EXPLORING IMPLICIT PROCESSES IN ADULT PSYCHOTHERAPY THROUGH MICRO ANALYSIS OF NONVERBAL SYNCHRONY

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ABSTRACT

EXPLORING IMPLICIT PROCESSES IN ADULT PSYCHOTHERAPY THROUGH MICRO ANALYSIS OF NONVERBAL SYNCHRONY

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The goal of the study was to explore implicit processes in adult face-to-face psychotherapy sessions based on microanalysis of nonverbal synchrony between psychotherapy dyads. Sample 1 included 6 different same-sex gender psychotherapy dyads who were blind to the study's purposes. The total number of the short-term psychotherapy sessions in Sample 1 was 97. Sample 2 included 2 psychotherapy dyads both of whom therapist was the present researcher. Thirty-four psychotherapy sessions were conducted in Sample 2. Coordinated interaction units were calculated by using Motion Energy Analysis (Ramseyer & Tschacher, 2011; Ramseyer, 2018). To see the patterns in nonverbal exchanges, the microanalysis (i.e., at second by second level) of these coordinated interaction units (n = 210 of total 250 in Sample 1, and n = 55 of total 111 in Sample 2) were coded by the researcher via content analysis on the communication dimensions. Content analysis results about self regulatory dynamics revealed *focusing*, *facial emotional expressiveness*, *self-regulatory behaviors*, *displacements of selfobject needs*, and *affirmativeness* categories. Interactive regulation dynamics were found as *interactive regulations, interactive dysregulations, rupture,* and *repairs*, and *heightened affective moments*. In terms of the outcomes of the psychotherapy

processes, it can be stated that synchronizing head movements might help the therapists to enter into patients' experience. This dissertation is the first study testing the analogy of mother-infant interactions with adult psychotherapy by combining computerized assessment of nonverbal head synchrony with content analysis of coordinated interaction units via video recordings of the sessions.

Keywords: Motion Energy Analysis, nonverbal synchrony in adult psychotherapy, coordinated interaction units, self and interactive regulation, contemporary psychoanalysis

ÖZ

YETİŞKİN PSİKOTERAPİSİNDEKİ ÖRTÜK SÜREÇLERİN SÖZEL OLMAYAN SENKRONUN MİKRO ANALİZİ İLE KEŞFEDİLMESİ

Cihan, Burçin

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Bu tez, temel olarak, anne-bebek ilişkisinde sözel olmayan etkileşimler ile yetişkin-yüz yüze psikoterapisinde sözsüz iletişim arasındaki analojiyi, çağdaş psikanalitik teorilerin (psikanalitik kendilik psikolojisi, ikili sistem iletişim anlayışı ve bağlanma teorisine dayanan gelişimsel psikanaliz çerçevesinde) test etmeyi amaçlamaktadır.) Çalışmanın amacı, yetişkin yüz yüze psikoterapisindeki örtük süreçleri araştırmaktır. Örneklem 1, çalışmanın amaçlarına kör olan 6 farklı psikoterapi çiftini içermektedir. Örneklem 1'deki toplam psikoterapi seansı sayısı 97'dir. Örneklem 2, araştırmacının terapist olduğu 2 psikoterapi çiftinden oluşmaktadır. Örneklem 2'de otuz dört psikoterapi seansı (her bir çift için haftada 17 seans) gerçekleştirilmiştir. Koordineli etkileşim birimleri, Hareket Enerji Analizi (Ramseyer ve Tschacher, 2011; Ramseyer, 2018) ile hesaplanmıştır. Sözel olmayan değişimlerdeki kalıpları görmek için, bu koordineli etkileşim birimlerinin mikroanalizi (Örneklem 1'de toplam 250'nin, n = 210'u ve Örnek 2'de toplam 250'nin n = 55'i) içerik analizi yapılmıştır. Kendini düzenleme dinamiklerine ilişkin sonuçlar, odaklanmayı, yüzdeki duygusal ifadeciliği, kendini düzenleme davranışlarını, kendiliknesnesi ihtiyaçlarının yer değiştirmesini ve affirmativeness kategorilerinin bulgulandığını göstermiştir. Etkileşimli/karşılıklı düzenleme

dinamikleri ise etkileşimli düzenlemeler, etkileşimli düzensizlikler, kırılma ve onarımlar ve belirgin duygusal anlar olarak bulunmuştur. Bu çalışmanın sonuçlarına göre, psikoterapi süreçlerinin sonuçları açısından, kafa hareketlerini senkronize etmenin terapistlerin hastaların deneyimine girmesine yardımcı olabileceği söylenebilir. Bu tez çalışmasının öne çıkan bir özelliği, sözel olmayan kafa senkronizasyonunun bilgisayarlı değerlendirmesini, oturumların video kayıtlarıyla koordine edilmiş etkileşim birimlerinin içerik analizi ile birleştirerek erişkin psikoterapiyle anne-bebek etkileşimlerinin analojisini test eden ilk çalışma olmasıdır.

Anahtar Kelimeler: Hareket Enerjisi Analizi, yetişkin psikoterapisinde sözel olmayan senkronizasyon, koordineli etkileşim birimleri, kendini ve etkileşimli düzenleme, çağdaş psikanaliz

To Patients and Therapists in This Study

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CHAPTER 1

INTRODUCTION

"Knowing without knowing that they know, seeing without knowing that they see"

Yaşar Kemal; İnce Memed

Yaşar Kemal (1955), one of the famous writers in Turkish literature, defines ordinary people's decision making process by saying "Knowing without knowing that they know, seeing without knowing that they see". He emphasizes the importance of the implicit processes as being the wisdom behind making right decisions. Similarly, in psychotherapy practices, psychotherapists behave according to their intuitions formed by recalled memories, unexplained emotional arousals, or bodily experiences. That's not to say that the psychotherapy practice has an unscientific methodology. Recently, in the framework of contemporary psychoanalytic theories, there have been psychotherapy process researches exploring implicit, procedural, and nonconscious aspects of the interactions within a therapy dyad. The following illustration may make it easier to understand how implicit processes work in psychotherapy practice. While looking at the left panel of the illustration, if someone focuses on the white part of the picture, she sees a gorilla and a tiger looking at each other; however, if someone focuses on the black part of the picture, she sees a big tree and some flying birds. Similarly, the psychotherapy practice is considered as being conducted on the foreground of verbal communication comprising explicit, speaking, and listening processes (presented with the white Venn diagram on the right panel of the illustration) and on the background of nonverbal communication comprising implicit, procedural,

and emotional processes (presented with the black Venn diagram on the right panel of the illustration). It is impossible to separate the two processes from each other while exploring the dynamics of the interactions within a therapy dyad.

