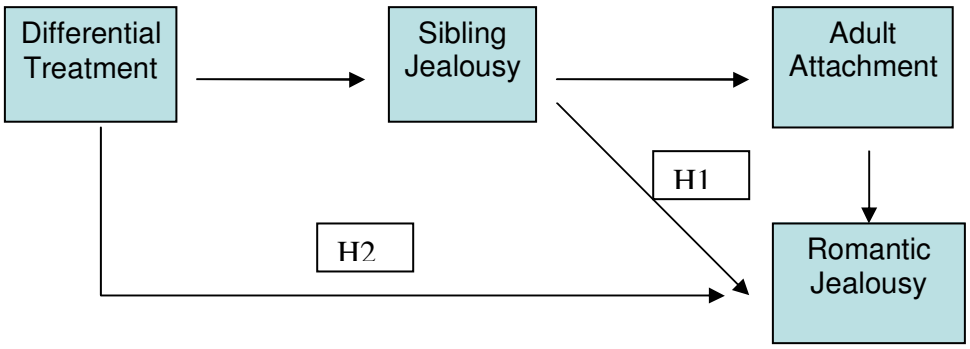

Figure 1. *The Proposed Developmental Model of Romantic Relationship Jealousy (H6) with Additional Lines of Other Hypotheses (H1, H2)*

7. Firstborn individuals will obtain higher scores on the sibling jealousy measure in comparison to secondborn individuals.
8. Firstborn individuals are expected to report more experiences of differential treatment as compared to secondborn individuals; that is, firstborns will obtain higher scores than laterborns on the differential treatment scale.
9. Firstborn individuals will score higher on the measure of romantic jealousy compared to laterborn individuals.

METHOD

Subjects

The sample consisted of 162 individuals (112 female, 50 male) taking the PSY 101, PSY 150, PSY 202, PSY 242, PSY 322, PSY 402, PSY 440, and SOC 150 courses at İstanbul Bilgi University, Boğaziçi University, Koç University, Bahçeşehir University, and Haliç University in addition to graduate students of the Clinical Psychology Program at İstanbul Bilgi University. The age range in the sample is 19 to 29 (M= 22, SD= 1.98) and every participant is a member of an intact family with two children, meaning that all have only one older or one younger sibling. The age range of their siblings is 14 to 30 (M= 22, SD= 4.31).

With regard to birth order, 74 of the subjects are firstborn children while 88 are the secondborn children of their family (45.7% and 54.3% of the subjects, respectively). 77 of the participants have same-sex siblings, while 85 have opposite sex siblings (47.5% and 52.5%, respectively). The same-sex sibling dyads are composed of 46 sister-sister combinations together with 29 brother-brother combinations (28.4% and 17.9%, respectively). For 80 dyads, the age difference is 3 or less while for 82 of sibling dyads, the age difference is 4 or more years.

Eligibility for the participation in the study was determined by some inclusion and exclusion criteria in order to control for any possible confounding variables. Only participants with one full biological sibling who lived together

with while growing up were included in the sample. Subjects who experienced the death of a sibling and those whose age difference with the sibling was more than 5 years were also excluded. Further, in order to be included in the study, the subjects, all of whom are unmarried individuals, had to have had a romantic relationship that lasted at least three months at least once in their lives.

In terms of familial demographics, most participants come from families with parents who completed high school or undergraduate education (75.3% of fathers and 76.6 of mothers). Similarly, most of the participants (88.9%) reported that their siblings have completed higher school or undergraduate education. Moreover, only one subject reported death of mother at the age of 20 while 11 subjects reported the death of father (mean age at the time of the experience = 18). With regard to parental divorce, only 10 subjects reported that their parents divorced (mean age at the time of the experience =12).

Measures

Demographic Information Questionnaire

A demographic information questionnaire was used to collect background data such as age, gender, marital status, residence, as well as the age, education, and occupation of the sibling and the parents. In addition to these, some circumstances are listed in order to detect any changes in the family environment that might affect attachment, such as maternal depression, marital discord, chronic/life-threatening illness in the family, loss of a parent, parental psychiatric disorder, physical or sexual abuse by a family member, and

drug/alcohol abuse (Waters, Weinfeld, & Hamilton, 2000; Waters, Merrick, Treboux, Crowell, & Albersheim, 2000; Waters, Hamilton, & Weinfeld, 2000; Waters & Cummings, 2000). The demographic information with regard to these circumstances reveals that the majority of the subjects did not report having experienced them, enabling us to make inferences about the effect of differential treatment and sibling jealousy on attachment styles more confidently by discarding the effects of other possible circumstances. Accordingly, 69.8% reported no conflict between parents for a long time, 63.3% reported no experience of maternal unhappiness over a long time, 90.7% reported no psychiatric disorders in parents, 92% reported no substance abuse of parents, 98.1% reported no physical or sexual abuse, and 82.7% reported no chronic illness of themselves or parents.

Romantic Relationships Scale (RRS)

The dependent variable, the intensity of adult romantic jealousy, is assessed by the Romantic Relationship Scale (RRS) which was developed in a pilot study by (Kosins, 1983).

The scale consists of 15 hypothetical situations that are thought to result in jealousy and subjects are expected to indicate how they would feel in such a situation on a 5-point Likert scale (1= very pleased to 5= very displeased). In addition to this, subjects are expected to indicate their degree of agreement in response to 13 statements that call for jealousy reactions again on a 5-point Likert scale (1= strongly disagree, 5= strongly agree). The original scale, as it

was developed in a pilot study, reveals a test-retest reliability of .82 ($p < .001$) over a 2-week interval and an internal consistency of .90 in addition to a convergent validity coefficient of .82 ($p < .001$) with the Interpersonal Relationship Scale (IRS; Hupka & Rusch, 1977; as cited in Kosins, 1983). The scale consists of two separate forms developed for males and females. The only difference between the two is the use of the words "woman" for "man", "female" for "male", and so forth in the female form. Compared to other scales that measure romantic jealousy in the form of reactions to betrayal or relationship loss, the advantage of this scale is considered to be its provision of the individual with some situations in which the threat is vague and hence the result becomes more a product of the way the individual interprets it (Kosins, 1983). Studying jealousy is considered to be very difficult as it takes place privately between two individuals and that people usually refrain from admitting it, in any one of the statements. Asking individuals directly how jealous they are may bias the results through social desirability bias in many cases (White, 1981, Mathes, Rother, & Joerger, 1982; as cited in Hansen, 1991; Clanton & Kosins, 1991). Likewise, it is argued that the person who admits to feeling jealous could actually be less jealous than the person who rejects this possibility, making the results of a study even more questionable (Clanton & Smith, 1998). Hence, another advantage of this scale appears to be its avoidance of the use of the word jealousy in any of the statements.

For the purposes of this study, a translation-back translation procedure was carried out by a clinical psychology student and a clinical psychologist

who are both bilingual in Turkish and English. The reliability analyses were carried out and the results demonstrated a Cronbach Alpha coefficient of .90 for the first part of the scale (15 items) while the Cronbach Alpha coefficient for the second part (13 items) was found to be .66. The reliability of the total scale (28 items) was very good, yielding a Cronbach Alpha coefficient of .86. As the variable romantic jealousy was entered into structural equation modeling, further analyses with regard to reliability and validity of the scale will be provided in the results section.

The Marlowe-Crowne Social Desirability Scale

Social desirability seems to be an inherent problem in the measurement of romantic jealousy since most people are unwilling to admit their feelings of jealousy due to its negative implications (Zammuner & Frijda, 1994; as cited in Bauerle, Amirkhan, & Hupka, 2002). The same concerns are thought to be inherent in the measurement of sibling jealousy, as well. As responding in a socially desirable way is believed to spoil the validity of self-report measures through efforts at demonstrating oneself in a socially desirable manner (Paulhus, 1991; as cited in Ural & Özbirecikli, 2006), The Marlowe-Crowne Social Desirability Scale (1960) is administered to the subjects identify the extent to which the social desirability response set would bias the self-reports on the variables of interest.

The Marlowe-Crowne Social Desirability Scale consists of 33 items that measure the person's inclination to give socially desirable responses (Paulhus,

1994; as cited in Ural & Özbirecikli, 2006). Participants are provided with a list of statements that refer to some situations asking for ways of behaving and personal attitudes with regard to the situations. They are expected to indicate whether the statement in question is true or false as it is personally appropriate for them or not. The responses that correspond to the previously defined appropriate responses are coded as 1 and the responses that would not match the appropriate responses are coded as 0. The total score can range from 33 to 0, ranging from a condition in which all responses match to a condition to a condition in which no responses are concordant. The Turkish version of the scale is obtained from Özeren (1996) who reported an adequate reliability (Cronbach Alpha = .67). Similarly, analyses reveal a fair amount of reliability for the scale with a Cronbach Alpha coefficient of .77 for this study.

Experiences in Close Relationships Scale (ECR)

The attachment style of subjects is measured by Experiences in Close Relationships (ECR) scale (Brennan, Clark, & Shaver, 1998). The rationale behind using this scale is its ability to obtain differences in attachment patterns through a continuum in terms of anxious versus avoidance dimensions rather than forcing attachments into strict categorical outcomes such as secure or insecure, especially in adult romantic relationships (Brennan, Clark, & Shaver, 1998; as cited in Cassidy, 2003; Fraley & Waller, 1998; as cited in Feeney, 2002; Fraley & Spieker, 2003; Cummings, 2003). It is argued that this enables the researcher to tap where the individual falls on the security-insecurity

continuum, a more reliable source of information, since the association between AAI security and attachment style dimensions is found to be very small (Roisman, Holland, Fortuna, Fraley, Clausell, & Clarke, 2007). Moreover, it is argued that categorical (forced-choice) measures are more likely to bear the risk of leading to response bias such as socially desirable responding. Supporting this, it is found that measures that are based on continuous dimensions result in fewer people categorized as secure (Bradford & Feeney, 2002; Brennan, Clark, & Shaver, 1988; as cited in Feeney, 2002). Experiences in Close Relationships (Brennan, Clark, & Shaver, 1998) has been chosen for the purposes of this study as it was considered to contain the subscales that have the best psychometric properties among similar inventories of attachment (Fraley, Waller, & Brennan, 2000).

In its short form, ECR is a multi-item measurement of adult romantic attachment that assesses two attachment dimensions, namely, anxiety and avoidance, as mentioned above. The anxiety dimension measures the extent to which the individual believes he/she is worthy of being loved and the extent of his/her worries about being rejected by others. The avoidance dimension, on the other hand, measures the extent to which the individual believes that others are responsive and the extent to which the individual feels comfortable with trusting and being close to others. The subscales for each of these two dimensions are composed of 18 items each. Each item is rated on a 7-point Likert scale (1= strongly disagree to 7= strongly agree). Odd questions refer to the avoidance dimension while even questions refer to the anxiety dimension.

Classification into the attachment categories is based on scores on both dimensions. Accordingly, people with low scores on both dimensions are classified as securely attached. High scores on the anxiety dimension and low scores on the avoidance dimension indicate preoccupied attachment while high scores on both dimensions designate fearful avoidant attachment. Finally, people who obtain high scores on avoidance and low scores on anxiety dimension are classified as having dismissing attachment style (Feeney & Collins, 2001).

ECR appears to be a stronger measure than other romantic attachment tools such as Relationship Questionnaire as it better predicts attachment group membership through its ability to differentiate truly the secure individuals from those who appear to be secure but are preoccupied in reality compared to (Müderrisoğlu, 1999; as cited in Arıkoğlu, 2003). Moreover, Sümer's (2006) study reveals that ECR's performance with respect to correspondence to four category model turns out to be better than the Relationships Questionnaire (Bartholomew & Horowitz, 1991) and Relationships Scale Questionnaire (Griffin & Bartholomew, 1994). The same study also demonstrated that anxiety and avoidance dimensions of the scale are reliably measured by ECR in the Turkish population (Sümer, 2006).

ECR has been translated into Turkish via translation-back translation procedure and has been used in several studies and master's theses (e.g. Güngör, 2000; Karakurt, 2001; Sümer & Güngör, 2000; as cited in Sümer, 2006). The Turkish form of the scale that is used in this study is taken from

Arıkoğlu (2003). For the purposes of this study, reliability analyses were carried out and the results yielded a Cronbach Alpha coefficient of .77 for the anxiety dimension and a Cronbach Alpha coefficient of .89 for the avoidance dimension.

Sibling Relationships Scale (SRS)

The Sibling Relationships Scale (SRS) was designed for the purposes of this study in order to measure the sibling relationship qualities of interest such as differential treatment and jealousy between siblings. The items of the scale were adapted and redesigned for the purposes of this study from the related items of Cattell's Intra-Familial Attitude Scales (1953) originally published as a social worker's checklist of family difficulties, 'Inter-sibling Jealousy Scale', Çavdar's (2003) 'Sibling Relationship Scale', Furman and Buhrmester's (1985; Buhrmester & Furman, 1990) 'Sibling Relationship Questionnaire-Revised' and Daniels and Plomin's (1985) 'Sibling Inventory of Differential Experience' (see Appendix H). The rationale behind the combination of items from the above mentioned scales is to capture the reactions to differential treatment and jealousy experience in affective, cognitive and behavioral terms.

Overall, the scale consists of 60 items. Most of the items focused on the circumstance of the threat of losing an important other's attention, namely the mother's and the father's attention, and fear of losing the relationship to a rival, consistent with the previously mentioned definitions of jealousy in addition to items that would tap competition and conflict, as these domains have been

found to be correlated with sibling jealousy (Adler, 1927; Furman & Buhrmester, 1985; Ihinger, 1975). Moreover, some factors with regard to the sibling's own jealousy were created because in some conditions it could be easier for subjects to indicate that it is their sibling rather than themselves who is jealous, implying the existence of a projective mechanism through which the subject projects his/her feelings of jealousy onto the sibling. Likewise, items that focus on circumstances which imply differential treatment and comparison between siblings by parents were included under the heading of 'sibling relationship scale'. In general, it can be said that these 60 statements are designed to describe the person's relationship with the sibling and feelings toward him/her, and feelings and perceptions with regard to the parents' attitudes toward the sibling. In other words, the scale is a the combination of two separate dimensions, one measuring sibling jealousy and the other measuring differential treatment by parents, with all their items being presented to the subjects in a mixed combination. Additionally, 8 of the items are reverse coded.

The subjects are asked to rate the items according to how descriptive they are on a 5-point Likert scale (1= does not describe me at all, 5=describes me completely). Except two items (item 3 and item 10), none of the items in the scale included the word 'jealousy' due to the same concerns mentioned above for the Romantic Relationship Scale (White, 1981, Mathes, Rother, & Joerger, 1982; as cited in Hansen, 1991; Clanton & Kosins, 1991).

A pilot study with 51 subjects aged between 18 and 30 with similar backgrounds as the subjects included in the main study was carried for reliability analysis. The Cronbach Alpha coefficient for the final total scale was found to be .94. The Cronbach Alpha coefficient for the differential treatment subscale was .89 while the Cronbach Alpha coefficient for the sibling jealousy subscale was found to be .91.

With the aim of differentiating different domains of sibling relationships and hence being able to test relevant hypotheses, the items were divided into two according to their common themes of interest, as *differential treatment* (including items concerning maternal and paternal differential treatment in addition to some items that refer to both parents' differential treatment and comparison), and *sibling jealousy* (including items that refer to sibling jealousy over parental love and attention, conflict, and competition between siblings). The *differential treatment* group is composed of 21 items (items 1, 12, 17, 39, 46, 54, 57, 60, 11, 23, 33, 41, 45, 48, 52, 55, 26, 14, 22, 42, 59) whose reliability analysis reveals a Cronbach Alpha coefficient of .93. The above mentioned first 8 items belong to a subgroup of *maternal differential treatment* with a Cronbach Alpha coefficient of .88 and the following 8 items belong to a subgroup of *paternal differential treatment* with a Cronbach Alpha coefficient of .90. The last 5 items mentioned above (items 26, 14, 22, 42, 59) refer to the differential treatment of both the mother and the father including items that refer to parents' comparison between siblings. The *sibling jealousy* group consists of 39 items (items 2, 4, 6, 7, 8, 9, 10, 13, 15, 19, 21, 24, 25, 29, 31, 32,

35, 36, 38, 51, 53, 56, 3, 16, 27, 37, 43, 49, 5, 18, 30, 34, 40, 50, 58, 20, 28, 44, 47) with a Cronbach Alpha coefficient of .91. This group is composed of items that refer to sibling jealousy over the mother's attention and love (items 6, 25, 29, 35, 43, 51) with a reliability score of .69 and items that refer to sibling jealousy over the father's attention and love (items 4, 9, 19, 31, 36, 49) with a reliability score of .76 in addition to items that relate to sibling's own jealousy (items 3, 16, 27, 37, 43, 49), items that tap conflict between siblings (items 5, 18, 30, 34, 40, 50, 58) and 4 items that relate to competition between siblings (items 20, 28, 44, 47).

Further analyses with regard to the factorial structure of differential treatment and sibling jealousy items will be provided in the results section.

The mean scores of differential treatment, maternal differential treatment, paternal differential treatment, sibling jealousy, jealousy over mother, and jealousy over father were calculated separately based on the related items of Sibling Relationship Scale in order to explore the relevant hypotheses.

Procedure

İstanbul Bilgi University students were recruited via the help of the professors from psychology and sociology departments. For some of the courses, the questionnaire packages were uploaded to the online web pages of the courses. The students who filled out the questionnaires and brought them back to the course assistants were given participation credits for the related course. The informed consent forms were filled out and returned separately.

There were 4 different questionnaire packages, 2 for each sex, two forms for each, form A and form B, with different orders of the questionnaires. In each questionnaire package, the top page was the Demographic Information Questionnaire. Form A started with the Romantic Relationships Scale, followed by The Marlowe-Crowne Social Desirability Scale, Experiences in Close Relationships Scale, and finally the Sibling Relationship Scale, while form B started with the Sibling Relationship Scale and ended with Romantic Relationships Scale with the other scales in the same place as in form A. These two forms were designed as a check on a possible effect of the order of presentation of scales. To ensure randomness, participants with student id numbers ending with an odd number were instructed to fill out form A while those whose id numbers ended with an even number were instructed to fill out the form B. Data from participants who did not meet the criteria listed above were discarded.

Some participants filled out the questionnaires in groups of 20-30 in the presence of the researcher. Completion of the questionnaire package took approximately 20 minutes.

Before starting, participants were asked to fill out an informed consent form containing general information about the research and contact information of the researcher. After obtaining the consent forms, the package was distributed to the subjects.

Overall, 57.4% of the subjects completed form A and 42.6% of the subjects completed form B.

RESULTS

The results of the study will be presented in four sections. First, analyses with regard to the measurement of constructs will be provided. Descriptive statistics regarding the variables of the study will the follow. Third, results of the analyses regarding the relationship between potential covariates and major variables of interest using t-test and correlations will be presented. Finally, hierarchical regression analyses and mediation analyses will be carried out in order to investigate the possible relationships between perceived differential treatment, sibling jealousy, attachment styles, and romantic relationship jealousy.

Measurement of Constructs

The measures of constructs that were used in the study are first analyzed with Explanatory Factor Analysis. Then, Confirmatory Factor Analysis was conducted to see whether the items in the scale of interest predict the construct in question significantly. In other words, Confirmatory Factor Analysis was used as a means of specifying the items that are thought to predict the construct in question. Finally, reliability analyses were conducted for the measurements of interest.

Romantic Jealousy

The 28 items of the Romantic Relationships Scale were entered into Explanatory Factor Analysis, and the scree plot suggested a one-factor solution,

as suggested by the original form of the scale (Kosins, 1983). The items altogether were found to explain 27% of the total variance. As mentioned before, Confirmatory Factor Analysis was carried out to explore if the items were able to predict the respective variable. The Maximum Likelihood Estimates section of the Confirmatory Factor Analysis showed that the regression weights of item 1 (p=.08) and item 25 (p=.23) in the second section of the scale are not significant at the .05 level in the prediction of the variable *romantic jealousy*. Hence, these items were omitted from the scale and Confirmatory Factor Analysis was performed without them. The remaining 26 items were found to have significant factor loadings ranging from .19 to .69 and to demonstrate good reliability, with a Cronbach Alpha score of .87.

Differential Treatment

Items that refer to *differential treatment* (items 1, 12, 17, 39, 46, 54, 57, 60, 11, 23, 33, 41, 45, 48, 52, 55, 26, 14, 22, 42, 59) of the Sibling Relationship Scale were analyzed first with Explanatory Factor Analysis. Principal Components Analysis was used as a means of extraction and the Scree Plot suggested a one factor solution for the items entered in the analysis, as expected, with items altogether explaining 42% of the total variance. As demonstrated in the Maximum Likelihood Estimates section of the results of the Confirmatory Factor Analysis, all the items listed above explain the variable *differential treatment* significantly at the .001 level. Thus, all items were used in the analyses of the study. The factor loadings of items ranged from .38 to .80.

As regards to reliability, the Cronbach Alpha coefficient of the items was found to be .93.

Items that refer to *maternal differential treatment* (items 1, 12, 17, 39, 46, 54, 57, 60) were also analyzed with Principal Components Analysis. The extraction resulted in one factor and the results showed that items altogether explained a total variance of 56%. The results demonstrated in the Maximum Likelihood Estimates section of Confirmatory Factor Analysis showed that these items explain the variable *maternal differential treatment* significantly at the .001 level. Hence, no items were dropped in the following analyses of the study. The items were found to have factor loadings ranging from .59 to .85 and to demonstrate good reliability with a Cronbach Alpha coefficient of .88.

Items that refer to *paternal differential treatment* (items 11, 23, 33, 41, 45, 48, 52, 55) were entered into Explanatory Factor Analysis and the extraction resulted in one factor. The results showed that the items altogether explained a total variance of 61%. The results of the Confirmatory Factor Analysis, as demonstrated in the Maximum Likelihood Estimates Section, suggested that these items explain the variable *paternal differential treatment* significantly at the .001 level. Thus, all items were used in the analyses of the study. The factor loadings of the items ranged from .49 to .90. Regarding the reliability, the Cronbach Alpha coefficient of the items was found to be .90.

Sibling Jealousy

The items that refer to sibling jealousy (items 2, 4, 6, 7, 8, 9, 10, 13, 15, 19, 21, 24, 25, 29, 31, 32, 35, 36, 38, 51, 53, 56, 3, 16, 27, 37, 43, 49, 5, 18, 30,

34, 40, 50, 58, 20, 28, 44, 47) of the Sibling Relationship Scale were entered into Explanatory Factor Analysis. Principal Components Analysis was used as a means of extraction and the Scree Plot suggested a one factor solution for the items entered in the analysis, as expected. The items altogether were found to explain 26% of the total variance. As demonstrated in the Maximum Likelihood Estimates section of the results of the Confirmatory Factor Analysis, the regression weight of item 13 (p=.56) is not significant at the .05 level in the prediction of the variable *sibling jealousy.*

Hence, item 13 is excluded from the analyses throughout the study. The remaining 38 items were entered into Confirmatory Factor Analysis and were found to have significant factor loadings ranging from .23 to .68 and to demonstrate a good reliability, with a Cronbach Alpha coefficient of .92.

Jealousy over Mother

The items that refer to sibling jealousy related to the loss of attention and love of mother (items 4, 25, 29, 35, 43, 51) of the Sibling Relationship Scale were analyzed with Explanatory Factor Analysis and the results suggested a one factor solution for the items entered in the analysis, as expected. The items altogether explained 43% of the total variance. The results of the Confirmatory Factor Analysis, as demonstrated in the Maximum Likelihood Estimates Section, suggested that these items explain the variable *jealousy over mother* significantly at the .01 level. Thus, all items were used in the analyses of the study. The factor loadings of the items ranged from .29 to

.65. Regarding the reliability, the Cronbach Alpha coefficient of the items was found to be .69.

Jealousy over Father

The items that refer to sibling jealousy related to the loss of attention and love of father (items 4, 9, 19, 31, 36, 49) of the Sibling Relationship Scale were entered into Explanatory Factor Analysis and the extraction resulted in one factor. The results showed that the items altogether explained a total variance of 47%. The results of the Confirmatory Factor Analysis, as demonstrated in the Maximum Likelihood Estimates Section, suggested that these items explain the variable *paternal differential treatment* significantly at the .001 level. Thus, all items were used in the analyses of the study. The factor loadings of the items ranged from .44 to .78. Regarding the reliability, the Cronbach Alpha coefficient of the items was found to be .76.

Descriptive Statistics

The means and standard deviations of the major variables of interest in the study are presented in Table 1.

Table 1.
Means and Standard Deviations of Differential Treatment, Sibling Jealousy, Attachment Dimensions, Romantic Jealousy, and Social Desirability

Measures	**N**	**Min.**	**Max.**	**Mean**	**SD.**
Differential Treatment	62	1.00	4.90	1.69	.69
Maternal Diff. Treat.	162	1.00	4.75	1.70	.82
Paternal Diff. Treat.	162	1.00	5.00	1.55	.76
Sibling Jealousy	162	1.00	3.47	1.93	.56
*Jealousy (over mother)	162	1.00	4.33	1.97	.76
**Jealousy (over father)	162	1.00	3.83	1.87	.79
Avoidance	162	1.00	5.22	2.94	1.00
Anxiety	162	1.56	8.22	4.04	1.12
Romantic Jealousy	162	1.62	4.92	4.01	.48
Social Desirability	162	1.03	1.94	1.42	1.52

* refers to the items that are related to the loss of mother's attention and love in Sibling Relationship Scale (SRS)
** refers to the items that are related to the loss of father's attention and love in Sibling Relationship Scale (SRS)

The relationships among variables of interest

A series of Pearson Product Moment Correlation Coefficient analyses were calculated in order to determine the associations among the variables in the present study. The results showed that most of the variables in the study are highly correlated with each other.

With regard to the hypotheses of the study, it was found that sibling jealousy was not correlated with romantic relationship jealousy r=.05, p=.51; that is Hypothesis 1 was not supported. There was also no significant relationship between romantic jealousy and jealousy over mother (r=.01, p=.95) or between romantic jealousy and jealousy over father (r=.02, p=.82). Results also showed that, contrary to Hypothesis 2, there was no significant association between differential treatment and romantic jealousy r=.06, p=.47. Similarly, romantic jealousy was not correlated either with maternal differential treatment (r=.03, p=.74) or paternal differential treatment (r=.09, p=.24). Romantic jealousy was not significantly associated with avoidance r=-.09, p=.26, while it was significantly associated with anxiety r=.31, p=.0001, as predicted by Hypothesis 5.

Differential treatment was found to be positively associated with sibling jealousy r=.65, p=.0001, as predicted in Hypothesis 3. Differential treatment was also positively related both to anxiety (r=.35, p=.0001) and to avoidance (r=.18, p=.02). Moreover, both maternal differential treatment (r=.61, p=.0001) and paternal differential treatment (r=.48, p=.0001) were positively correlated with sibling jealousy. There was a positive relationship both between maternal differential treatment and anxiety (r=.40, p=.0001) and maternal differential treatment and avoidance (r=.19, p=.02). However, although paternal differential treatment was found to be positively associated with anxiety (r=.24, p=.003), there was no significant relationship between paternal differential treatment and avoidance (r=.12, p=.13). Sibling jealousy, on the other hand, was positively

associated both with anxiety (r=.28, p=.0001) and avoidance (r=.29, p=.0001) (see Table 2 for all the results of the Pearson Product Moment Correlation Coefficient analysis).

Table 2.
Correlations between Differential Treatment, Sibling Jealousy, Attachment Dimensions, Romantic Jealousy, and Social Desirability

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1. Differential Treatment	1.00									
2. Maternal Diff. Treat.	.87**	1.00								
3. Paternal Diff. Treat.	.83**	.55**	1.00							
4. Sibling Jealousy	.65**	.61**	.48**	1.00						
5. Jealousy over Mother	.55**	.59**	.34**	.74**	1.00					
6. Jealousy over Father	.51**	.51**	.38**	.72**	.58**	1.00				
7. Anxiety	.35**	.40**	.24**	.28**	.26**	.19*	1.00			
8. Avoidance	.18*	.19*	.12	.29**	.22**	.28**	.06	1.00		
9. Romantic Jealousy	.06	.03	.09	.05	.01	.02	.31**	-.09	1.00	
10. Social Desirability	-.19*	-.20*	-.15	-.23**	-.15	-.11	-.33**	-.04	-.15	1.00

* correlation is significant at the 0.05 level
** correlation is significant at the 0.01 level

The effect of social desirability on the variables of interest

In terms of social desirability, the results showed that it is negatively correlated with the majority of the variables in the study. Table 6 shows that social desirability was negatively correlated both with differential treatment (r=-.19, p=.02) and specifically with maternal differential treatment (r=-.20, p=.01). Moreover, the results demonstrated that there was a negative association between social desirability and sibling jealousy r=-.23, p=.003. The other variable that social desirability was found to have a negative relationship with was anxiety dimension of adult attachment r=-.33, p=.0001. Hence, the Pearson Product Moment Correlation Coefficient analysis was repeated while controlling for the effect of social. The results of the partial correlations after controlling for social desirability are presented in Table 3.

Table 3.
Partial Correlations between Differential Treatment, Sibling Jealousy, Attachment Dimensions, and Romantic Jealousy, Controlling for Social Desirability

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1. Differential Treatment	1.00								
2. Maternal Diff. Treat.	.86**	1.00							
3. Paternal Diff. Treat.	.83**	.53**	1.00						
4. Sibling Jealousy	.63**	.59**	.46**	1.00					
5. Jealousy over Mother	.54**	.58**	.32**	.74**	1.00				
6. Jealousy over Father	.50**	.50**	.37**	.72**	.57**	1.00			
7. Anxiety	.31**	.36**	.20*	.22**	.23**	.17*	1.00		
8. Avoidance	.18*	.19*	.11	.29**	.22**	.27**	.05	1.00	
9. Romantic Jealousy	.03	-.004	.07	.02	-.02	.002	.28**	-.10	1.00

* correlation is significant at the 0.05 level
** correlation is significant at the 0.01 level

The comparison of the results of the correlations between the variables and partial correlations after controlling for the possible effects of social desirability reflects that there are no changes in the significance of the associations between variables, except the level of significance for the relationship between paternal differential treatment and anxiety dimension. The association between these two variables was found to be significant at the .05 level after controlling for social desirability (r=.20, p=.01) whereas their association was significant at the .01 level before controlling for the effect of social desirability (r=.24, p=.003). Overall, these results suggest that the further analyses can be conducted with confidence with regard to the effect of social desirability as it proved to have no important effect on the relationships among the variables of interest.

The relationship between differential treatment and attachment dimensions

Anxious attachment

According to Hypothesis 4, it was expected that differential treatment would predict insecure attachment through its effect on sibling jealousy. To test this hypothesis, mediation analysis was carried out using methods described by Preacher and Hayes (2004) for estimating direct and indirect effects.

Accordingly, the linear regression analysis showed that differential treatment significantly predicts anxious attachment $F(1, 160)=22.38$, $p=.0001$, $\beta=.35$, $t=4.73$, accounting for 12% of the variance in the anxiety dimension of

adult attachment. Likewise, sibling jealousy was found to predict anxiety significantly F(1, 160)=13.66, p=.0001, β=.28, t=3.70, with R^2 of .08. Using the SPSS macro created by Preacher and Hayes (2009), the test of whether sibling jealousy mediates the relationship between differential treatment and anxious attachment was carried out by entering anxiety scores as the independent variable, differential treatment as the predictor variable, and sibling jealousy as the proposed mediator (see Figure 2).

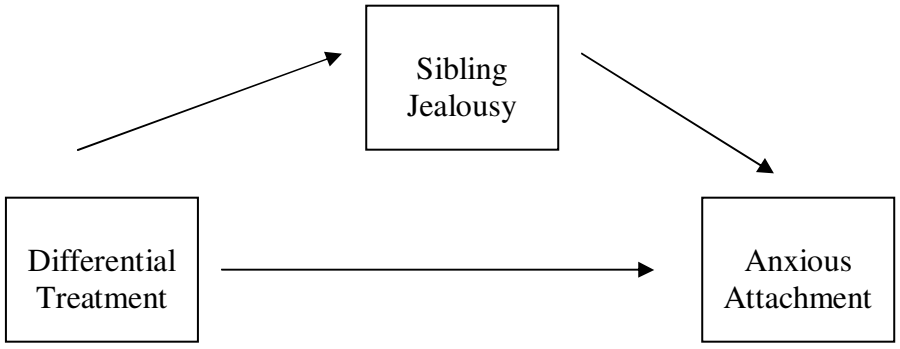

Figure 2. *The Proposed Model for the Mediation Effect of Sibling Jealousy in the Relationship between Differential Treatment and Anxious Attachment*

Bootstrapping analysis was chosen for the mediation analysis since it is considered to be more reliable, it does not make assumptions about the sampling distribution of the variables and it provides confidence intervals for the obtained results, (Preacher & Hayes, 2004).