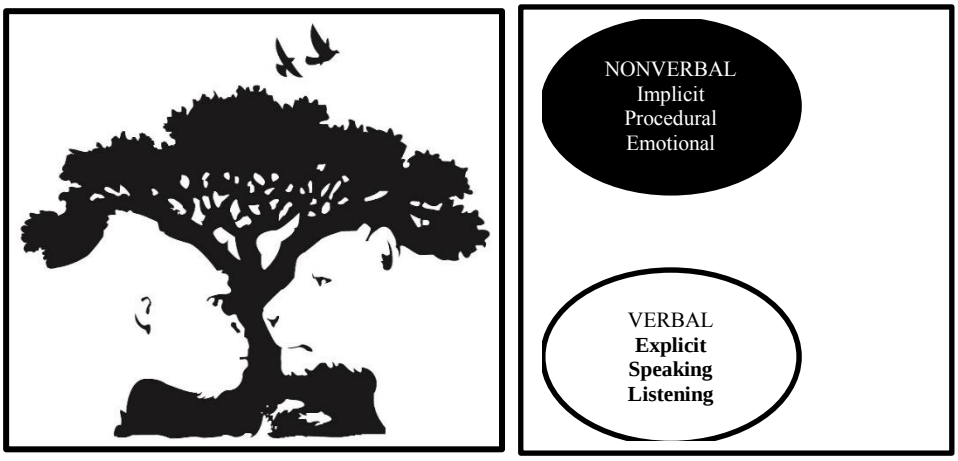

Figure 1. How implicit processes work in psychotherapy practice

Nonetheless, in psychotherapy's practice and education, the nonverbal aspects of the relationship are mostly ignored due to the lack of equipment for observation, and the time consuming and excessive labor needs to analyze the dynamics. Besides, there is an important problem in studying the nonverbal processes in psychotherapy which is establishing well-defined theoretical concepts to explore the c6omplex implicit and procedural dimensions of communication.

One of the ways of empirically studying the implicit processes is to apply the theoretical assumptions of studies to mother-infant interaction before the language development of the infant. It is believed that due to the predefined roles of the therapist (providing help) and the patient (seeking help), the roles in a psychotherapeutic relationship are asymmetrical (as it is in a mother-infant relationship). Particularly, therapists function as a selfobject according to the psychoanalytic self psychology (Kohut, 1971, 1977, 1984). Selfobject needs of the patient are remobilized during the therapy process and are expected to be met in an

emotionally secure bond between the therapist which occurs at both verbal and nonverbal interactions.

An analogy is created to express the resemblance between the mother-infant nonverbal interactions (which are responsible for the infant's further secure attachment, emotion regulation, and self; Stern, 1974; Tronick, 1989; Beebe & Lachmann, 2014), and the implicit processes in adult therapy. This resemblance has been stressed in various papers and case reports (e.g., Boston Change Process Study Group, 1998a, 1998b, 1998c, 1999, 2002, 2007, 2012); however, there is only a limited number of empirical studies investigating this subject. Therefore, this dissertation aims to investigate the nonverbal, nonconscious, and procedural features of adult face-to-face therapy in a broader framework of contemporary psychoanalytic theories, particularly psychoanalytic self psychology. In the introduction part, the psychoanalytic self psychology will be described with respect to the development of self and selfobject needs, and its resemblance with attachment theory will be presented. Next, principles of mother-infant interactions before language development of infant on the basis of bipolar model of self- and interactive regulation models will be defined to point out the dynamics of secure attachment resulting from healthy selfobject interactions. Following that, some studies on interpersonal synchrony in adult psychotherapy will be summarized. Then, assessment of nonverbal interaction will be provided. Finally, aims and hypotheses of the present dissertation will be presented.

1.1.Psychoanalytic Self Psychology

Psychoanalytic self psychology is one the therapy approaches of contemporary psychoanalysis, in which it is claimed that *two-person* interactions motivate and organize relationships in psychotherapy dyads. Dynamics of a therapeutic relationship are shaped by the unique contributions of the patient and the therapist. Each side forms an emotional bond based on his/her own subjectivity.

Historical background of psychoanalytic theory according to Kohut is based on three periods (Siegel, 1996). The first period of psychoanalysis (1890-1920)

includes Freud's interest in id, unconsciousness, and infantile sexuality. In the second period (1920-1937), structural perspective (i.e., tripartite model), nature of id, ego, and superego and their relationships with each other are conceptualized. The third period (1937-1958) is dominated by ego psychology to understand the structure, functions, and defenses of ego. Kohut, one of the leading figures of contemporary theories, has different conceptualizations and perspectives on psychotherapy from aforementioned classical theories.

Kohut's (1971, 1977, 1984; Siegel, 1996) basic criticism to classical psychoanalytic theory was on Freud's efforts to understand the mechanisms of human behavior based on other sciences such as biology (i.e., sexual or aggressive drives) and physics (i.e., vectors, mechanics, and hydrodynamics). Kohut, on the other hand, suggested that concepts originating from real experiences should be used. This is known as "*experience-near*" in the terminology of Kohutian psychoanalysis. Another fundamental difference between Kohut and Freud was Kohut's focus on the impacts of environment (i.e., others) on the establishment of psychological structures. This brings one to a paradigm shift from one-person psychology to two-person psychology, which is a definitive feature of contemporary psychoanalysis. Thus, it can be concluded that human behaviors are not only originated from a human's own inner world, but also most are shaped in relational world (Kohut, 1971, 1977, 1984; Siegel, 1996).