The results of the mediation analysis showed that the total effect of differential treatment on anxious attachment is significant (total effect=.57,

p=.0001) parallel to its effect on sibling jealousy (direct effect=.53, p=.0001), which is also highly significant. However, the effect of sibling jealousy on anxious attachment was found to be insignificant after controlling for differential treatment (direct effect=.18, p=.35). Moreover, the direct effect of differential treatment on anxious attachment stayed significant after controlling for sibling jealousy (direct effect=.47, p=.003). In addition to these, bootstrap results based on 5000 resamples indicated that the true indirect effect is estimated to lie between -.1066 and .3004 with 95% confidence. As zero is in the 95% interval, it can be concluded that the indirect effect of differential treatment on anxious attachment through sibling jealousy is insignificant. In other words, sibling jealousy does not mediate the significant relationship between differential treatment and anxious attachment and that anxious attachment is solely predicted by differential treatment.

Avoidant attachment

Whether differential treatment predicts avoidant attachment through its effect on sibling jealousy was also tested. The linear regression analysis showed that differential treatment significantly predicts avoidant attachment $F(1, 160)=5.4$, $p=.02$, $\beta=.18$, $t=2.33$, explaining 3% of the variance in the avoidance dimension of adult attachment. Likewise, sibling jealousy was found to predict avoidance scores significantly $F(1, 160)=15.07$, $p=.0001$, $\beta=.29$, $t=3.88$, with $R^2=.09$. Avoidance scores were entered as the independent variable, differential treatment was entered as the predictor variable, and sibling jealousy was

entered as the proposed mediator using the Preacher and Hayes method as described above (see Figure 3).

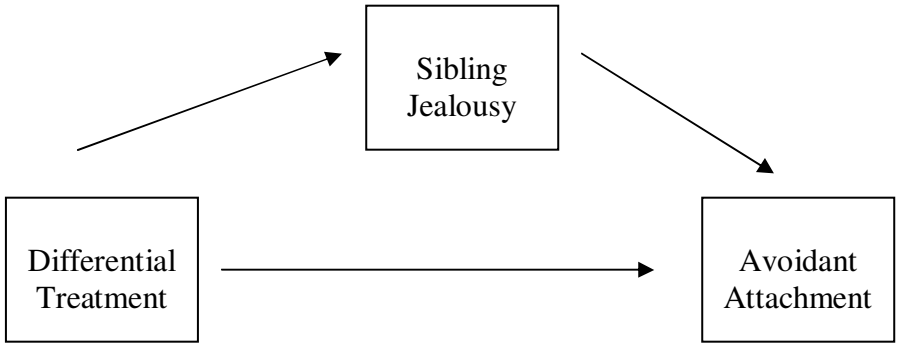

Figure 3. *The Proposed Model for the Mediation Effect of Sibling Jealousy in the Relationship between Differential Treatment and Avoidant Attachment*

The results of the mediation analysis showed that the total effect of differential treatment on avoidant attachment is significant (total effect=.26, p=.02) and its effect on sibling jealousy is also highly significant (direct effect=.53, p=.0001). Likewise, the effect of sibling jealousy on avoidant attachment was found to be significant after controlling for differential treatment (direct effect=.54, p=.003). However, the direct effect of differential treatment on avoidant attachment became insignificant after controlling for sibling jealousy (direct effect=-.02, p=.87). In addition to these, bootstrap results based on 5000 resamples indicated that the true indirect effect is estimated to lie between .0994 and .5215 with 95% confidence. As zero is not in the 95% interval, it can be concluded that the indirect effect of differential

treatment on avoidant attachment through sibling jealousy is significant. In other words, sibling jealousy mediates the relationship between differential treatment and avoidant attachment. This indirect effect is called *perfect mediation* (Preacher & Hayes, 2004).

The relationship between maternal differential treatment and attachment dimensions

Anxious attachment

In order to obtain more detailed results, similar mediation analyses were carried out for maternal differential treatment; that is, whether sibling jealousy mediates the relationship between maternal differential treatment and anxious attachment was tested. As reported above, sibling jealousy was a highly significant predictor of anxious attachment $F(1, 160)=13.66$, $p=.0001$, $\beta=.28$, $t=3.70$, explaining 8% of the variance in the anxiety dimension. In addition to this, whether maternal differential treatment also predicts anxious attachment was tested. The results showed that maternal differential treatment significantly predicts anxious attachment
$F(1, 160)=29.96$, $p=.0001$, $t= 5.47$, $\beta=.40$, accounting for 16% of the variance in anxiety scores.

In mediation analysis, anxiety scores were entered as the independent variable, maternal differential treatment was entered as the predictor variable, and sibling jealousy was entered as the proposed mediator (see Figure 4).

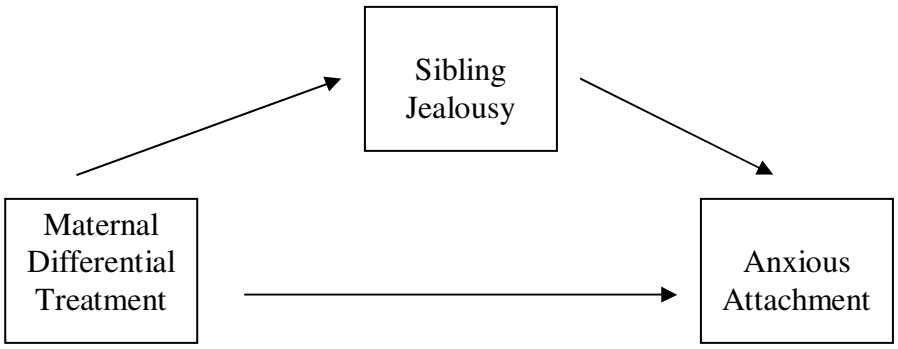

Figure 4. *The Proposed Model for the Mediation Effect of Sibling Jealousy in the Relationship between Maternal Differential Treatment and Anxious Attachment*

The results of the mediation analysis showed that the total effect of maternal differential treatment on anxious attachment (i.e. the simple relationship between maternal differential treatment and anxious attachment) was significantly different from zero (total effect=.54, p=.0001) and its effect on sibling jealousy is also significant (direct effect=.42, p=.0001). However, the effect of sibling jealousy on anxious attachment was found to be insignificant after controlling for maternal differential treatment (direct effect=.12, p=.52) and the direct effect of maternal differential treatment stayed significant after controlling for sibling jealousy (direct effect=.49, p=.0001). Moreover, bootstrap results based on 5000 resamples indicated that the true indirect effect (total effect-direct effect) is estimated to lie between -.0962 and .2087 with 95% confidence. As zero is in the 95% interval, it can be concluded that the indirect effect of maternal differential treatment on anxious attachment through sibling

jealousy is insignificant. Hence, sibling jealousy is not a mediator of the relationship between maternal differential treatment and anxious attachment. What clearly predicts anxious attachment appears to be maternal differential treatment alone.

Avoidant attachment

Mediation analysis was also carried out to see if there is a similar relationship between maternal differential treatment, sibling jealousy, and avoidant attachment. Accordingly, the linear regression analysis showed that maternal differential treatment significantly predicts avoidance attachment $F(1, 160)=6.05$, $p=.02$, $\beta=.19$, $t=2.46$, accounting for 4% of the variance in the avoidance dimension of adult attachment. Hence, whether sibling jealousy mediates the relationship between maternal differential treatment and avoidant attachment was tested by entering avoidance scores as the independent variable, maternal differential treatment as the predictor variable, and sibling jealousy as the proposed mediator in the Preacher and Hayes (2009) SPSS macro (see Figure 5).

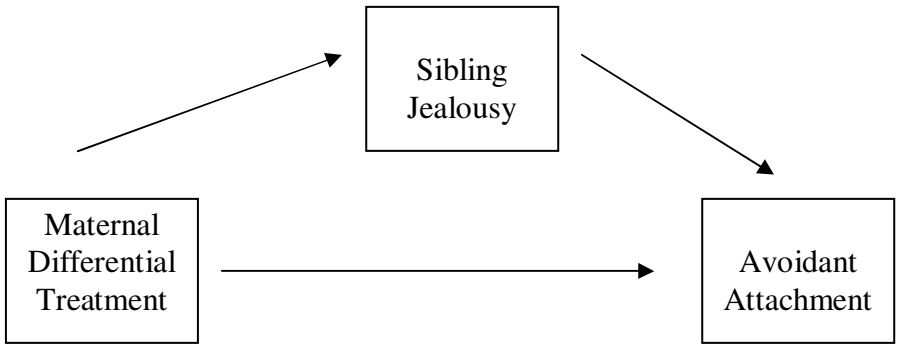

Figure 5. *The Proposed Model for the Mediation Effect of Sibling Jealousy in the Relationship between Maternal Differential Treatment and Avoidant Attachment*

The results of the mediation analysis showed that the total effect of maternal differential treatment on avoidant attachment is significant (total effect=.23, p=.02) and its effect on sibling jealousy is also significant (direct effect=.42, p=.0001). Likewise, the effect of sibling jealousy on avoidant attachment was found to be significant after controlling for maternal differential treatment (direct effect=.5, p=.004). However, the direct effect of maternal differential treatment on avoidant attachment became insignificant after controlling for sibling jealousy (direct effect=.02, p=.85). Furthermore, bootstrap results based on 5000 resamples indicated that the true indirect effect is estimated to lie between .0687 and .3857 with 95% confidence. As zero is not in the 95% interval, it can be concluded that the indirect effect of maternal differential treatment on anxious attachment through sibling jealousy is significant, for perfect mediation (Preacher & Hayes, 2004).

The relationship between paternal differential treatment and attachment dimensions

Anxious attachment

Another simple mediation analysis was carried out to see if sibling jealousy mediates the relationship between paternal differential treatment and anxious attachment based on the finding that paternal differential treatment was a highly significant predictor of individuals' anxiety scores $F(1, 160)=9.35$, $p=.003$, $\beta=.24$, $t=3.06$, explaining 6% of the variance in the anxiety dimension of adult attachment. Anxiety scores were entered as the independent variable, paternal differential treatment was entered as the predictor variable, and sibling jealousy was entered as the proposed mediator in the Preacher and Hayes (2009) SPSS macro (see figure 6).

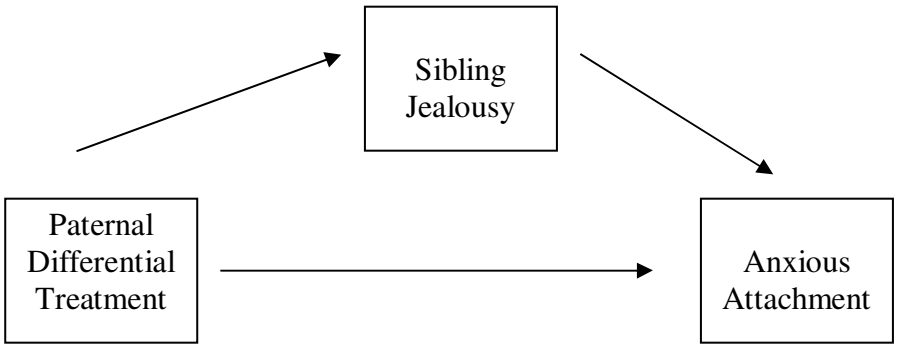

Figure 6. *The Proposed Model for the Mediation Effect of Sibling Jealousy in the Relationship between Paternal Differential Treatment and Anxious Attachment*

The results of the mediation analysis showed that the total effect of paternal differential variable on anxious attachment is significant (total effect=.34, p=.003), as is its effect on sibling jealousy (direct effect=.35, p=.0001), which is also significant. Likewise, the effect of sibling jealousy on anxious attachment was found to be significant after controlling for paternal differential treatment (direct effect=.43, p=.01). However, the direct effect of paternal differential treatment on anxious attachment became insignificant after controlling for sibling jealousy (direct effect=.19, p=.13). Furthermore, bootstrap results based on 5000 resamples indicated that the true indirect effect is estimated to lie between .0372 and .2910 with 95% confidence. As zero is not in the 95% interval, it can be concluded that the indirect effect of paternal differential treatment on anxious attachment through sibling jealousy is significant. Again, this indirect effect is called *perfect mediation* (Preacher & Hayes, 2004).

As paternal differential treatment failed to predict avoidant attachment significantly

$F(1, 160)=2.27$, $p=.134$, $\beta=.12$, $t=1.51$, with R^2 of .01, it was not included in a mediation analysis.

Predicting romantic jealousy from differential treatment, sibling jealousy, and adult attachment dimensions

To test Hypothesis 6, concerning differential treatment, sibling jealousy, and adult attachment as predictors of romantic jealousy, a hierarchical regression analysis was conducted with differential treatment, sibling jealousy, and dimensions of adult attachment were as independent variables and romantic jealousy as the dependent variable. The reason for using hierarchical regression analysis as the statistical method is the fact that the assumed model of the study as presented in Figure 1 is composed of a series of intermediate variables that are dependent variables in relation to other independents, but at the same time they are independent variables in relation to the final dependent variable, i.e. romantic jealousy (Garson, 2009).

The effect of the independent variables was analyzed by entering them into the analysis in three sets. The first predictor, differential treatment, was entered into the regression equation and the results showed that differential treatment did not significantly predict romantic jealousy $F(1, 160)=.54$, $p=.47$, with R^2 of .003. The second predictor, sibling jealousy, resulted in R^2 change of .0001, which is not significant $F(1, 159)=.64$, $p=.80$ after controlling for the effect of differential treatment. The third set of variables, anxiety and avoidance dimensions of adult attachment, was found to account for a significant proportion of the variance in romantic jealousy with R^2 change of .10, $F(2, 157)=9.13$, $p=.0001$ after controlling for the effects of differential treatment and sibling jealousy. When the third set of predictors is examined, it becomes clear

that anxiety is the only variable which predicts romantic jealousy significantly (see Table 4 for the summary of hierarchical regression analysis results).

Table 4.
Summary of Hierarchical Regression Analysis for Variables Predicting Romantic Relationship Jealousy (N = 162)

	Model 1			Model 2			Model 3		
Variable	*B*	*SE B*	*B*	*B*	*SE B*	*β*	*B*	*SE B*	*B*
Differential Treatment	.04	.10	.06	.03	.07	.04	-.04	.07	-.06
Sibling Jealousy				.02	.09	.03	.02	.09	.03
Anxiety							.14	.03	.33**
Avoidance							-.05	.04	-.11
R^2		.03			.04			.11**	
F for change in R^2		.54			.06			9.13**	

*$p < .05$. **$p < .01$.

Another hierarchical regression analysis including maternal differential treatment, paternal differential treatment, sibling jealousy, and dimensions of adult attachment was conducted in order to evaluate the prediction of romantic jealousy. Similarly, the independent variables were entered into the analysis in three sets. As the first set of predictors, maternal and paternal differential treatment were entered into the regression equation and the results showed that maternal and paternal differential treatment did not significantly predict romantic jealousy $F(2, 159)=.75$, $p=.47$, with R^2 of .01. The second predictor, sibling jealousy, resulted in R^2 change of .001, which is not significant $F(1, 158)=.11$, $p=.74$ after controlling for the effect of maternal and paternal differential treatment. Finally, the third set of variables, anxiety and avoidance dimensions of adult attachment, was found to account for a significant proportion of the variance in romantic jealousy with R^2 change of .11, $F(2, 156)=9.94$, $p=.0001$ after controlling for the effects of maternal and paternal differential treatment and sibling jealousy. Examination of the third set of predictors reveals that again, anxiety is the only variable which predicts romantic jealousy significantly (see Table 5 for the summary of hierarchical regression analysis results).