A healthy, stable and cohesive self consisted of healthy grandiosity, idealization, stability, security, and self-regulation is the result of relationships with selfobjects who are available, empathic, and responsive during infant's developments. *Selfobject* environment is the relational world of developing infant and of patient in psychotherapy (Kohut, 1971, 1977, 1984; Siegel, 1996). Selfobject is another person external to self, that is expected to fulfill selfobject needs. Selfobject needs and experiences are categorized under three groups as mirroring, idealization, and twinship. In mirroring needs, selfobject is expected to see, confirm and respond to grandiosity needs of child. If mirroring needs are adequately satisfied, positive and stable sense of self-worth, healthy ambitions, and assertiveness will develop. Child

wants to merge with the power of the idealizable selfobject and get directions from it. Being able to develop healthy goals, ideals, and values is an outcome of fulfillment of idealization needs. Twinship experiences and alter ego-connectedness are about sense of belonging, being connected with others and being accepted by others.

Psychological mechanism underlying fulfilling selfobject needs in the selfobject environment is called *transmuting internalization* process (Kohut, 1977). Due to *optimal frustrations* to meet the selfobject needs while having experiences with selfobjects, child learns to tolerate and regulate negative feelings caused by unmet selfobject needs. As time passes, child internalizes selfobject functions of selfobjects. In other words, child's self-regulation capacity is developed through the interactive regulation dynamics with the caregiver. Kohut's definition of development of self regulative functions associates self psychology theory with the attachment theory (Bowlby, 1969, 1973, 1980), which is also one of the regulatory theories (Banai, Mikulincer, & Shaver, 2005). In addition to this, recently, psychoanalytic self psychology is called as applied developmental psychology (Hartman, 2009), which has connections with attachment and mentalization theories. For instance, Banai, Mikulincer, and Shaver (2005) proposed a model to present the resemblance between hunger for/avodiance of selfobject needs and defensive attachment strategies. It was claimed that, an anxiously attached person/baby, who uses hyperactivating attachment system to get others' love and support, is similar to the desire for fulfillment of unmet selfobject needs. Similarly, a person with avoidant attachment uses deactivating attachment system to protect herself/himself from traumatic interactions with caregivers, and this resembles ignoring and avoiding fulfillment of unmet selfobject needs. Nonetheless, it is believed that during the interaction with caregiver, the infant is not a passive receiver of the caregiving manners of her parents. Infants are active during the interactions with their caregivers (e.g., Murray & Trevarthen, 1986) according to their unique biological tendencies for reactivity (individuals' reactions to change in environment; somatic, endocrine, and autonomous nervous systems) and inborn

self-regulation capacity (management of reactivity; e.g., attentional and behavioral patterns of approach and avoidance) (Rothbarth & Derrybery, 1981). Consequently, there should be an integrative perspective to explore dynamics of interactions between two separate systems (mother-infant).

One of the approaches of this dyadic system is established by Bebee and Lachmann (1998) to understand healthy development of infant before language development. In their bipolar model of self- and interactive regulation, the quality of the nonverbal coordination between mother-infant interaction creates infant's further secure attachment. They proposed principles of mother infant interactions which is also considered as being valid in adult-adult face to face interactions.

1.2.Principles of Mother-Infant Interactions Before Language Development of Infant

Beebe and Lachmann (2014) claimed that in mother-infant and adult-adult face to face interactions, each partner senses each other for a split-second out of awareness at procedural level. There are several manifestations of nonverbal communication. A few examples of these manifestations are bodily experiences, bodily arousal, somatic sensations, affective reactions, facial expressions, head orientation shifts, postural tonus, breathing rhythms, self-soothing, shifts in the chair, gaze, facial affect, vocal affect, intonation touch, engagement, spatial orientation and orientation, and narrative dialogue . Based on their studies, they suggested that nonverbal procedural "action-dialogue" helps the therapist to enter the patient's experience. Patient and therapist sense each other without words and modulate their emotional states according to each other.

According to the authors, the three elements of infant-mother interactions are a) *ongoing regulations,* b) *disruption and repair,* and c) *heightened affective moments* which catagorize the principles of making therapeutic actions as "salient and patterned".

1.1.1.Ongoing Regulations

The repeated interactions in the therapy that are unique and predictable for the therapist-patient dyad can be conceptualized as ongoing regulations. These interactions are co-created by each partner's momentary actions that are connected with time, space, affect, and arousal. Ongoing regulations can be understood in detail by investigating self- and interactive contingency concepts. Self contingency is the subjective evaluation of the person's degree of own impact on and responsiveness to the interactive efficacy and also his/her sense of self-predictability. It is not necessary to verbalize interactively organized expectations (e.g., nonresponse, indifference, or rejection) and disconfirmations (e.g., fears of being ignored, steamrollered, intruded upon, misunderstood, or criticized), they are represented and internalized via nonverbal exchanges. To be more precise, ongoing regulations can also occur at the nonconscious level. Nonverbal, procedural and presymbolic nature of self- and interactive contingency between infant and mother is valid for all patients. Interactive contingency can be explored by investigating the rhythm of sounds-silence, looking and looking-away, facial changes and facial pauses, and interactive regulation of attention in the dyad. For instance, an individual's degree of self-predictability of the *rhythm* can be *stabilized*, *over stabilized* or *liable* **(**Beebe & Lachmann, 2014; Lachmann & Beebe, 1996).

1.1.2.Disruption and Repair

The second principle that can be considered as a particular extension of the ongoing regulations principle is called disruption and repair. The function of this principle is to re-organize breakdowns in the expectations and to repair these ruptures. Disruptions should be in a continuum. Mild disruptions are likely to affect both developmental and therapeutic relationships in an undesirable way. Influences of the disruptions or ruptures are not independent from how (e.g, severe or mild), when (e.g., beginning of the treatment or session), and where (e.g., while confronting or explaining) they arise. Reparation of these disruptions increases flexibility of the therapy dyad. Beebe and Lachmann (2004) proposed that when the infant cannot

feel and experience being seen and recognized, there would be hidden traumas that are the outcomes of disconnection between infant and mother. In the context of mismatches and communication difficulties in adult treatment, these hidden traumas can be re-activated, especially when the mismatches are experienced by the therapist. Thus, the therapist should be aware of both his/her own and patient's shadows originating from early interactions with the caregiver. Patient would be sensitive to interactive mismatches depending on his/her unique relational problems experienced during his/her early interactions. While communicating, it is expected that nonverbal communication between patient and therapist is matched. Nonetheless, as presented in this section, it is possible that mismatches may occur via nonverbal exchanges within the dyad. For instance, the therapist may have a positive facial expression, while the patient has a neutral or a dampened one. The impact of the mismatches in terms of whether it will be soothing or panicking, depends on the scope of the mismatches (either optimal or nonoptimal) (Beebe & Lachmann, 2014; Lachmann & Beebe, 1996). As proposed by Kohut (1977), however, *traumatic* frustrations (e.g., rejections or losses) might lead the child to be too needy for selfobject needs. As a matter of fact, because of these traumatic experiences in selfobject relationship, selfobject needs can manifest themselves in archaic/immature forms in adulthood.

1.1.3.Heightened Affective Moments

It was claimed that an affectively alive environment is necessary for the patient/baby to be known, recognized, and seen. This affectively alive environment in therapy room has been studied under the topics of affective sharing, affective attunement or affect regulation in the contemporary psychoanalysis. It was provided that heightened affectivity which is a powerful emotional state, either positive or negative, may be experienced by both the therapist and the patient. When this happens, a dramatic transformation in the patient's state is expected. This transformation can show itself in different verbal or non-verbal actions (e.g., silence, humour, or verbal flow) and in a symbolic context. Content, timing or form of the heightened moments depend on the unique exchange within the given therapy dyad.

Having opportunities for new experiences, re-finding old loves, re-traumatization, self-regulation and mutual regulation are the outcomes of these emotionally intense and deep moments (Beebe & Lachmann, 2014; Lachmann & Beebe, 1996).

These three principles of mother-infant interaction in the framework of dyadic system view of Beebe and Lachmann (1996, 2004) have been empirically studied for years, whereas studies on nonverbal interactions in adult psychotherapy are very limited. One of the pioneering studies of Havas, Svatberg, and Ulvenes (2015) showed the influence of nonverbal attunement between therapists and patients on the improvements in the patients' attachment securities. Generally, the coordination between self- and interactive regulation features of interacting partners embodied in nonverbal communication is studied under the topics of nonverbal synchrony, interpersonal synchrony or embodiment communication in the current literature.

1.3.Interpersonal Synchrony in Adult Psychotherapy

In 2003, Tickle-Degnen and Gavett (2003) stated that there have been limited number of studies exploring the effects of nonverbal behaviors, which is a fundamental factor in intimate and cooperative human interactions, such as the bonding between the therapist and the patient is considered. They reviewed studies and reached a conclusion that the role of nonverbal behaviors in both psychotherapy bond and working alliance can be divided into three domains; namely, a) *attentiveness,* b) *positivity-negativity*, and c) *coordination*.

Impacts of these domains on the process are expected to be different at three different phases of the therapy. These phases are development of the rapport, the development of the working alliance, and the ongoing working relationship. For instance, nonverbal coordination immediately regulates the interpersonal interactions at the development of rapport phase, and then plays a role in the formation of the working atmosphere at the development of working alliance phase. Finally, nonverbal coordination affects interactions and synchrony within therapy dyad at the ongoing working alliance level.

Grounding on the non-linear dynamic systems theory, researchers from Switzerland have studied coordination dimension of nonverbal interactions within the therapy dyad as defined by Tickle-Degnen and Gavett (2003). Coordination of body movements of the patient and the therapist has been investigated as nonverbal synchrony in their studies. Their findings suggested that there is significantly more than expected nonverbal synchrony in successful therapy dyads.

The outcomes of their research involves a positive impact of nonverbal synchrony between the therapist and patient (Ramseyer &Tschacher, 2014; Ramseyer & Tschacher, 2011, Salvatore, Tschacher, Gelo, & Koch, 2015). Moreover, several macro and micro outcomes of the therapy process have been found which are related to different regions of the body. For instance, head synchrony was found to be associated with the overall therapy success, which means goal attainment and positive changes in the experiences and behaviors of the patient due to psychotherapy. Furthermore, body movement (including upper torso and hands) synchrony was found to be related with the session's success level evaluated by the post-session questionnaires designed for the therapy process (Ramseyer & Tschacher, 2014). Ramseyer and Tschacher (2014, 2011) studied on the same-sex dyads by taking only the comparability and standardization issues into account. They reported that mixed-gender dyads lead lower levels of synchrony.

Recently, a new model called "interpersonal synchrony model of psychotherapy" was suggested by Koole and Tschacher (2016). In this model (as shown in Figure 2), it was asserted that the neural activities of the patient and the therapist are matched with each other during the process. This match between brains manifests itself as a coordination and synchrony between their behaviors and expressions, and it leads to more positive therapy outcomes. Also, this synchrony helps to build a positive relationship within the dyad and improves the emotion regulation skills which is considered as an outcome of a successful treatment. I n their study, they defined three different timescales; 1) *phasic* (several milliseconds -10 seconds), 2) *tonic* (10 seconds – 1 hour), and 3) *chronic* (several weeks – years). Different levels

of cognitive features such as perceptual-motor processes (movement synchrony, inter-brain coupling), complex cognition (common language, I-sharing, and affective co-regulation), and emotion regulation (implicit and explicit) are detected at different timescales of the therapy process.