Table 5.
Summary of Hierarchical Regression Analysis for Variables Predicting Romantic Relationship Jealousy (N = 162)

	Model 1			Model 2			Model 3		
Variable	*B*	*SE B*	*B*	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Maternal Differential Treatment	-.02	.06	-.03	-.03	.06	-.05	-.10	.06	-.17
Paternal Differential Treatment	.07	.06	.11	.06	.06	.10	.06	.06	.10
Sibling Jealousy				.03	.09	.03	.04	.09	.04
Anxiety							.15	.04	.35**
Avoidance							-.05	.04	-.10
R^2		.01			.01			.12**	
F for change in R^2		.75			.11			9.94**	

*$p < .05$. **$p < .01$.

The effect of birth order

The effect of birth order was analyzed as another. The results of the independent samples t-test showed that, contrary to Hypothesis 7, there was no significant difference between firstborn and seconborn individuals in terms of sibling jealousy t(160)=1.78, p=.08. Hypothesis 8 also was not supported as firstborn and secondborn individuals did not differ significantly in terms of perceived differential treatment by parents t(160)=1.31, p=.19.Regarding maternal and paternal differential treatment scores, there was no significant difference between firstborn and secondborn individuals in. perception of maternal differential treatment t(160)=1.24, p=.22. However, the results of the independent samples t-test revealed a significant difference between firstborn and secondborn individuals with regard to paternal differential treatment t(160)=2.07, p=.04. Regarding romantic jealousy, the results failed to report a significant effect of birth order on romantic jealousy t(160)=1.29, p=.20, contrary to Hypothesis 9. Similarly, the effect of birth order was insignificant for both jealousy over mother [t(160)=.93, p=.36] and jealousy over father [t(160)=.98, p=.33]. With regard to dimensions of attachment, there was no significant difference between firstborn and secondborn individuals either on the avoidance dimension [t(160)=.26, p=.79] or the anxiety dimension [t(160=1.28, p=.20] (see Table 6 for means and standard deviations).

Table 6.
Means and Standard Deviations of Differential Treatment and Jealousy Scores according to Birth Order

	Firstborn		Secondborn	
	Mean	**(SD)**	**Mean**	**(SD)**
Differential Treatment	1.76	(.68)	1.62	(.69)
Maternal Differential Treatment	1.79	(.85)	1.63	(.79)
Paternal Differential Treatment	1.68	(.82)	1.43	(.70)
Sibling Jealousy	2.01	(.57)	1.86	(.55)
Jealousy over mother	2.03	(.74)	1.92	(.78)
Jealousy over father	1.94	(.88)	1.82	(.71)
Avoidance	2.96	(1.02)	2.92	(.99)
Anxiety	4.16	(1.11)	3.94	(1.12)
Romantic Jealousy	4.06	(.45)	3.96	(.49)

The relationship between early jealousy over the opposite sex parent and romantic jealousy

In order to test whether there is a relationship between early jealousy over the opposite sex parent and romantic jealousy in adulthood, a Pearson Product Moment Correlation Coefficient analysis was carried out. The results showed that for females there was no significant relationship between romantic jealousy and jealousy over father (r=-.02, p=80) just as there was no significant relationship between romantic jealousy and jealousy over mother (r=.06, p=.53). Similarly, for males, romantic jealousy was not correlated with jealousy over mother (r=-.11, p=.45) just as there was no significant association between romantic jealousy and jealousy over father (r=.17, p=.25).

To see if gender and jealousy over mother and jealousy over father interact in understanding romantic jealousy, a 2 X 2 Mixed Design ANOVA, with gender as a between subjects factor, and jealousy over parents (jealousy over mother and jealousy over father) as within subjects factor, was conducted. Results indicated that the interaction between gender and jealousy over parents on romantic jealousy was insignificant $F(1, 160)=2.06$, $p=.15$, $л^2=.01$. Moreover, there was no main effect of gender $F(1, 160)=3.09$, $p=.08$, $л^2=.02$ and no main effect of jealousy over parents $F(1, 160)=1.06$, $p=.31$, $л^2=.01$ (see Table 7 for means and standard deviations).

Table 7.
Means and Standard Deviations of Gender and Jealousy over Parents

	Gender	Mean	SD
Jealousy over mother	Female *(N=112)*	2.06	.81
	Male *(N=50)*	1.77	.59
Jealousy over father	Female *(N=112)*	1.91	.82
	Male *(N=50)*	1.79	.74

The effect of gender

In regard to gender, results of the independent samples t-test showed that there was no significant difference between females and males on differential treatment t(160)= .27, p=.79. Likewise, there was no significant difference between females and males on either maternal differential treatment [t(160)= .86, p=.39] or paternal differential treatment [t(160)= -1.07, p=.29]. In terms of jealousy scores, the results of the independent samples t-test analyses showed no significant effect of gender either on sibling jealousy [t(160)=.18, p=.86] or romantic jealousy [t(160)=-1.36, p=.18]. For jealousy over mother, the results of the independent samples t-test showed a significant difference between females and males, with females scoring higher t(160)=2.58, p=.011. However, there was no significant difference between females and males in the amount of jealousy they reported over the father t(160)=.90, p=.37. When the effect of gender on attachment dimensions was analyzed, results showed that there was no significant gender difference either for anxiety [t(160)=.-37, p=.71] or for avoidance [t(160)=.19, p=.85 (see Table 8 for means and standard deviations).

Table 8.
Means and Standard Deviations of Differential Treatment and Jealousy Scores according to Gender

	Female		Male	
	Mean	**(SD)**	**Mean**	**(SD)**
Differential Treatment	1.70	(.65)	1.66	(.68)
Maternal Differential Treatment	1.74	(.87)	1.63	(.69)
Paternal Differential Treatment	1.50	(.75)	1.64	(.79)
Sibling Jealousy	1.93	(.57)	1.92	(.54)
Jealousy over mother	2.06	(.81)	1.77	(.59)
Jealousy over father	1.91	(.82)	1.79	(.74)
Avoidance	2.95	(1.04)	2.92	(.93)
Anxiety	4.01	(1.06)	4.09	(1.25)
Romantic Jealousy	3.97	(.49)	4.08	(.43)

The effect of sex constellation of the sibling dyad

In order to investigate the effect of sex constellation (two brothers, two sisters, or brother and sister) of the sibling dyad as another potential covariate in the study, One-way ANOVA was conducted. The results showed that sex constellation had no significant effect on perceptions of differential treatment $F(2, 159)=1.53$, $p=.22$. Likewise, there was no significant effect of sex constellation either on maternal differential treatment [$F(2, 159)=1.13$, $p=.33$] or on paternal differential treatment [$F(2, 159)=1.11$, $p=.33$]. Results also indicated that sibling constellation had no effect on sibling jealousy $F(2, 159)=1.09$, $p=.34$. Similarly, the three groups of dyads were found not to differ significantly either in jealousy over mother [$F(2, 159)=.18$, $p=.84$] and or in

jealousy over father [F(2, 159)=.18, p=.84]. There was also no effect of sex constellation on romantic jealousy F(2, 159)=.13, p=.88. For attachment dimensions, the results of one-way ANOVA yielded no significant effect of sex constellation of sibling dyad either on anxiety [F(2, 159)=.15, p=.86] or on avoidance dimensions [F(2, 159)=.1.00, p=.37] (see Table 9 for means and standard deviations).

Table 9.
Means and Standard Deviations of Differential Treatment and Jealousy Scores according to Sex Constellation of the Sibling Dyad

	Sisters		**Brothers**		**Sister-Brother**	
	Mean	**(SD)**	**Mean**	**(SD)**	**Mean**	**(SD)**
Differential Treat.	1.55	(.52)	1.66	(.65)	1.77	(.77)
Maternal Diff. Treat.	1.56	(.66)	1.69	(.73)	1.79	(.91)
Paternal Diff. Treat.	1.40	(59)	1.59	(.71)	1.61	(.85)
Sibling Jealousy	1.90	(.57)	2.07	(.53)	1.90	(.57)
Jealousy over mot.	1.97	(.73)	1.90	(.64)	1.99	(.81)
Jealousy over fat.	1.85	(.80)	1.95	(.82)	1.86	(.79)
Avoidance	2.80	(1.05)	3.13	(1.02)	2.95	(.97)
Anxiety	4.05	(.99)	4.13	(1.32)	4.00	(1.13)
Romantic Jealousy	4.01	(.43)	4.04	(.50)	3.99	(.49)

DISCUSSION

The aim of this thesis was to investigate the developmental origins of romantic relationship jealousy and to discover the extent of the effect of early familial influences in terms of sibling relationships on young adulthood functioning in romantic relationships. With this aim, the relationships between differential treatment by parents, sibling jealousy in childhood, adult attachment style in romantic relationships, and romantic relationship jealousy were examined. As part of this, the psychoanalytic assertion that relates early sibling jealousy to romantic relationship jealousy later in life with an emphasis on oedipal themes was another major area of investigation for this study. Additionally, the effects of covariates such as birth order, gender, and sex-constellation of siblings were studied with respect to the major variables of interest.

Discussion of the Findings

The psychoanalytic assumption that early sibling jealousy would be related to romantic jealousy later in life was investigated with the aim of discovering developmental roots of romantic jealousy. It was predicted that as the emotional attitudes of persons to other people are grounded very early in life, according to general psychoanalytic understanding, childhood sibling jealousy could lay the foundations for reactions to the threat of loss of a significant love object later in life. Hence, it was predicted that early

experiences of jealousy might shape the way individuals respond in similar situations in adulthood. The proposition regarding children's probable beliefs that they are not good enough so that their parents might have decided to give birth to a sibling also strengthened the assumption that children could carry this anxiety about being replaced in their relationships with significant others later in life. However, the results failed to support this hypothesis as early sibling jealousy was found to be unrelated to romantic relationship jealousy.

Despite the popularity of this psychoanalytic proposition, the results of this study were in line with the existing relevant literature consisting of studies that fail to find such a relationship (e.g. Bringle & Williams, 1979; as cited in Bringle, 1991; Clanton & Kosins, 1991). The failure to find a relationship between childhood sibling jealousy and romantic relationship jealousy later in life may have several reasons. As both Freud (1922), Fenichel (1953; as cited in Pao, 1969), and Clanton and Smith (1998) asserted that sibling jealousy is universal and unavoidable, every individual is expected to be jealous to some degree. The psychoanalytic understanding adds to this by emphasizing that individuals with unresolved envy and jealousy issues in childhood would experience the most difficulty in similar relationships later on (Neubauer, 1983). However, the results of this study showed that individuals reported experiencing very little sibling jealousy. One possible explanation is that the intensity of feelings might have diminished as a long time has passed since the childhood years for the sample drawn from young adults who might have resolved these issues by now. Likewise, even if unresolved, since these issues

are mainly unconscious, using self-report techniques for data collection may not enable the researcher to tap them. Besides, although there are inconsistent findings, a preponderance of the research shows that rivalry and competition between siblings show a decreasing trend as children grow into adulthood (Ross & Milgram, 1992; as cited in Cicirelli; 1995; Buhrmester, 1992; Cicirelli, 1996; Goetting, 1986) especially due to the relative decrease of the importance of parents in terms of sustaining developmental needs and increase of other significant people, i.e. romantic partners, in maintaining the significant aspects of the self (Leung & Robson, 1991; Parrott, 1991). Thus, even if felt very intensely during childhood, sibling jealousy might not have come to the surface in such a retrospective study as the current relationship with siblings might distort the recall of early related feelings.

A second set of psychoanalytic assumptions had to do with whether romantic jealousy is associated with early jealousy over the opposite sex parent in the sibling relationship. This research question was based on the psychoanalytic assertions that emphasize the role played by the oedipal conflict, in which the sibling becomes the rival between the individual and the opposite sex love object, in jealousy toward sexual partners when grown up. The results showed that for females there was no significant relationship between romantic jealousy and jealousy over either father or mother. Similarly, for males, romantic jealousy was not correlated with jealousy over mother. Thus, the results of the present study failed to find a significant relationship between early jealousy over the opposite sex parent and later romantic jealousy, as

proposed formerly (e.g. Freud, 1922; Seidenberg, 1952). Surprisingly, the results are also not in line with some developmentalists' (e.g. Neill, 1998) and some other psychoanalysts' assertion that romantic jealousy has its roots mainly in the early jealousy over the mother, namely the first love object for both genders (Fairbairn, 1954; Guntrip, 1961; as cited in Clarke, 1988; Downing, 1998, Levy, 1940). It can be speculated that although both early sibling jealousy and romantic jealousy can be considered as responses to a threat of losing a significant relationship, the motivations behind the two relationships as well as the nature of the two might lead them to be unrelated. In that sense, Harris (2006) interprets Sulloway's explanations for sibling jealousy by stating that "each sibling wants the lion's share of goodies for himself; his brother or sister can have whatever is left" (p. 93). Although siblings do not want to share the attention and love of their parents, the fact that they share fifty percent of their genes, one can confidently state that there is altruism among siblings, even though it is limited (Sulloway, 1997). In general, it can be maintained that what siblings want is that they want more in their relationships with parents. However, in romantic relationships, individuals want the exclusive attention and love of their partners and there is no space for sharing with or being altruistic to a rival in any way. These differences in the nature and structure of the relationships might be responsible for the fact that the jealousy experienced in them are of different kind and so, unrelated.

As part of the developmental origins of romantic jealousy, apart from its proposed relationship with early sibling jealousy, it was hypothesized that

perceived parental differential treatment during childhood might be related to feelings of romantic jealousy later in life. This expectation was based on the notion that children's development of identity is partly shaped by observing and comparing how their parents treat themselves and their siblings, as a result of which they are thought to arrive at a self-definition (Kernberg & Richards, 1988). Children who perceived that they got less in comparison to their sibling might be more alert to situations including the threat of loss of the love and attention of a significant other. However, the results demonstrated that there is no direct relationship between perceptions of being differentially treated by parents and experiences of jealousy in romantic relationships later in life. The same line of results was obtained with regard to the relationship of romantic jealousy with both maternal differential treatment and paternal differential treatment. One possible explanation could be that rather than the amount of differential treatment, the attribution for reasons for differential treatment and the way the individual constructed meanings for it in childhood might have moderated its effect (Kowal & Kramer, 1997) in a way that prevented it from being carried over to one's relationship with significant others later in life. As the scale prepared for the purposes of this study does not provide information about the individual's judgment of fairness of differential treatment, it is not possible to evaluate the effects of such judgments. Also, there could be other factors which, in combination with differential treatment, enable its effects to show up in later relationships as it appears that differential treatment alone is

not sufficient to lead to romantic jealousy. These possible factors will be discussed in the following.

As a possible correlate of romantic jealousy, adult attachment was also hypothesized to be related to romantic jealousy; that is, individuals with anxious attachment were expected to report higher levels of romantic jealousy in their relationships. This hypothesis was based on the notion that as one grows older the attachment figure becomes the romantic partner in adulthood and that having anxious attachment leads the individual to become more alert to any signs of separation or loss; that is the forerunner of the jealousy reaction (Bowlby, 1969). As the anxiety dimension in adult attachment is related to fears of being rejected and abandoned as well as continuous worries about not being a desirable partner (Brennan, Clark, & Shaver, 1998; Fraley & Shaver, 2002) it was expected that people who display higher levels of anxiety in attachment relationships would report higher levels of jealousy in romantic relationships. In line with several studies in the literature (e.g. Buunk, 1997; Hazan & Shaver, 1987; Sharpsteen & Kirkpatrick, 1997), this hypothesis received strong support in the present study. In light of the consistency of this result with the majority of the results of relevant studies, it can be concluded that higher levels of jealousy in romantic relationships are associated with established internal working models that are dominated by feelings of inadequacy, self-doubt and doubt regarding the love and care of others, and preoccupation with relationships.