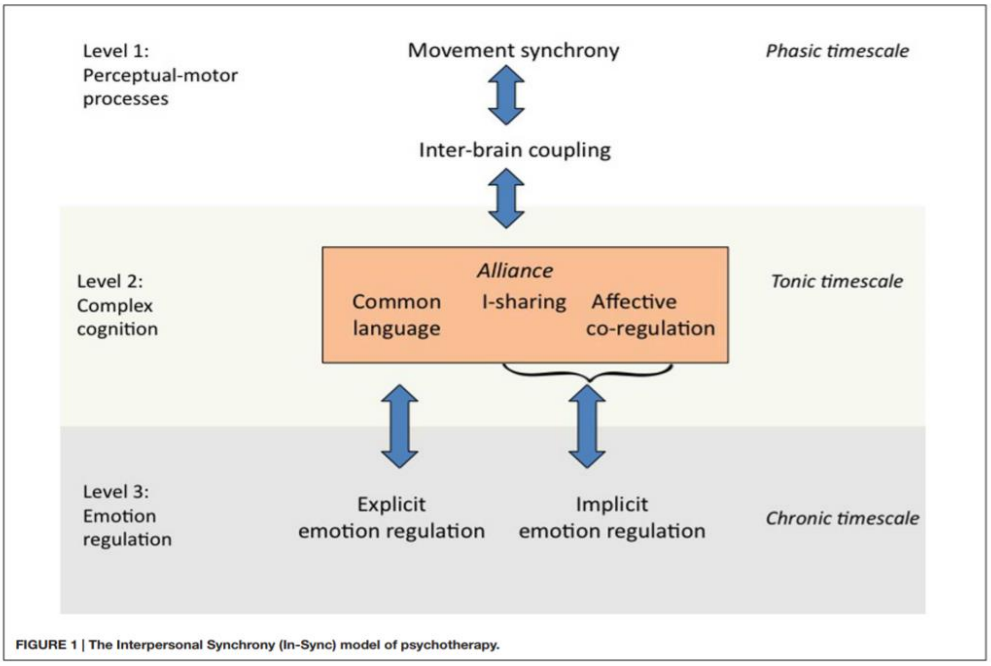

Figure 2. Koole and Tschacher (2016) interpersonal synchrony model in psychotherapy

Koole Tschacher's (2016) model is based on the work of one of the pioneer figures mother-infant studies, Daniel Stern (2004), who defined "present moments" and different types of consciousness conceptualizations. By "present moments", he intended to define a timescale that continues for 3-4 seconds. According to him, there are three types of consciousness in present moments. The first one corresponds to *phenomenal consciousnes*s, which is perceptually based. In this consciousness state, bodily sensations and simple perceptions are recorded by the patient. The second one is introspective consciousness, which is verbally based. In this state of consciousness, conscious experiences are represented at and became attached with symbolic and imagistic levels. For instance, content of talking during therapy requires introspective consciousness. The last form is intersubjective consciousness, which is socially based. In this state, two people mutually

experience the moment and co-create intersubjective consciousness either in a positive or negative form in relatively intense interactions (e.g., psychotherapy). To be more precise, there is an overlap between phenomenal consciousness of experiences and reflector of self's experiences. Also, implicit relational expectations of self and other resulting from experiences with earlier relationships with significant others influence the formation of intersubjective consciousness; and this is called implicit relational knowing, as well (Lyons-Ruths et al., 1998). It can be concluded that similar to mother-infant interaction, high-quality nonverbal coordination between interacting partners in adult psychotherapy may facilitate the positive improvements in intersubjective consciousness in psychotherapy process, and in implicit relational knowing or attachment security of the patients.

In the light of information presented above, it may not be wrong to say that theoretical conceptualizations of the quality of nonverbal coordination between interacting partners resulting from self- and interactive regulation dynamics are very complex to empirically study. However, in the current literature there have been different methods developed for the purpose of defining and assessing nonverbal synchrony, mutual attunement, or embodiment communication.

1.4.Assessment of Nonverbal Interaction

There are both computational and noncomputational ways of assessing nonverbal interaction in communication. Current literature includes various examples of both techniques, nonetheless within the scope of this study, only one example for each method will be provided.

To begin with the noncomputional way of assessing synchrony, it is coding analysis unit by trained raters. Beebe and Lachmann's coding method is trained observer coding. With this method based on the micro analysis of observable interactions between mother and infant, macro interpretations are made. The basic purpose of mother-infant interactive process in Bebee and Lachman's research (e.g., 2004) is to have mutual enjoyment (i.e., mothers were asked to play with their babies like they do at home, but without toys). Second-by-second investigations of

2.5 minutes interactions are coded. Coded communication modalities consist of attention, affect, orientation, and touch. Mother and infant are symmetrical to each other in terms of communication modalities; except mother's ability to move her hands and arms since the mother has more advantages compared to infant sitting on its baby-chair. Each communication modality is coded independent from each other for both the mother and the infant. Their results are presented in three different forms; a) real time, b) second-by-second, and c) expectations of both infant and mother.

Considering the time consuming aspects and being tiring for coders, it is advised that a psychotherapist can benefit from computerized tools for determining the synchrony (Delaherche, Chetouani, Mahdhaoui, Saint-Georger, Viaux, & Cohen, 2012). Thus, the second way of assessing nonverbal interaction in communication is computerized synchrony method. It is a *motion energy analysis program* (MEAP) developed by Ramseyer and Tschacher, (2011; Ramseyer, 2018) They use the split-screen method while analyzing head and body movements of both the patient and the therapist at one-minute interactions. For each one minute interval of the first 15 minutes of each session, the amount of head and body movements of the patient and the therapist are calculated. They analyzed only first 15 minutes of the sessions because psychotherapy dyad remained seated during these period only; during the rest of the sessions they left their chairs to use flip carts or other devices (Ramseyer & Tschcaher, 2014). In this method, pixel changes in a given region of interest (head and body movements for therapist and patient) in the greyscale image across time represent the amount of body movement (i.e., motion energy). Cross correlations between motion energy values of the patient and the therapist are calculated within $\pm$5 time lag. Aggregation of each 15 minute cross correlation values correspond to a global nonverbal synchrony value.

All of the aforementioned studies in the literature show that nonverbal coordination, embodied communication, and nonverbal synchrony are important, yet scarcely, studied subjects in adult interactions. Especially, findings from mother-infant studies increased psychotherapists' awareness of the importance of understanding

nonverbal, implicit, procedural dynamics in therapy. Respective studies have adopted findings for neurological, cognitive, emotional, and social components of infant development to their clinical works (Boston Process Change Group, 1998a, 1998b, 1998c, 1999, 2002, 2007, 2012). Thus, in order to fill the gap in the psychotherapy process literature, the present dissertation aimed to explore interpersonal synchrony in therapist-patient dyads within the framework of contemporary psychoanalytic psychology.

1.5.Present Study

The present dissertation basically aimed to test the analogy between nonverbal interactions in mother-infant relationship (Beebe & Lachman, 2002) and nonverbal communication in adult face-to-face psychotherapy. The goal of the study was to explore implicit processes in adult face-to-face psychotherapy sessions based on microanalysis of nonverbal synchrony between psychotherapy dyads. In the literature it was seen that in mother-infant studies, nonverbal communication dynamics are investigated during infant and mother plays. In the present study, *coordinated interaction* units, which were generated from nonverbal synchronized moments, were defined as the units of analysis to understand the dynamics of nonverbal communication in psychotherapy dyads. Coordinated interaction units were calculated with Motion Energy Analysis via MATLAB. To see the patterns in nonverbal exchanges, the micro analysis of these coordinated interaction units was coded by the researcher via content analysis. Consequently, hybrid approach, including both quantitative and qualitative analyses, was applied to understand the relationship between psychotherapy outcomes and self and interactive contingency processes embedded in nonverbal exchanges. The aims and expected results of the study are presented in the following (see also Diagram 1).

- To empirically investigate whether nonverbal exchanges between patients and therapists in adult face-to-face psychotherapy include three principles of mother-infant relationship which are (a) ongoing regulations, (b) disruption and repair, and (c) heightened affective moments based on self

and interactive regulation characteristics of each therapy dyad (corresponds to “1” on the following diagram).

- To describe the associations between (a) temperament, (b) attachment and (c) selfobject needs of therapists and patients, and (i) the dynamics of nonverbal exchanges in their relationships and (ii) their evaluations on therapeutic alliance (corresponds to “2” on the following diagram).
- To explore the influence of the amount of fit between (a) temperament, (b) attachment, and (c) selfobject needs of therapists and patients on both (i) nonverbal dynamics between them and (ii) their evaluation of therapeutic alliance. Similar features may lead to a therapy environment that is more familiar for the dyad, temperament, and attachment stills, which in turn would lead to higher levels of therapeutic alliance particularly at the beginning phase (corresponds to “3” on the following diagram).
- To compare psychotherapy dyads with each other based on the association of nonverbal synchrony with (i) micro and (ii) macro outcomes of psychotherapy. Higher values of nonverbal synchrony with exact timing rather than time lags would be related to better psychotherapy outcomes (corresponds to “4” on the following diagram).

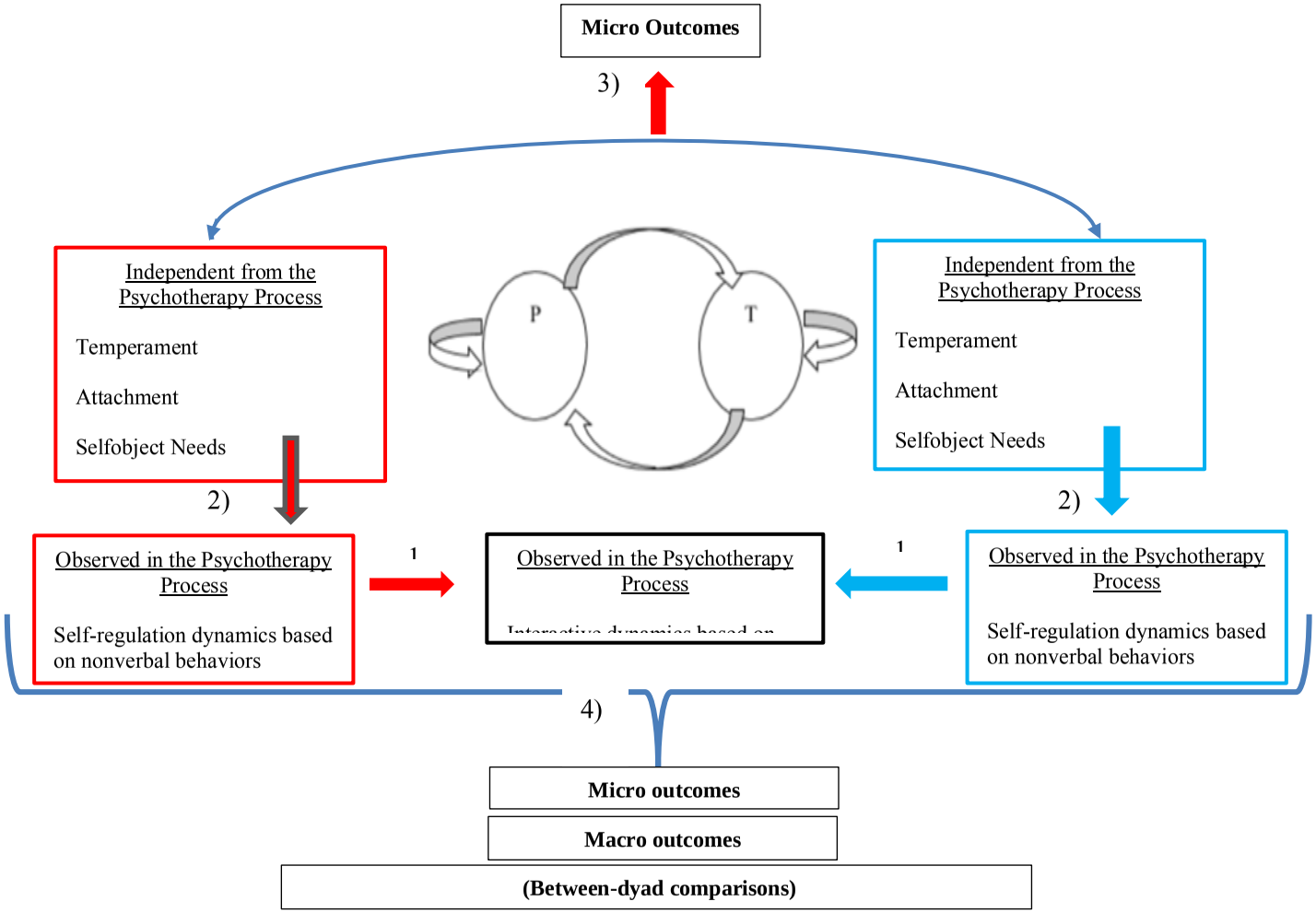

Figure 3. Diagram 1. Model of the present study

CHAPTER 2

METHOD

2.1.Participants

The study included two different samples. First one consisted of six psychotherapy dyads who were blind to the aims of the study. The second sample had two psychotherapy dyads in which the psychotherapist was the researcher. Thus, she knew the study's aims, whereas patients were blind to them. The differences between the first and the second samples based on therapeutic evaluations of the patients were analysed to decide whether findings of the two samples should be evaluated separately or together.