In addition to this, the results of the study demonstrated no significant relationship between the level of avoidance in attachment relationships and the amount of jealousy in romantic relationships in contrast to several other studies which report significant relationships between romantic jealousy and avoidance in attachment; although individuals with avoidant attachments are found to report lower levels of jealousy compared to people with anxious attachment (Buunk, 1997; Hazan & Shaver, 1987; Rauer & Volling, 2007; Sharpsteen & Kirkpatrick, 1997; Guerrero, 1998). One possible explanation for the failure to find a relationship between avoidance and romantic jealousy can be the differences between the present study and the studies mentioned above in terms of methodology of the studies. Using different measures with different psychometric properties for assessing both romantic relationship jealousy and adult attachment may lead to differences in the direction of results. Moreover, the fact that the results of this study do not support the existing findings might not necessarily mean that these individuals do not experience romantic jealousy. It is known that people who score high on the avoidance dimension, being uncomfortable with intimacy, distance themselves from their emotions, direct their attention away from the conflictual situation, and suppress their thoughts and feelings regarding the threatening situation as a way of dealing with the intensity of their emotions and the frequently experienced unavailability and unresponsiveness of the significant other (Mikulincer & Shaver, 2003; as cited in Mikulincer & Shaver, 2005; Brennan, Clark, & Shaver, 1998; Crittenden & Ainsworth, 1989; Belsky, 2002; Simpson &

Rholes, 1994). Moreover, there is evidence that avoidant people feel sadness very strongly and try to regain their self-esteem quickly compared to others in jealousy-evoking situations (Sharpsteen & Kirkpatrick, 1997). Hence, it can be surmised that although they experience intense feelings in jealousy-evoking situations, their efforts at maintaining their emotional stability and keeping emotional distance may enable them to hide their deep true feelings. A self-report instrument other than the one used in the present study that assesses different types of romantic jealousy rather than a general perception of jealousy might better portray the relationship between the avoidance dimension of attachment and jealousy in romantic relationships.

The present study also tested whether there is a predictive pathway that leads to romantic jealousy in a developmental and a theoretical sequence. However, although associated with each other, the existence of a developmental pathway starting from differential treatment, continuing with sibling jealousy and adult attachment dimensions through romantic jealousy revealed that the model that predicts romantic jealousy only becomes significant as the effect of the anxiety dimension is added to the analysis. The same direction of results was obtained when the effects of paternal and maternal differential treatment were taken into consideration separately instead of differential treatment by both parents including comparison. These suggest that the effect of early childhood variables become relevant for the prediction of romantic jealousy only if the individual develops an anxious attachment. In other words, even if the individual is exposed to differential treatment, and feels jealous of the

sibling, he/she might not experience romantic jealousy if these early experiences did not lead to the development of anxious attachment. It appears that the major predictor of one's jealousy experiences in romantic relationships is the cognitive and affective schemas, i.e. the internal working models of self and others. In order for jealousy to be experienced at more intense levels, it appears that the internal working model with regard to the perceived unavailability of the attachment figure and following hyperactivating strategies that work to maintain the availability and security of the attachment figure through overdependence, clinging, and controlling should be activated in the case of a threat of loss of a significant other (Cassidy & Kobak, 1988; Belsky, 2002).

Apart form its relationship with romantic jealousy, the experience of anxiety in close relationships was also expected to be associated with perceived differential treatment through the effect of perceived differential treatment on sibling jealousy. Although the literature mainly consists of several studies that look at the link between early attachment patterns and sibling jealousy in childhood (e.g. Teti & Ablard, 1989), the assumption underlying this hypothesis was that a child who is exposed to continuous differential treatment of parents would regard the parents as inconsistent in terms of availability and responsiveness, which are asserted to lead to negative view of self and/or others (Ainsworth, Blehar, Waters, & Wall, 1978; as cited in Sheehan & Noller, 2002). Through being exposed to differential treatment, the child was expected to feel jealous of his/her sibling and seeing that the sibling gets more attention,

affection, and love, he/she was expected to be have negative models of self as unworthy of love and affection; and specifically to obtain higher scores on the anxiety dimension of adult attachment. The results of the present study partly confirmed this hypothesis as both differential treatment and sibling jealousy separately predicted anxious attachment, although sibling jealousy failed to mediate the relationship between the two. Hence, altogether the results suggested that what predicted anxious attachment was perceived differential treatment by parents. Additional analyses that looked at the effect of maternal differential treatment instead of differential treatment by both parents including comparison suggested that although it was significantly predicted by maternal differential treatment, sibling jealousy did not mediate the relationship between maternal differential treatment and anxious attachment. However, it was found to fully mediate the relationship between paternal differential treatment and anxious attachment.

What these results suggest is that perceived maternal differential treatment directly leads to the development of internal working models that include a negative view of self and negative expectations with regard to the availability of significant others independent of being jealous of the sibling. Related to this, there is evidence that mother's preference for a particular twin is associated with the development of insecure attachment in the disfavored one as shown by less trust in himself and others (Minde, Corter, Goldberg, & Jeffers, 1990; as cited in Sheehan & Noller, 2002). Also, it is consistent with Bowlby's (1979) theoretical assumption that being the recipient of inconsistent

care from the attachment figure is related to the development of model of oneself as unworthy of being loved.

With regard to the effect of paternal differential treatment, it appears that its effect is indirect, predicting anxious attachment only as long as there is sibling jealousy in contrast to the direct effect of mother's differential treatment. It appears that mothers are more crucial in the way children interpret the experiences in the family and arrive at a conclusion about themselves and others. One possible explanation might be that children do not consider receiving differential treatment from their fathers to be as crucial as long as they are satisfied with their relationship with the mother. For instance, it is consistently reported that children are very attentive to a loss of their mother's attention and affection; as evident even in studies that use infant-sized dolls (Hart, Field, DelValle, & Letourneau, 1998). Similarly, the attitudes and behavior of the firstborns toward the newly arrived baby are argued to be influenced by the relationship between the firstborn and the mother (Levy, 1940). Moreover, the firstborn child's adaptation to the birth of a sibling is thought to be related to the quality of changes in the relationship between the mother and the firstborn (Baydar, Greek, Brooks-Gunn, 1997). It appears that mothers, compared to fathers, play a more direct role in the child's emotional development as they are the primary caregiving sources; and any signs of difference in the provided care and attention should be much more informative for the child's being. Aspects of Turkish culture may also be responsible for these findings as fathers are less emotionally involved with children while

mothers take the role of main satisfiers of physical and emotional needs of children (Fişek, 2002; as cited in Çavdar, 2003). As a result, a more intimate and emotionally involved relationship with the mother informs the child more of his own view of self and others. All in all, bringing the findings together, it can be concluded that romantic jealousy is predicted by anxious attachment, which in turn is directly predicted by maternal differential treatment and indirectly by paternal differential treatment via its effect on sibling jealousy. However, there is no evidence that anxious attachment mediates the effect of differential treatment, as there is no direct effect between differential treatment and romantic jealousy.

Moreover, maternal differential treatment was found to lead to avoidance in adult relationships, but indirectly through its effect on sibling jealousy. Continuous exposure to differential treatment by the mother relative to one's sibling can lead to a rivalry in terms of obtaining the attention and love of the mother between siblings. However, as one cannot get rid of the sibling and as the sibling relationship is not a result of a voluntary choice (Dunn, 1983; Thompson, 2004), it could be adaptive for the child who is the recipient of less affection and care and who is jealous of the sibling to avoid the situation and to emotionally distance himself/herself from what he/she has been experiencing. This could be adaptive since feeling unattended to by the mother, who is crucial in terms of the satisfaction of survival and emotional needs especially in the beginnings of life, must be difficult to bear over the long term. The experience of an unresponsive attachment figure, thus, would be expected to lead to the

development of a negative model of others and negative expectations about others' availability (Sheehan & Noller, Bowlby, 1979). However, the results also suggested that sibling jealousy predicts both anxiety and avoidance in later relationships. When considered together, it can be speculated that some children deal with maternal differential treatment or sibling jealousy by developing avoidant attachments and some by becoming anxious. One speculation about why some children develop anxious attachment and why some develop avoidant attachment could be related to parental attachment such that the attachment between the mother and the child could influence the way the child reacts to and maternal differential treatment and sibling jealousy. For instance, as more securely attached children should be surer about the emotional availability and responsiveness of their mothers, they could feel less threatened when the mother directs her attention to the other sibling compared to insecurely attached children (Teti & Ablard, 1989; Volling & Belsky, 1992). Likewise, there can be genetic grounds of this such that as demonstrated in recent research, insecurities in attachment can be explained to some extent by particular the polymorphism of particular genes (Gillath, Shaver, Baek, & Chun, 2008). What this suggests is that some kinds of polymorphisms may predispose individuals to develop a particular kind of insecurity rather than a different kind of insecurity (Gillath, Shaver, Baek, & Chun, 2008). Moreover, children with difficult temperaments can respond to differential treatment by the mother in a different manner compared to children with easy temperaments. Further speculations necessitate studies that would take these factors into

consideration. However, as suggested by Sheehan and Noller (2002), it can be concluded from the results of this study that what differentiates between different working models of self and others appears to be within-family experiences in differential treatment of parents.

Differential treatment by parents, however, was expected to be associated with early sibling jealousy based on similar studies which suggested that differences in the quality of relationships between parents and each child in the family predict conflict and jealousy between the siblings (Brody, Stoneman, & Burke, 1987; Stocker, Dunn, & Plomin, 1989; as cited in Furman & Lanthier, 1996; Brody, 1998; Rauer & Volling, 2007; Thompson & Halberstadt, 2008). Consistent with previous research, the results of the present study also showed that there is a strong relationship between perceived differential treatment by parents and sibling jealousy. Moreover, both maternal and paternal differential treatment were found to be related to experiences of jealousy toward the sibling. As children believe that attention and affection given to someone else is limited in quantity (Heider, 1958), it can be concluded that perception of being the recipient of less affection and attention of parents compared to the sibling is related to feelings of jealousy in which the threat of loss is centered around the love and affection of the parents.

In addition to the proposed developmental model of romantic jealousy, the effect of some potential covariates, one of which was birth order, was examined. It was hypothesized that firstborn individuals would report more experiences of differential treatment as compared to secondborn individuals.

However, this hypothesis received no support from the results of the present study. Similarly, it was expected as the older child, who has been the sole owner of especially the mother, i.e. the satisfier of physical, developmental, and emotional needs, faces the loss of the mother for some time with the birth of a sibling (Freud, 1937; as cited in Rosner, 1985), would be more alert to differences in terms of maternal differential treatment compared to secondborns already being born into a family of three where the parental attention and affection are things that should be shared from the beginning onwards (Crouter, Head, McHale, & Jenkins-Tucker, 2004; Volling, McElwain, Miller, 2002). Nevertheless, firstborn and secondborn individuals were found not to be significantly different from each other with regard to perceptions of maternal differential treatment. With regard to the paternal differential treatment, however, the results suggested that firstborns experienced significantly more paternal differential treatment compared to secondborn individuals. What these suggest is that after the birth of a sibling, due to demands of the small baby for some time, the mother is expected to be preoccupied with the newborn during which the treatment of the father and the quality of the relationship between the father and the firstborn might gain special importance in terms of the firstborn's interpretation of the family environment and his/her standing at home (Volling, 2005). As mentioned before, the structure of Turkish culture which is mainly characterized by less emotional involvement on the part of the father compared to the mother (Fişek, 2002; as cited in Çavdar, 2003) might make the firstborn more vulnerable to any kinds of decrease or difference in paternal treatment.

Moreover, although there is evidence that due to the demands of the secondborn sibling, changes occur in the quality of the relationship between the firstborn and the mother, such as decreases in attention, play, and increases in controlling and punishing behaviors (Baydar, Greek, & Brooks-Gunn, 1997; Kendrick, Dunn, 1980), children might interpret these changes as related to the needs of the baby, especially in terms of survival needs which has to be fulfilled by the mother. However, it could be more difficult to attribute meaning to the differential treatment of the father as compared to mother.

The results of the present study also suggested that there was no significant effect of sex on differential treatment, maternal differential treatment, or paternal differential treatment. Contributing to these, there was no significant effect of sex constellation of the sibling dyad on any of the perceived differential treatment scores. A possible speculation with regard to these findings could be that perceptions of parental treatment are independent of one's sex or one's sibling sex, implying that what really matters could be the subjective experience and interpretation of parental relationships. Moreover, in contrast to the sample in the present study, a sample in which males and females and all three sets of siblings are distributed more equally may better portray the interplay between these covariates and individuals' perceived differential treatment.

Sibling jealousy, as another variable of interest in the present study, was investigated in relation to the effects of potential covariates. Accordingly, the results suggested that, contrary to expectations, birth order was found not to

significantly affect jealousy between siblings. Moreover, firstborn and secondborn individuals did not differ significantly either in terms of jealousy over mother or jealousy over father. The reason for the failure to find a significant difference between the two groups of individuals might be that younger siblings are also observed to show jealousy responses (Miller, Volling, McElwain, 2000). It appears that, as argued by some others, both firstborns and secondborns have reasons to be jealous. The firstborn would be jealous of the second as he/she has to share the parental attention and love and move from a state of sole owner of the affection to a status of a competitor with the birth of sibling (Robey, Cohen, & Epstein, 1988). On the other hand, the secondborns, coming into a world where the sibling has established a privileged place and has been the more talented child already in the family has to compete through all their lives to obtain the love and privileges the older one has (Betzig, 1992; as cited in Buunk, 1997; Moser, Jones, Zaorski, Mirsalimi, & Luchner, 2005). Moreover, evolutionary explanations suggest that due to higher reproductive value of older siblings who are thought to have more survival values in the old days, parents devote most of their supplies to firstborns (Daly & Wilson, 1988; as cited in Sulloway, 1995), a situation which may lead the secondborns to compete for the family resources all through childhood (e.g. Betzig, 1987). However, firstborns also have to protect their status in the family (Sulloway, 1995). All in all, it seems that both firstborns and secondborns have their own reasons to be jealous of their sibling, although their reasons are not the same.

The results also showed that there was no significant difference between males and females in terms of experiences of early sibling jealousy. However, females were found to report significantly higher levels of jealousy over mother compared to males while gender was found to have no significant effect on the jealousy over father. Related to jealousy over mother, it is widely argued that jealousy arises first in relation to the exclusive love of the mother (e.g. Levy, 1940; Downing, 1998; Vollmer, 1998). In line with this, it can be maintained that especially in the early years of life, the child is relatively dependent on the mother for survival and emotional needs as the mother is the primary source of nurturance and development in general (Leung & Robson, 1991). As girls identify with their mothers throughout development, they can be much more concerned over the love and attention of the mother since becoming identified with a parent would mean becoming more like that parent and hence this might enable the child to achieve the love and attention as much as he/she desires as long as he/she is similar to that parent. It is also maintained that identification involves the acquisition of parental values and is associated indirectly with pleasing the parent and thus achieving a positive relationship with that parent (e.g. Bandura, 1964; Hoffman, 1971). Moreover, trying to be like a parent is thought to lead to an increase in the child's emotional investment in terms of a hope of being positively evaluated by that parent (Hoffman, 1971). It can be speculated that if the sibling also needs the mother especially in the early years of life, the presence of a sibling would be perceived as an obstacle to the

identification process and a rival against the attainment of more love and attention of the mother during childhood.

As regard to the effect of sex constellation of the sibling dyads on sibling jealousy, the results of the present study showed that sisters, brothers, and dyads composed of a sibling and a brother did not significantly differ from each other in terms of the amount of early sibling jealousy they experienced. This result was in contradiction with other studies which showed that especially same-sex siblings have more conflictual relationships (Minnett, Vandell, & Santrock, 1983) with sibling rivalry observed most often between same-sex siblings (Cicirelli, 1980, 1985; as cited in Cicirelli, 1996), as explained by the commonality of their needs and resources (Leung & Robson, 1991). A possible explanation could be that a larger sample with more equal distribution of different groups of dyads may reveal different results other than the ones obtained in the present study as sex constellation of the sibling dyad was found to have no significant effect on any of the variables of interest in the study.

As for dimensions of adult attachment, there was no significant effect of birth order either on the anxiety or the avoidance dimension. Similarly, there was no significant effect of gender or sex constellation of the sibling dyad on both dimensions of attachment. These results are reasonable in the sense that whether a child develops an anxious or an avoidant attachment is related to the consistency in the availability and responsiveness of the attachment figure (Ainsworth, Blehar, Waters, & Wall, 1978; as cited in Sheehan & Noller, 2002); that is the exclusive dynamics of the relationship between the mother

and the child, as sometimes being influenced by sibling jealousy as mentioned above.

With regard to the effects of potential covariates on the experience of romantic jealousy, it was found that there was no significant difference between firstborns and secondborns, contrary to the hypothesis which expected that firstborns, having experienced dethronement might be more likely than laterborns to fear any kind of dethronement in the eyes of the significant other (Adler, 1928; as cited in Adams, 1972). However, it appears that secondborns have reasons to feel jealous in romantic relationships, as well. As secondborns compete for familial resources that are provided to the firstborn, according to the evolutionary point of view, this may lead them to believe that they have to try hard to keep the attention and love of the significant other (Buunk, 1997). Hence, the results of the present study indicate that both firstborns and secondborns have reasons to feel jealous of their partners, although their motivation to feel this way may not be the same.

The effect of gender on romantic relationship jealousy was another area of investigation. The results showed that there was no significant difference between males and females with respect to romantic jealousy, similar to several other studies (e.g. Pines & Friedman, 1998) although there are inconsistent findings in the literature with regard to gender differences. These results suggest that both males and females experience romantic jealousy to some extent in their romantic relationships. In fact, this is compatible with evolutionary explanations of romantic jealousy which offers different

motivations for men and women to experience jealousy by stressing that men are much more concerned over the protection of their genetic transmission into the offspring while women are much more concerned about the provision of resources that are needed for the upbringing of their offspring (Daly, Wilson, & Weghorsts, 1982; as cited in Hupka, 1991; Buss, Larsen, Westen, & Semmelroth, 1992). Although the reasons may differ, this does not imply that one sex would be more jealous than the other. As the instrument used to measure romantic jealousy in the present study assesses the quantity of romantic jealousy rather than the quality of it, the results suggest that both males and females may have reasons to experience jealousy in romantic relationships, although not identifiable in the present study. Likewise, when looked from the sociocultural point of view, it can be argued that Turkish culture values marriage and the family and hence jealousy has been a concern for our culture in terms of protecting what is valued and attributed importance (Hupka, 1981, as cited in Salovey & Rothman, 1991; Hupka, 1991), as evident from high levels of romantic jealousy reported by both sexes.

Sex constellation of the sibling dyad was found to have no significant effect on individuals' experiences of romantic relationship jealousy. When considered together with the fact that there was also no significant relationship between sibling jealousy and romantic jealousy, one may speculate that jealousy experience in romantic relationships is not directly related to the dynamics and structure of the sibling relationship. However, as mentioned above, the fact that sex constellation was found to have no effect on any of the

variables in the study necessitates being cautious about interpreting the results with regard to it.

Limitations of the Study and Considerations for Future Research

The present study has several issues that warrant mentioning as limitations one of which is the retrospective nature of the results. As the subjects involved in the study were young adults, the questionnaires used for differential treatment and sibling jealousy refer to childhood years. Moreover, the self-report instruments that were used in the present study required individuals to recall information or feelings from the past. The intensity of the experiences related to the variables of interest might have diminished over the years or due their somewhat negative nature, might have been subject to motivated learning. Besides, current relationships with siblings and parents might affect individuals' recall of relationships in childhood. Thus, it is unclear if a longitudinal study of the same kind would produce the same results as this study. The developmental nature of the present study requires a longitudinal approach that would better portray the interplay of early familial variables and later adulthood functioning. Moreover, it was difficult to test psychoanalytic assumptions using self-report techniques which may fail to portray the unconscious issues related to childhood experiences. The data gathered from self-reports would better be supplemented with some qualitative techniques such as open-ended interviews.

Continuing with the methodological issues, it can be maintained that the sibling relationships scale was newly developed for the purposes of the study. Although it demonstrated high reliability both in the pilot and in the original study and related to the concerns of the study in theoretically meaningful ways, little is known about its external validity. This also points to the need for a comprehensive Turkish scale for the investigation of sibling jealousy in particular. Likewise, the scale that was used to assess romantic relationship jealousy was used for the first time in Turkish culture. Although it demonstrated good reliability, it is questionable whether the statements included are compatible with our cultural structure. Again, there is a clear lack of a scale for assessing romantic relationship jealousy with good psychometric qualities in Turkish.

There are also some shortcomings with regard to the nature of the sample used in the study. The sample consisted of mainly young adults from middle and upper socioeconomic levels of the society, which limits the generalizability of the results to the larger population. Similarly, a larger sample would make it possible to portray the results with more confidence. The fact that there were more female subjects than male subjects requires more caution in the interpretation of the findings. This limitation also appeared in making comparisons between sibling dyads composed of different sexes. The achievement of relative equality in terms of these numbers would probably lead more accurate results in further studies.

Finally, future studies may include the perceptions of the other sibling in the dyad as the comparison of agreement or disagreement between the siblings related to their experiences in the family may shed more light onto the nature of their relationships. In a similar vein, sibling sets composed of more than two siblings may enrich the findings in a similarly designed study as it would be very informative in terms of the experiences of the middleborns who appear to be the less frequently investigated group of siblings.

Conclusion

The present study contributed to the area of developmental research by providing some information on a relatively less studied topic, namely the developmental roots of jealousy with the effect of early familial variables in consideration. As emphasized by several different studies, the influence of early experiences on the importance of later adulthood functioning has been stressed in the present study, too. Accordingly, however, most of the hypotheses that relate early childhood variables with adult romantic jealousy did not receive support from the results of this study. Some of these can be related to the limitations of the study that are mentioned above.

In contrast to expectations, the present study found no relationship between early sibling jealousy and romantic jealousy. Contributing to this, the psychoanalytic assertion that relates romantic jealousy to early jealousy over the opposite sex parent did not receive support. Similarly, there was no significant relationship between jealousy over mother and romantic jealousy, as

proposed by some developmentalists. Possible explanations for these findings include the differences between sibling and romantic relationships in terms of their nature and dynamics. As there is no altruistic component in romantic relationships as there is in sibling relationships, the motivations to be jealous in each relationship can be unrelated. In addition to these, since the instruments used in the present study required subjects to recall feelings in their relationships with siblings in childhood years, the possible effects of forgetting and decreases in intensity of feelings are also taken into consideration while interpreting the low levels of sibling jealousy reported by the subjects.

In a similar vein, differential treatment and romantic jealousy were not directly linked while individuals who reported having experienced high levels of differential treatment also reported having felt high levels of sibling jealousy, as expected. On the other hand, the developmental model of the romantic relationship jealousy suggested that what really predicted jealousy was anxious attachment. It appeared that the major predictor of one's jealousy experiences in romantic relationships is the internal working models of self and others. Going one step back, especially perceptions maternal differential treatment were found to be determinant in terms of the development of anxious attachment. Though paternal differential treatment was found to affect the development of anxiety in relationships through its effect on sibling jealousy, maternal differential treatment seems to have much more effect on the way the individual interprets the world and himself, and develop internal working models accordingly as it

was found to be related to avoidant attachment through its effect on sibling jealousy.

Contrary to many studies in the literature, however, there was no significant relationship between avoidance and romantic relationship jealousy; a finding which was attributed to the methodological structure of the present study as compared to other studies in the literature.

As regard to the effects of potential covariates, a remarkable finding of the present study was the significant effect of paternal differential treatment as perceived differently by firstborns and secondborns, which was interpreted as being related to the increase in the importance of fathers' treatment in the case of relative differentiation in the mothers' treatment and care due to the existence of a sibling for a firstborn. However, birth order did not have a significant effect on sibling jealousy, suggesting that both firstborns and secondborns can have reasons to be jealous of their siblings. Likewise, there were no significant differences between males and females in terms of sibling jealousy, except that females reported having experienced more jealousy over mother compared to males. Also, contrary to many studies, there was no significant difference between dyads of sisters, brothers, or dyads composed of a brother and a sister.

With regard to the effects of potential covariates on the experience of romantic jealousy, firstborns and secondborns did not differ significantly, suggesting that both groups of individuals can have reasons to experience jealousy in romantic relationships, although their motivation to feel jealousy

may not have to be the same. Also, males and females did not differ in their experience of romantic jealousy. This result is interpreted in the light of the structure of the scale used in the present study such that as it assesses the quantity of romantic jealousy rather than the quality of it, both males and females may have reasons to experience jealousy in romantic relationships, although not identifiable in the present study.

All in all, despite its limitations, the present study enriches the understanding of the interplay between early sibling and familial experiences and later adulthood functioning, that is romantic relationship functioning in terms of adult attachment and jealousy experiences in particular, for young adults in Turkish families.

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Appendix A

Consent Form

İSTANBUL BİLGİ ÜNİVERSİTESİ

Psikoloji Bölümü

Bilgilendirme ve Onay Formu

Bu çalışmada uygulanacak olan anketler İstanbul Bilgi Üniversitesi Klinik Psikoloji Yüksek Lisans Bölümü'nde okuyan bir öğrencinin uzmanlık tezinin bir parçasını oluşturmaktadır. Çalışmaya katılım gönüllülük esasına dayanmaktadır.

Bu çalışma yaklaşık 15-20 dakika sürecektir. Söz konusu çalışmaya ait anketler yakın ilişkilerinizle ilgili birtakım soruları içermektedir. Bu soruların doğru ya da yanlış cevapları yoktur. Lütfen soruları atlamadan ve üzerinde fazla düşünmeden, kendi görüşlerinizi dikkate alarak cevaplayınız.

Uygulanan anketler sonucunda tüm kimlik bilgileri **gizli** tutulacak, tez çalışmasında ya da herhangi başka bir amaçla kesinlikle açıklanmayacak ve yayımlanmayacaktır. Araştırmanın amacı doğrultusunda her katılımcıya bir numara verilecek ve veriler bu numaraya göre kaydedilecektir. Bu çalışmaya katılmak, sizi herhangi bir şekilde risk altına sokmayacaktır. Ancak rahatsızlık duymanız halinde çalışmayı bırakmanız mümkündür.

Çalışmaya katılımla ilgili herhangi bir soru ya da sorununuz olursa, veya çalışmaya katılımınızdan sonra araştırmayla ilgili bilgi almak isterseniz İstanbul Bilgi Üniversitesi Klinik Psikoloji Yüksek Lisans Bölümü öğrencisi Merve İnce (merveince83@yahoo.com) ile iletişime geçebilirsiniz.

Anketleri doldurmanız bu onay formunu okuyup yazılanları kabul ettiğinizi gösterir.

Tarih:

Ad-Soyad: **İmza:**

Appendix B

Demographic Information Questionnaire

DEMOGRAFİK BİLGİ FORMU

Cinsiyetiniz: Kadın [ ] Erkek [ ]

Doğum Tarihiniz:

Medeni Haliniz: Bekar [ ] Evli [ ] Dul [ ]

Şuanda kimlerle oturuyorsunuz?

[ ] Çekirdek aile (anne, baba, kardeş)

[ ] Eş ve çocuklar

[ ] Arkadaş

[ ] Yurt

[ ] Diğer

Babanızın:

Yaşı:

Mesleği:

Eğitim Durumu:

Annenizin:

Yaşı:

Mesleği:

Eğitim Durumu:

Kardeşinizin:

Cinsiyeti: Kadın [ ] Erkek [ ]

Yaşı:

Eğitim Durumu:

Mesleği:

Siz büyürken, kardeşinizle aynı evde mi oturuyordunuz?

Evet [ ] Hayır [ ]

Aşağıdaki durumlardan ailenizde mevcut olan(lar) varsa lütfen işaretleyiniz:

[ ] Annenin kaybı Yıl:

[ ] Babanın kaybı Yıl:

[ ] Kardeşin kaybı Yıl:

[ ] Boşanma Yıl:

Aşağıdaki durumlardan ailenizde mevcut olan(lar) varsa hangi döneme denk geldiğini de belirterek işaretleyiniz:

[ ] Anne ve baba arasında uzun süreli çok yoğun çatışma olması

[ ] Okul öncesi dönem [ ] İlkokul dönemi

[ ] Ortaokul dönemi [ ] Lise ve/veya sonrası

[ ] Annenin uzun süreli kendini çok mutsuz ve çökkün hissetmesi

[ ] Okul öncesi dönem [ ] İlkokul dönemi

[ ] Ortaokul dönemi [ ] Lise ve/veya sonrası

[ ] Anne ya da babada bir psikiyatrik hastalık olması

[ ] Okul öncesi dönem [ ] İlkokul dönemi

[ ] Ortaokul dönemi [ ] Lise ve/veya sonrası

[ ] Anne ya da babanın alkol ya da maddeyi kötüye kullanımı

[ ] Okul öncesi dönem [ ] İlkokul dönemi

[ ] Ortaokul dönemi [ ] Lise ve/veya sonrası

[ ] Kişiye bir aile bireyi tarafından fiziksel ya da cinsel tacizde bulunulması

[ ] Okul öncesi dönem [ ] İlkokul dönemi

[ ] Ortaokul dönemi [ ] Lise ve/veya sonrası

[ ] Anne, baba ya kişinin kendinde kronik/yaşamı tehdit eder bir hastalık olması (kanser, kalp hastalığı, böbrek hastalığı, MS vb.)

[ ] Okul öncesi dönem [ ] İlkokul dönemi

[ ] Ortaokul dönemi [ ] Lise ve/veya sonrası

Şuana kadar hiç 3 ay ya da daha uzun süren romantik bir ilişkiniz oldu mu?

Evet [ ] Hayır [ ]

Appendix C

Romantic Relationships Scale

ROMANTIC RELATIONSHIPS SCALE (RRS)

This is the female form of the jealousy measure used in this study. The male form substitutes words “man” for “woman”, “male” for “female”, “he” for “she”, “him” for “her”, and “boyfriend” for “girlfriend”.

Part I: Instructions

Below are some situations in which you may have been involved. Please rate how you would feel if you were confronted with the situation by placing a check mark in a space on the scale. Do not answer in terms of how you think you should feel, but rahter how you would *actually* feel. Answer as if you were in a serious relationship. If you have not been involved in a particular situation, then *imagine* how you would feel in that situation and reply to the item accordingly. Be sure to answer each item- even if you have to guess. Your first reaction to the item is what matters. There is no time limit, but work quickly. There are no right or wrong answers.

Scale of how you would *actually* feel:

1- Very pleased
2- Pleased
3- Neutral
4- Displeased
5- Very displeased

1. At a party, your partner dances with another woman.
2. Your partner comments to you on how attractive another woman is.
3. Another woman kisses your partner on the cheek at a New Year’s party.
4. You see a picture in your partner’s wallet of a woman he used to date.
5. At a party, your partner hugs another woman.
6. Someone flirts with your partner.

7. Your partner sees an old girlfriend and responds with a great deal of happiness.
8. Your partner pays more attention to another woman besides you at a party.
9. You hear your partner enjoying a conversation with another woman on the telephone. When he sees you, he hangs up.
10. At a party, your partner disappears for a long period of time.
11. Your partner flirts with another woman.
12. Your partner goes to a bar several evenings without you.
13. Your partner tells you he is sexually attracted to a mutual friend of yours.
14. Your partner receives a letter from a former lover and refuses to tell you what it says.
15. At a party, your oartner passionately kisses a woman you do not know.

Part II: Instructions

Below you will find a list of statements. After reading each statement, place a check mark in a space on the scale to indicate how true the statement is for you. As before, answer as though you were in a serious romantic relationship. Say how you would *actually* feel, not how you *should* feel. Be sure to answer each one.

Scale of how you would *actually* feel:

1- Strongly disagree
2- Disagree
3- Neutral
4- Agree
5- Strongly agree

1. If my partner admired another woman, I would feel irritated.
2. I wouldn't worry or become suspicious if a female stranger called my partner.

3. I frequently check up to see if my partner has been where he says he has been.

4. I wouldn't mind if my partner were accidentally to call me by the wrong name.

5. I seldom worry about where my partner is or what he is doing with this time.

6. I like to find fault with my partner's former girlfriends.

7. If I thought that my partner was interested in another woman, I would get very upset.

8. I feel inferior when my partner talks to an attractive stranger.

9. I often worry thatt I will lose my partner to another woman.

10. It wouldn't bother me if my partner flirted with another woman.

11. If my parner becomes close to another woman, I feel happy for him.

12. If I thought my partner was seeing another lover, I would feel angry or hurt.

13. If my partner went out with another woman, I would get intensely upset.

Appendix D

Romantik İlişkiler Ölçeği

(Türkçe versiyonu)

(Kadın)

ROMANTİK İLİŞKİLER ÖLÇEĞİ (RİÖ)

1. Bölüm: Yönergeler

Aşağıda içinde bulunmuş olabileceğiniz bazı durumlar verilmiştir. Lütfen o durumla karşılaşsaydınız nasıl hissedeceğinizi ölçekteki bir boşluğa tik işareti atarak değerlendiriniz. Cevaplarınızı nasıl hissetmeniz gerektiğini düşünerek değil, daha çok ***gerçekte*** nasıl hissederdiniz diye veriniz. Ciddi bir ilişki içerisinde olduğunuzu varsayarak cevap veriniz. Eğer daha önce aşağıda belirtilen bir durumda bulunmadıysanız, o zaman böyle bir durumda bulunsaydınız nasıl hissedeceğinizi ***hayal edip*** ona göre cevap veriniz. Tahmin etmek zorunda kalsanız dahi, bütün maddeleri cevapladığınızdan emin olun. Önemli olan maddeyi okuduğunuzdaki ilk tepkinizdir. Zaman sınırlaması yoktur, ancak hızlı cevap vermeye çalışınız. Doğru ya da yanlış cevap yoktur.