2.1.1.Sample 1

For the purpose of this study, only same-sex gender dyads were prefered, since it was found that mixed-gender dyads lead to lower levels of synchrony (Ramseyer & Tschacher, 2014; Ramseyer & Tschacher, 2011). Therapists were doctoral students in the clinical psychology program of psychology department at Middle East Technical University (n = 6; m_{age} = 30.66; min-max$_{age}$ = 28-37; middle perceived income for all). Table 1 presents background information about therapists' psychotherapy education, experiences, and theoretical orientations. All of them were attending to their own psychotherapies for an average of 2.4 years. Therapists of the Sample 1 reported various types of theoretical trainings. They were mostly homogeneous in terms of their psychotherapy experiences (i.e., m =5.66 years or almost 656 hours; min-max = 4-9 years) except the therapist of Ddyad 4, who was almost four years more experienced than the other therapists. Almost all of the therapists in Sample 1 mentioned psychoanalytic or psychodynamic (except the therapist of Dyad 2) approach as one of their psychotherapy orientations (see Table 1).

The patients in Sample 1 ($n = 6$; $m_{age} = 23.83$; min-max$_{age}$ = 19-38; middle perceived income) contacted the researcher via announcements. Experiencing an active psychotic episode was the only exclusion criterion. As presented in Table 2, patients were homogenous in terms of their education level (i.e., undergraduate students; except the patients of Dyad 4 and Dyad 5, who were graduate students), occupations (i.e., student), marital status (i.e., single; except the patient of Dyad 5), and lack of early psychotherapy experience and psychiatric treatment (except the patient of Dyad 4). Demographic characteristics of the Sample 1 can be seen in Table 2.

2.1.2.Sample 2

The therapist (woman, middle class income, and 29 years old) of the Sample 2, who was experienced in conducting psychotherapy for 5 years, was trained in CBT, Schema Therapy, and Psychoanalytic Self Psychology. She had been attending to her own psychotherapy for 4 years with the theoretical approach of psychodynamic psychotherapy. Also, she reported her theoretical orientation as psychoanalytic self psychology. Participants of the Sample 2 were an undergraduate student (age = 20) and a saleslady (age = 29). Patients were single and they reported their perceived income as middle. Both of them had previous psychotherapy experience and psychiatric treatment.

2.2.Instruments

2.2.1.The Selfobject Needs Inventory.

The inventory (Banai, Mikulincer, & Shaver, 2005; Yurdeşen & Gençöz, 2015), a self report instrument with 38 items measured on a 6-point Likert type scale (Total Score: Min-Max: 1-7), was used for assessing the degree of approach to or avoidance from idelization, mirroring, and twinship needs. Idealization needs can be defined as an admiration to the other who is more experienced or competent (e.g., approach to idealization needs: “I am attracted to successful people; avoidance from idelization needs: “I find it difficult to accept guidance even from people I respect”). Mirroring needs include the need to be appreciated by others based on own competences (e.g., approach to mirroring needs: “I do not function well in situations where I receive too little attention”; avoidance from mirroring

needs: “I do not really care what others think about me”). Twinship needs refer to liking to be with others who have similar problems or expectations with us (e.g., approach to twinship needs: “I feel better when I and someone close to me share similar feelings toward other people”; avoidance from twinship: “I would rather not belong to a group of people whose lifestyle is similar to mine”). The Cronbach’s alpha internal consistency values of factors were ranged between .79 and .91 in the orginigal study of the scale (see Table 3 for psychometric properties of each scale in this study).

2.2.2.The Adult Temperament Questionnaire

ATQ (Evans & Rothbart, 2007; Gölcük, 2014) includes 39 items measured on a 7-point Likert type scale (min-max total score: 1-7). The Cronbach’s alpha values of the Turkish version of the scale ranged between .65 and .73 including four factors, namely negative affectivity (e.g., “I become easily frightened”), extraversion (e.g., “I usually like to talk a lot”), effortful control (e.g., “I am often late for appointments”), and orienting sensitivity (e.g., “I often notice mild odors and fragrances”) representing temperament types of both therapist and patient based on their self report evaluations.

2.2.3.The Experiences in Close Relationships Questionnaire/ Short Version

To measure attachment avoidance (e.g., “I am nervous when partners get too close to me”) and anxiety (e.g., “I worry that romantic partners won’t care about me as much as I care about them”), the scale (Fraley, Waller, & Brennan, 2000; Selçuk, Günaydın, Sümer, & Uysal, 2005) which contains 36 items measured on a 7-point Likert scale was completed by both therapists and patients (min-max total score:1-7). Cronbach’s alpha internal consistency values of Turkish version of the scale in the original study was .90 for attachment avoidance factor, and .86 for anxiety factor.

2.2.4.The Brief Symptom Inventory

(Derogatis, 1992; Şahin & Durak, 1994; Şahin, Durak, & Uğurtaş, 2002). In order to assess improvements in patients’ symptoms, the Brief Symptom Inventory with 54 item measured on a 5-point Likert type scale was used (min-max total score: 0-

4). Anxiety (e.g., Nervousness or shakiness inside) depression (e.g.," Thoughts of ending your life"), negative self (e.g., "Feeling that people are unfriendly or dislike you"), somatization (e.g., "Faintness or dizziness), and hostility (e.g., "Feeling easily annoyed or irritated") are the factors on which the patients evaluated their complaints. The Cronbach's alpha coefficients values were ranged between .70 (for depression) and .88 (for somatization) in original study of the scale.