Lütfen aşağıdaki durumlarla karşılaşsanız ***gerçekte*** nasıl hissedeceğinizi bu ölçeğe göre belirtiniz:

1- Çok memnun
2- Memnun
3- Ne memnun ne hoşnutsuz
4- Hoşnutsuz
5- **Çok hoşnutsuz**

	Çok memnun				**Çok hoşnutsuz**
1. Bir partide partneriniz başka bir kadınla dans ediyor.	1	2	3	4	5
2. Partneriniz başka bir kadının ne kadar çekici olduğu hakkında size yorum yapıyor.	1	2	3	4	5
3. Yılbaşı partisinde başka bir kadın partnerinizi yanağından öpüyor.	1	2	3	4	5

	Çok memnun				**Çok hoşnutsuz**
4. Partnerinizin cüzdanında daha önce çıktığı bir kızın resmini görüyorsunuz.	1	2	3	4	5
5. Bir partide partneriniz başka bir kadına sarılıyor.	1	2	3	4	5
6. Birisi partnerinize kur yapıyor.	1	2	3	4	5
7. Partneriniz eski bir kız arkadaşını görüyor ve büyük bir mutlulukla karşılık veriyor.	1	2	3	4	5
8. Partneriniz bir partide sizden başka bir kadına daha fazla ilgi gösteriyor.	1	2	3	4	5
9. Partnerinizin başka bir kadınla telefonda ettiği sohbetten keyif aldığını duyuyorsunuz. Sizi gördüğü zaman telefonu kapatıyor.	1	2	3	4	5
10. Bir partide partneriniz uzun bir süre ortadan kayboluyor.	1	2	3	4	5
11. Partneriniz başka bir kadına kur yapıyor.	1	2	3	4	5
12. Partneriniz birkaç akşam siz olmadan bara gidiyor.	1	2	3	4	5
13. Partneriniz size ortak bir arkadaşınızdan cinsel olarak etkilendiğini söylüyor.	1	2	3	4	5
14. Partneriniz eski bir sevgilisinden bir mektup alıyor ve size ne yazdığını söylemeyi reddediyor.	1	2	3	4	5
15. Bir partide partneriniz sizin tanımadığınız bir kadını tutkulu bir şekilde öpüyor.	1	2	3	4	5

2. Bölüm: Yönergeler

Aşağıda bazı ifadeler bulacaksınız. Her ifadeyi okuduktan sonra ifadenin sizin için ne kadar doğru olduğunu belirtmek üzere ölçekteki bir boşluğa tik işareti yerleştiriniz. Daha önce olduğu gibi, ciddi bir romantik ilişki içerisinde olduğunuzu varsayarak cevap veriniz. Nasıl hissetmeniz ***gerektiğini*** değil, ***gerçekte*** nasıl hissedeceğinizi söyleyiniz. Her birine cevap verdiğinizden emin olunuz.

Lütfen aşağıdaki durumlarla karşılaşsanız ***gerçekte*** nasıl hissedeceğinizi bu ölçeğe göre belirtiniz:

1- Kesinlikle katılmıyorum
2- Katılmıyorum
3- Nötr
4- Katılıyorum
5- Kesinlikle katılıyorum

	Kesinlikle katılmıyorum				**Kesinlikle katılıyorum**
1. Eğer partnerim başka bir kadına hayranlık duysaydı, bundan rahatsız olurdum.	1	2	3	4	5
2. Eğer yabancı bir kadın partnerimi arasaydı endişelenmez ya da şüphelenmezdim.	1	2	3	4	5
3. Partnerimin söylediği yerde olup olmadığını anlamak için sıklıkla kontrol ederim.	1	2	3	4	5

	Kesinlikle katılmıyorum				**Kesinlikle katılıyorum**
4. Partnerim kazara beni yanlış isimle çağırsaydı bunu önemsemezdim.	1	2	3	4	5
5. Partnerimin nerede olduğu ya da o sırada ne yaptığıyla ilgili nadiren endişelenirim.	1	2	3	4	5
6. Partnerimin eski kız arkadaşlarının kusurlarını bulmaktan hoşlanırım.	1	2	3	4	5
7. Eğer partnerimin başka bir kadınla ilgilendiğini düşünseydim, çok üzülürdüm.	1	2	3	4	5
8. Partnerim çekici bir yabancı ile konuştuğunda kendimi o kadına göre daha aşağı nitelikte hissederdim.	1	2	3	4	5
9. Partnerimi başka bir kadına kaptıracağım diye sık sık endişelenirim.	1	2	3	4	5
10. Eğer partnerim başka bir kadına kur yapsaydı bu beni rahatsız etmezdi.	1	2	3	4	5
11. Eğer partnerim başka bir kadınla yakınlaşırsa onun adına mutlu olurum.	1	2	3	4	5

	Kesinlikle katılmıyorum				**Kesinlikle katılıyorum**
12. Eğer partnerimin başka bir sevgilisi olduğunu ve onunla görüştüğünü düşünseydim, kızgın ya da incinmiş hissederdim.	1	2	3	4	5
13. Eğer partnerim başka bir kadınla dışarı çıksaydı oldukça üzülürdüm.	1	2	3	4	5

APPENDIX E

Romantik İlişkiler Ölçeği

(Türkçe versiyonu)

(Erkek)

ROMANTİK İLİŞKİLER ÖLÇEĞİ (RİÖ)

1. Bölüm: Yönergeler

Aşağıda içinde bulunmuş olabileceğiniz bazı durumlar verilmiştir. Lütfen o durumla karşılaşsaydınız nasıl hissedeceğinizi ölçekteki bir boşluğa tik işareti atarak değerlendiriniz. Cevaplarınızı nasıl hissetmeniz gerektiğini düşünerek değil, daha çok ***gerçekte*** nasıl hissederdiniz diye veriniz. Ciddi bir ilişki içerisinde olduğunuzu varsayarak cevap veriniz. Eğer daha önce aşağıda belirtilen bir durumda bulunmadıysanız, o zaman böyle bir durumda bulunsaydınız nasıl hissedeceğinizi ***hayal edip*** ona göre cevap veriniz. Tahmin etmek zorunda kalsanız dahi, bütün maddeleri cevapladığınızdan emin olun. Önemli olan maddeyi okuduğunuzdaki ilk tepkinizdir. Zaman sınırlaması yoktur, ancak hızlı cevap vermeye çalışınız. Doğru ya da yanlış cevap yoktur.

Lütfen aşağıdaki durumlarla karşılaşsanız ***gerçekte*** nasıl hissedeceğinizi bu ölçeğe göre belirtiniz:

1- Çok memnun
2- Memnun
3- Ne memnun ne hoşnutsuz
4- Hoşnutsuz
5- **Çok hoşnutsuz**

	Çok memnun				**Çok hoşnutsuz**
1. Bir partide partneriniz başka bir adamla dans ediyor.	1	2	3	4	5
2. Partneriniz başka bir adamın ne kadar çekici olduğu hakkında size yorum yapıyor.	1	2	3	4	5
3. Yılbaşı partisinde başka bir adam partnerinizi yanağından öpüyor.	1	2	3	4	5

	Çok memnun				**Çok hoşnutsuz**
4. Partnerinizin cüzdanında daha önce çıktığı bir adamın resmini görüyorsunuz.	1	2	3	4	5
5. Bir partide partneriniz başka bir adama sarılıyor.	1	2	3	4	5
6. Birisi partnerinize kur yapıyor.	1	2	3	4	5
7. Partneriniz eski bir erkek arkadaşını görüyor ve büyük bir mutlulukla karşılık veriyor.	1	2	3	4	5
8. Partneriniz bir partide sizden başka bir adama daha fazla ilgi gösteriyor.	1	2	3	4	5
9. Partnerinizin başka bir adamla telefonda ettiği sohbetten keyif aldığını duyuyorsunuz. Sizi gördüğü zaman telefonu kapatıyor.	1	2	3	4	5
10. Bir partide partneriniz uzun bir süre ortadan kayboluyor.	1	2	3	4	5
11. Partneriniz başka bir adama kur yapıyor.	1	2	3	4	5
12. Partneriniz birkaç akşam siz olmadan bara gidiyor.	1	2	3	4	5
13. Partneriniz size ortak bir arkadaşınızdan cinsel olarak etkilendiğini söylüyor.	1	2	3	4	5
14. Partneriniz eski bir sevgilisinden bir mektup alıyor ve size ne yazdığını söylemeyi reddediyor.	1	2	3	4	5
15. Bir partide partneriniz sizin tanımadığınız bir adamı tutkulu bir şekilde öpüyor.	1	2	3	4	5

2. Bölüm: Yönergeler

Aşağıda bazı ifadeler bulacaksınız. Her ifadeyi okuduktan sonra ifadenin sizin için ne kadar doğru olduğunu belirtmek üzere ölçekteki bir boşluğa tik işareti yerleştiriniz. Daha önce olduğu gibi, ciddi bir romantik ilişki içerisinde olduğunuzu varsayarak cevap veriniz. Nasıl hissetmeniz ***gerektiğini*** değil, ***gerçekte*** nasıl hissedeceğinizi söyleyiniz. Her birine cevap verdiğinizden emin olunuz.

Lütfen aşağıdaki durumlarla karşılaşsanız ***gerçekte*** nasıl hissedeceğinizi bu ölçeğe göre belirtiniz:

1- Kesinlikle katılmıyorum
2- Katılmıyorum
3- Nötr
4- Katılıyorum
5- Kesinlikle katılıyorum

	Kesinlikle katılmıyorum				**Kesinlikle katılıyorum**
1. Eğer partnerim başka bir adama hayranlık duysaydı, bundan rahatsız olurdum.	1	2	3	4	5
2. Eğer yabancı bir adam partnerimi arasaydı endişelenmez ya da şüphelenmezdim.	1	2	3	4	5
3. Partnerimin söylediği yerde olup olmadığını anlamak için sıklıkla kontrol ederim.	1	2	3	4	5

	Kesinlikle katılmıyorum				**Kesinlikle katılıyorum**
4. Partnerim kazara beni yanlış isimle çağırsaydı bunu önemsemezdim.	1	2	3	4	5
5. Partnerimin nerede olduğu ya da o sırada ne yaptığıyla ilgili nadiren endişelenirim.	1	2	3	4	5
6. Partnerimin eski erkek arkadaşlarının kusurlarını bulmaktan hoşlanırım.	1	2	3	4	5
7. Eğer partnerimin başka bir adamla ilgilendiğini düşünseydim, çok üzülürdüm.	1	2	3	4	5
8. Partnerim çekici bir yabancı ile konuştuğunda kendimi o adama göre daha aşağı nitelikte hissederdim.	1	2	3	4	5
9. Partnerimi başka bir adama kaptıracağım diye sık sık endişelenirim.	1	2	3	4	5
10. Eğer partnerim başka bir adama kur yapsaydı bu beni rahatsız etmezdi.	1	2	3	4	5
11. Eğer partnerim başka bir adamla yakınlaşırsa onun adına mutlu olurum.	1	2	3	4	5

	Kesinlikle katılmıyorum				**Kesinlikle katılıyorum**
12. Eğer partnerimin başka bir sevgilisi olduğunu ve onunla görüştüğünü düşünseydim, kızgın ya da incinmiş hissederdim.	1	2	3	4	5
13. Eğer partnerim başka bir adamla dışarı çıksaydı oldukça üzülürdüm.	1	2	3	4	5

APPENDIX F

Marlowe-Crown Social Desirability Scale

(Marlowe-Crowne Sosyal Güvenilirlik Ölçeği)

MARLOWE-CROWN SOSYAL BEĞENİLİRLİK ÖLÇEĞİ

Kişisel Davranış Envanteri

Aşağıda kişisel tutum ve özelliklerle ilgili bazı cümleler sıralanmıştır. Her birini okuyarak sizin için uygun olup olmadıklarını, **doğru** ya da **yanlış** şıklarından birini işaretleyerek belirtiniz.

1. Oy vermeden önce tüm adayların niteliklerini araştırırım.
   Doğru [ ] **Yanlış [ ]**
2. Başı dertte olan birine yardım etmek için elimden geleni yapmakta hiçbir . zaman tereddüt etmem.
   Doğru [ ] **Yanlış [ ]**
3. Bazen, biri beni cesaretlendirmediğinde yaptığım işe devam etmek benim için güçtür.
   Doğru [ ] **Yanlış [ ]**
4. Birinden aşırı derecede hoşlanmadığım bir durum hiç olmadı.
   Doğru [ ] **Yanlış [ ]**
5. Zaman zaman hayatta başarılı olabileceğime dair şüphelerim oldu.
   Doğru [ ] **Yanlış [ ]**
6. İşler istediğim gibi gitmediği zaman bazen kızgınlık duyarım.
   Doğru [ ] **Yanlış [ ]**
7. Giyimime her zaman özen gösteririm.
   Doğru [ ] **Yanlış [ ]**
8. Evde yemek yerken dışarıda bir lokantada yemek yermiş gibi sofra adabına. özen gösteririm**.**
   Doğru [ ] **Yanlış [ ]**
9. Bilet almadan bir sinemaya girebileceğimi bilsem ve yakalanmayacağımdan emin olsam sanırım bunu yapardım.
   Doğru [ ] **Yanlış [ ]**

10. Birkaç kez yeteneklerimi fazlaca küçümseyip yaptığım işten vazgeçtiğim oldu.

Doğru [ ] **Yanlış [ ]**

11. Bazen dedikodu yapmak hoşuma gider.

Doğru [ ] **Yanlış [ ]**

12. Haklı olduklarını bildiğim halde, otorite konumundaki insanlara isyan etmek istediğim zamanlar oldu.

Doğru [ ] **Yanlış [ ]**

13. Karşımdaki kim olursa olsun, her zaman iyi bir dinleyiciyimdir.

Doğru [ ] **Yanlış [ ]**

14. Bir işin içinden sıyrılmak için 'hasta numarası' yaptığımı hatırlıyorum.

Doğru [ ] **Yanlış [ ]**

15. Birini kullanıp ondan yararlandığım durumlar olmuştur.

Doğru [ ] **Yanlış [ ]**

16. Bir yanlış yaptığımda bunu kabul etmeye her zaman razıyımdır.

Doğru [ ] **Yanlış [ ]**

17. Her zaman başkalarına yapmalarını söylediğim şeyleri kendim de uygulamışımdır.

Doğru [ ] **Yanlış [ ]**

18. Ağzı kalabalık, pervasız kişilerle geçinmenin özellikle zor olduğunu düşünmüyorum.

Doğru [ ] **Yanlış [ ]**

19. Bazen unutmak ve bağışlamak yerine karşımdakiyle ödeşmeye çalışırım.

Doğru [ ] **Yanlış [ ]**

20. Eğer bir şeyi bilmiyorsam bunu kabul etmek benim için hiç de zor olmaz.

Doğru [ ] **Yanlış [ ]**

21. Aksi insanlara karşı dahi her zaman nazik davranırım.

Doğru [ ] **Yanlış [ ]**

22. İşlerin ille de benim istediğim şekilde olması için ısrar ettiğim zamanlar oldu.

Doğru [ ] Yanlış [ ]

23. Birşeyleri kırıp dökmek istediğim zamanlar oldu.

Doğru [ ] Yanlış [ ]

24. Bir başkasının benim yaptığım bir yanlış yüzünden cezalandırılmasına asla izin vermem.

Doğru [ ] Yanlış [ ]

25. Yapılan bir iyiliğin karşılığı istendiğinde hiç kızmam.

Doğru [ ] Yanlış [ ]

26. İnsanlar, benimkilerden çok farklı görüşler dile getirdiklerinde hiçbir zaman kızmadım.

Doğru [ ] Yanlış [ ]

27. Arabamın güvenli olup olmadığını kontrol etmeden asla yola çıkmam.

Doğru [ ] Yanlış [ ]

28. Başkalarının şansını çok kıskandığım zamanlar oldu.

Doğru [ ] Yanlış [ ]

29. Hemen hemen hiçbir zaman birini azarlama isteği duymadım.

Doğru [ ] Yanlış [ ]

30. Bazen, benden iyilik isteyen insanlara sinirlenirim.

Doğru [ ] Yanlış [ ]

31. Hiçbir zaman haksız yere cezalandırıldığım hissine kapılmadım.

Doğru [ ] Yanlış [ ]

32. Bazeni şansları yaver gitmeyen insanların bunu haketmiş olduklarını düşünürüm.

Doğru [ ] Yanlış [ ]

33. Hiçbir zaman kasıtlı olarak birinin duygularını incitecek birşey söylemedim.

Doğru [ ] Yanlış [ ]

Appendix G

Experiences in Close Relationships Scale

(Yakın İlişkilerde Yaşantılar Envanteri)

Aşağıdaki maddeler romantik ilişkilerinizde hissettiğiniz duygularla ilintilidir. Bu araştırma ilişkinizde yalnızca şu anda değil, ***genel olarak*** neler olduğuyla ya da neler yaşadığınızla ilgilenmektedir. Maddelerde sözü geçen ***"birlikte olduğum kişi"*** ifadesi ile romantik ilişkide bulunduğunuz kişiler kastedilmektedir. Her bir madde için, yanındaki çizgili bölüme ne kadar katılıp katılmadığınızı, size uygun olan rakamı **yuvarlak içine alarak** belirleyiniz.

1----------2----------3----------4----------5----------6----------7

Hiç katılmıyorum	**Kararsızım/ fikrim yok**	**Tamamen katılıyorum**

1.	Gerçekte ne hissettiğimi birlikte olduğum kişiye göstermemeyi tercih ederim.	**1---2---3---4---5---6---7**
2.	Terk edilmekten korkarım.	**1---2---3---4---5---6---7**
3.	Romantik ilişkide olduğum kişilere yakın olmak konusunda çok rahatımdır.	**1---2---3---4---5---6---7**
4.	İlişkilerim konusunda çok kaygılıyım.	**1---2---3---4---5---6---7**
5.	Birlikte olduğum kişi bana yakınlaşmaya başlar başlamaz kendimi geri çekiyorum.	**1---2---3---4---5---6---7**
6.	Romantik ilişkide olduğum kişilerin beni, benim onları umursadığım kadar umursamayacaklarından korkarım.	**1---2---3---4---5---6---7**
7.	Romantik ilişkide olduğum kişi çok yakın olmak istediğinde rahatsızlık duyarım.	**1---2---3---4---5---6---7**
8.	Birlikte olduğum kişiyi kaybedeceğim diye oldukça kaygılanırım.	**1---2---3---4---5---6---7**
9.	Birlikte olduğum kişilere açılmakta kendimi rahat hissetmem.	**1---2---3---4---5---6---7**

1----------2----------3----------4----------5----------6----------7

Hiç katılmıyorum	**Kararsızım/ fikrim yok**	**Tamamen katılıyorum**

10. Çoğunlukla, birlikte olduğum kişinin benim için hissettiklerinin, benim onun için hissettiklerim kadar güçlü olmasını arzularım.	**1---2---3---4---5---6---7**
11. Birlikte olduğum kişiye yakın olmak isterim, ama sürekli kendimi geri çekerim.	**1---2---3---4---5---6---7**
12. Genellikle birlikte olduğum kişiyle tamamen bütünleşmek isterim ve bu bazen onları korkutup benden uzaklaştırır.	**1---2---3---4---5---6---7**
13. Birlikte olduğum kişilerin benimle çok yakınlaşması beni gerginleştirir.	**1---2---3---4---5---6---7**
14. Yalnız kalmaktan endişelenirim.	**1---2---3---4---5---6---7**
15. Özel duygu ve düşüncelerimi birlikte olduğum kişiyle paylaşmak konusunda oldukça rahatımdır.	**1---2---3---4---5---6---7**
16. Çok yakın olma arzum bazen insanları korkutup uzaklaştırır.	**1---2---3---4---5---6---7**
17. Birlikte olduğum kişiyle çok yakınlaşmaktan kaçmaya çalışırım.	**1---2---3---4---5---6---7**
18. Birlikte olduğum kişi tarafından sevildiğimin sürekli ifade edilmesine gereksinim duyarım.	**1---2---3---4---5---6---7**
19. Birlikte olduğum kişiyle kolaylıkla yakınlaşabilirim.	**1---2---3---4---5---6---7**

1----------2----------3----------4----------5----------6----------7

Hiç katılmıyorum	**Kararsızım/ fikrim yok**	**Tamamen katılıyorum**

20. Bazen birlikte olduğum kişileri daha fazla duygu ve bağlılık göstermeleri için zorladığımı hissederim.	**1---2---3---4---5---6---7**
21. Birlikte olduğum kişilere güvenip dayanma konusunda kendimi rahat bırakmakta zorlanırım.	**1---2---3---4---5---6---7**
22. Terk edilmekten pek korkmam.	**1---2---3---4---5---6---7**
23. Birlikte olduğum kişilere fazla yakın olmamayı tercih ederim.	**1---2---3---4---5---6---7**
24. Birlikte olduğum kişinin bana ilgi göstermesini sağlayamazsam üzülür ya da kızarım.	**1---2---3---4---5---6---7**
25. Birlikte olduğum kişiye hemen hemen herşeyi anlatırım.	**1---2---3---4---5---6---7**
26. Birlikte olduğum kişinin bana istediğim kadar yakın olmadığını düşünürüm.	**1---2---3---4---5---6---7**
27. Sorularımı ve kaygılarımı genellikle birlikte olduğum kişiyle tartışırım.	**1---2---3---4---5---6---7**
28. Bir ilişkide olmadığım zaman kendimi biraz kaygılı ve güvensiz hissederim.	**1---2---3---4---5---6---7**
29. Birlikte olduğum kişilere her zaman güvenip dayanmakta rahatımdır.	**1---2---3---4---5---6---7**
30. Birlikte olduğum kişi istediğim kadar yakınımda olmadığında kendimi engellenmiş hisseder sıkıntı duyarım.	**1---2---3---4---5---6---7**

1----------2----------3----------4----------5----------6----------7

Hiç katılmıyorum	**Kararsızım/ fikrim yok**	**Tamamen katılıyorum**

31. Birlikte olduğum kişilerden teselli, öğüt ya da yardım istemekten rahatsız olmam.	**1---2---3---4---5---6---7**
32. İhtiyaç duyduğumda, birlikte olduğum kişiye ulaşamazsam kendimi engellenmiş hisseder sıkıntı duyarım.	**1---2---3---4---5---6---7**
33. İhtiyacım olduğunda birlikte olduğum kişiden yardım istemek işe yarar.	**1---2---3---4---5---6---7**
34. Birlikte olduğum kişiler beni onaylamadıkları zaman kendimi gerçekten kötü hissederim.	**1---2---3---4---5---6---7**
35. Rahatlama ve güvencenin yanısıra birçok şey için birlikte olduğum kişiyi ararım.	**1---2---3---4---5---6---7**
36. Birlikte olduğum kişi benden ayrı zaman geçirdiğinde içerlerim.	**1---2---3---4---5---6---7**

Appendix H

Sibling Relationships Scale

(Kardeş İlişkileri Ölçeği)

KARDEŞ İLİŞKİLERİ ÖLÇEĞİ

Aşağıda kardeş ilişkilerini tanımlayan bazı cümleler bulacaksınız. Lütfen her cümleyi dikkatle okuyun ve o cümlenin **siz çocukken** kardeşinizle/ağabeyinizle/ablanızla olan ilişkinize ne kadar uyduğunu 1'den 5'e kadar bir sayıyı yuvarlak içine alarak belirtin.

(1= bana hiç uymuyor, 5= bana tam olarak uyuyor).

	Hiç uymuyor				**Tam olarak uyuyor**
1. Annem kardeşime daha çok ilgi gösterirdi[a].	1	2	3	4	5
2. Evimize misafir geldiğinde kardeşimden önce yanlarına oturur, onların dikkatini çekmeye çalışırdım[b].	1	2	3	4	5
3. Kardeşim beni çok kıskanırdı[a].	1	2	3	4	5
4. Babamın sadece benim olmasını isterdim[a].	1	2	3	4	5
5. Kardeşimle birbirimize kötü davranırdık[c].	1	2	3	4	5
6. Kardeşimin annemle, benim annemle geçirdiğimden daha fazla vakit geçirmesi beni rahatsız etmezdi. (-)	1	2	3	4	5
7. Genellikle kardeşime çeşitli isimler takar, bunları etrafta yayar ya da insanların yanında onunla dalga geçerdim[b].	1	2	3	4	5
8. Gerek olmasa dahi sırf kardeşimi annem ve babamla yakınlaşmasını önlemek için anne ve babamın dikkatini çekmeye çalışırdım[b].	1	2	3	4	5

[a] Çavdar (2003)
[b] Cattell (1953)
[c] Furman & Buhrmester (1985), Buhrmester & Furman (1990)

	Hiç uymuyor				**Tam olarak uyuyor**
9. Babamın kardeşime ilgi göstermesi, annemin kardeşime ilgi göstermesinden daha rahatsız ediciydi[a].	1	2	3	4	5
10. Kardeşimi çok kıskanırdım[a].	1	2	3	4	5
11. Babam yanlış hareketlerimizden dolayı kardeşimden çok beni cezalandırırdı[d].	1	2	3	4	5
12. Annem benden daha çok kardeşimle bir şeyler yapmaktan hoşlanırdı[d].	1	2	3	4	5
13. Kardeşimin dikkat çekme amaçlı yaptığını düşündüğüm davranışlarına göz yumar ve karşılığında ben de dikkat çekmeye çalışmazdım[b]. **(-)**	1	2	3	4	5
14. Annem ve babam sürekli olumsuz bir şekilde kardeşimle beni yeteneklerimiz açısından karşılaştırarak beni üzerlerdi.	1	2	3	4	5
15. Kardeşimin olası cezalardan kaçmaması için elimden geleni yapardım[b].	1	2	3	4	5
16. Kardeşim birçok konuda hep benden daha fazlasını elde etmek isterdi.	1	2	3	4	5
17. Annem kardeşimin düşüncelerine ve hislerine benimkilerden daha fazla önem verirdi[d].	1	2	3	4	5
18. Kardeşimle sıklıkla birbirimize kızar ve tartışmaya girerdik[c].	1	2	3	4	5

[d] Daniels & Plomin (1985)
The remaining items are designed by the researcher.

	Hiç uymuyor				**Tam olarak uyuyor**
19. Babamın kardeşime ilgi göstermesi beni rahatsız etmezdi. (-)	1	2	3	4	5
20. Ben ve kardeşim çok fazla birşeyleri birbirimizden daha iyi yapmaya çalışırdık[c].	1	2	3	4	5
21. Kardeşim herhangi bir konuda üstün performans göstererek anne ve babamın dikkatini çekerse hasta olmuş numarası yapardım[b].	1	2	3	4	5
22. Beni kardeşimle kıyaslamaları ya da onunla benzerliklerimizden bahsetmeleri beni rahatsız etmezdi. (-)	1	2	3	4	5
23. Babam kardeşimin yaptıklarıyla benim yaptıklarımdan daha fazla gurur duyardı[d].	1	2	3	4	5
24. Kendi yakın arkadaşlarımla kardeşimin yakınlaşmasını engellemek için elimden geleni yapardım[b].	1	2	3	4	5
25. Annemin kardeşime ilgi göstermesi, babamın kardeşime ilgi göstermesinden daha rahatsız ediciydi[a].	1	2	3	4	5
26. Çoğunlukla anne ve babama birçok konuda kardeşime benden daha farklı davrandıklarını söylerdim[b].	1	2	3	4	5
27. Beni övdüklerinde kardeşim çoğunlukla karşı çıkardı ve karşıt yorumlarda bulunurdu.	1	2	3	4	5
28. Kardeşimi geçmek için çaba gösterirdim[a].	1	2	3	4	5
29. Annemin sadece benim olmasını isterdim[a].	1	2	3	4	5
30. Kardeşimle pek kavga etmezdik. (-)	1	2	3	4	5

	Hiç uymuyor				**Tam olarak uyuyor**
31. Babam kardeşimle ilgilenirken ilgisini çekmek için çaba gösterirdim[a].	1	2	3	4	5
32. Annem ve babam beni cezalandırdığında bunun acısını genellikle kardeşimden çıkarır, örneğin sinirimden ona vururdum[b].	1	2	3	4	5
33. Babam çoğunlukla kardeşime daha iyi davranırdı[c].	1	2	3	4	5
34. Kardeşimle sıklıkla birbirimizi kızdırır ve birbirimizle uğraşırdık[c].	1	2	3	4	5
35. Annem kardeşimle ilgilenirken ilgisi çekmek için çaba gösterirdim[a].	1	2	3	4	5
36. Kardeşimin babamla, benim babamla geçirdiğimden daha çok vakit geçirmesi beni rahatsız etmezdi. (-)	1	2	3	4	5
37. Kardeşim hep benimle yarışırdı.	1	2	3	4	5
38. Annem, babam ve kardeşim arasındaki tartışmalarda annem ve babamın tarafını tutardım[b].	1	2	3	4	5
39. Kardeşim yüzünden annemin bana daha az ilgi gösterdiğini düşünürdüm[a].	1	2	3	4	5
40. Annem ve babam evde yokken kardeşime saldırır ve onlara eve geldiklerimde herşeyi kardeşimin başlattığını söylerdim[b].	1	2	3	4	5
41. Babam kardeşime daha çok ilgi gösterirdi[a].	1	2	3	4	5
42. Davranışlarımın annem ve babam tarafından sürekli kardeşimle kıyaslanması beni üzerdi[b].	1	2	3	4	5

	Hiç uymuyor	**Tam olarak uyuyor**
43. Annem benimle ilgilenirken kardeşim ilgisini çekmek için çaba gösterirdi.	1	2 3 4 5
44. Birçok konuda hep kardeşimden daha fazlasını elde etmek isterdim[b].	1	2 3 4 5
45. Babam kardeşimin düşüncelerine ve hislerine benimkilerden daha fazla önem verirdi[d].	1	2 3 4 5
46. Kardeşimle annem, annemle benim olduğumdan daha yakındı[a].	1	2 3 4 5
47. Kardeşimi hiçbir konuda geçmeye çalışmazdım. (-)	1	2 3 4 5
48. Kardeşim yüzünden babamın bana daha az ilgi gösterdiğini düşünürdüm[a].	1	2 3 4 5
49. Babam benimle ilgilenirken kardeşim ilgisini çekmek için çaba gösterirdi[b].	1	2 3 4 5
50. Kardeşimle saçma ve önemsiz konulardan çok rahatlıkla tartışma çıkarabilirdim[b].	1	2 3 4 5
51. Annemin kardeşime ilgi göstermesi beni rahatsız etmezdi. (-)	1	2 3 4 5
52. Babam benden daha çok kardeşimle birşeyler yapmaktan hoşlanırdı[d].	1	2 3 4 5
53. Kardeşimin dikkat çekmesine neden olabileceğini düşündüğüm şeylere, örneğin benden daha güzel yaptığını düşündüğüm resim ya da elişlerine zarar verirdim[b].	1	2 3 4 5
54. Annem yanlış hareketlerimizden dolayı kardeşimden çok beni cezalandırırdı[d].	1	2 3 4 5

	Hiç uymuyor	**Tam olarak uyuyor**
55. Kardeşimle babam, babamla benim olduğumdan daha yakındı[a].	1____2____3____4____5	
56. Kardeşimi övdüklerinde çoğunlukla karşı çıkardım ve karşıt yorumlarda bulunurdum[b].	1____2____3____4____5	
57. Annem kardeşimin yaptıklarıyla benim yaptıklarımdan daha fazla gurur duyardı[d].	1____2____3____4____5	
58. Hiç sebep yokken kardeşimle kavga çıkarırdım[a].	1____2____3____4____5	
59. Annem ve babam kardeşimle beni başarılarımız açısından karşılaştırıp beni üzerlerdi.	1____2____3____4____5	
60. Annem çoğunlukla kardeşime daha iyi davranırdı[c].	1____2____3____4____5	