Table 1 Professional Background Information of Therapist in Sample 1

	Self Therapy	Education	Psychotherapy Experience	Theoretical Orientation
Dyad 1 / T	2 years (Psychodynamic Therapy)	Cognitive Behavioral Therapy / Schema Therapy / Psychodynamic Therapy / Relational Oriented Eclectic Therapy	6 years (600-700 hours)	Schema Therapy / Psychodynamic Therapy
Dyad 2 / T	2 years (Cognitive Behavioral Therapy / Schema Therapy)	Schema Therapy	5 years (1500 hours)	Schema Therapy / Cognitive Behavioral Therapy
Dyad 3 / T	3 years (Eclectic Therapy)	Cognitive Behavioral Therapy / Schema Therapy / Psychodynamic Therapy	6 years (400 hours)	Cognitive Behavioral Therapy / Psychodynamic Therapy
Dyad 4 / T	6 years (Psychoanalytic Therapy)	Different Approaches of Psychoanalytic Psychotherapies	9 years (800 hours)	Psychoanalytic Therapy
Dyad 5 / T	2 years (Eclectic Therapy)	Cognitive Behavioral Therapy / Schema, Eclectic Therapy	4 years (280 hours)	Eclectic Therapy / Relational Psychoanalysis
Dyad 6 / T	(Schema Therapy / Psychoanalytic	Schema Therapy	4 years (284 hours)	Psychodynamic Therapy

Table 2 Demographic Characteristics of the Patients in Sample 1

	Marital Status	Education level	Occupation	Early Psychotherapy Experience	Psychiatric Treatment Background
Dyad 1	Single	Undergraduate	Student	None	None
Dyad 2	Single	Undergraduate	Student	None	None
Dyad 3	Single	Undergraduate	Student	None	None
Dyad 4	Single	Graduate	Student	None	Seroquel/ Lamictal/ Cipralex
Dyad 5	Married	Graduate	Student	None	None
Dyad 6	Single	Undergraduate	Student	None	None

2.2.5.Interpersonal Circumplex Inventory

This self report inventory of interpersonal circumplex (Alden, Wiggins, & Pincus, 1990; Akyunus & Gençöz, 2016) contains 32 items measured on a 5-point Likert type scale (min-max total score: 0-4). There are eight subscales of the scale, which represent individuals' styles in interpersonal relationships; domineering/controlling (e.g., I am too aggressive toward other people), intrusive-needy (e.g., I want to be noticed too much), self-sacrificing (e.g., I let other people take advantage of me too much), overly accommodating (e.g., I try to please other people too much), nonassertive (e.g., It is hard for me to tell a person to stop bothering me), socially avoidant (e.g., It is hard for me to ask other people to get together), cold-distant (e.g., It is hard for me to feel close to other people), and vindictive/self-centered (e.g., It is hard for me to trust other people). Cronbach's alpha internal consistency values of Turkish version's factors ranged between .66 and .86.

2.2.6.The Therapeutic Alliance Scale

The scale (Horwart & Greenberg, 1989; Soygüt & Işıklı, 2008) includes 36 items measured on a 7-point Likert type scale (min-max total score: 0-6). Bond (e.g., "I believe my therapist/my patient likes me"), task (e.g., "I find what I am doing in therapy confusing"), and goal (e.g., "The goals of these sessions are important to me") are the factors of the scale that were evaluated by both patients and therapists on separate forms by considering their experiences in the therapy relationship. The Cronbach's alpha coefficients of the factors were .96 for therapists (bond: .83, goal: .94, and task: .90) and .96 for patients (bond: .78, goal: .81, and task: .90).

2.2.7.Modified Version of the Experiences in Close Relationships Questionnaire/ Short.

In the present study, in order to understand how each therapy dyad attach to each other, questions of the attachment scale were adopted into therapy concept (i.e., instead of asking questions related to person in your life, the phrase "your therapist or your patient" was used). By this way, attachment anxiety and avoidance features of given therapist-patient dyad were defined (min-max: 1-7).

2.3.Procedure

Before conducting the study, Institutional Review Board (IRB) approval was obtained from Human Subjects Ethics Committee of Middle East Technical University. Fifteen to seventeen weekly sessions were conducted in the Psychology Department at Middle East Technical University. Both therapists and patients voluntarily aparticipated in study by signing the informed consent form. Patients received the psychotherapy service for free. Also, the therapists did not get paid by the reseracher for the service they provided. Both the patients and the therapists were told that they have the right to quit the study whenever they want to do so. Therapies were time-limited (min: 15 – max: 17, m = 16.16); the length of the process was designed based on the duration of one academic semester. Goals and tasks of each psychotherapy process and content of the sessions were defined by the dyad independently from the aims of the study. As reported before, in Sample 1, double blind design was applied; neither the therapists nor the patients knew

which aspect of the therapy process would be investigated in the study. Thus, the purpose of the study was hidden from the participants to prevent as much bias as possible. In Sample 2 of the study, only the therapist knew the purpose of the study. Each session was recorded by two cameras, one recording only the therapist and one recording only the patient. Across different phases of the psychotherapy process, both the therapists and the patients filled out the questionnaire package, which took them approximately twenty minutes (see Table 4).

2.4.Data Analysis

2.4.1.Assessment of Nonverbal Exchange In Psychotherapy Dyads

Nonverbal exchange between the therapist and the patient during the sessions were assessed via two different methods which complement each other.

2.4.1.1.Motion Energy Analysis

ADOBE Premiere Pro. Version 11 was used to generate a split-screen synchronized video from multi-camera sources. Motion energy was defined based on the explanation of Ramseyer and Tschacher (2011; Ramseyer, 2018), who developed a computerized way of assessing nonverbal synchrony between interacting partners. As stated in their study, motion energy of head movements was defined as pixel changes in a given region of interest in the grayscale image across time. Frame by frame pixel differences were quantified to see the changes in Region of Interest (ROI; Head). An example for ROI (see *Figure 4*) and motion energy frames (see *Figure 5*) were presented below. Motion energy data were generated via MATLAB with the codes written by a research assistant in Physics Department at METU (see Appendix L for codes).

Figure 4 An image representing region of interest (ROI: head)

Figure 5 Three images showing second by second changes in ROIs

To be congruent with the methods used in previous studies (e.g., Ramseyer & Tschcaher, 2014), each one-minute interval of the first 15 minutes of each session were analysed via Motion Energy Analysis. Cross correlations between motion energy values of the patient and the therapist were calculated within ±5 time lag.

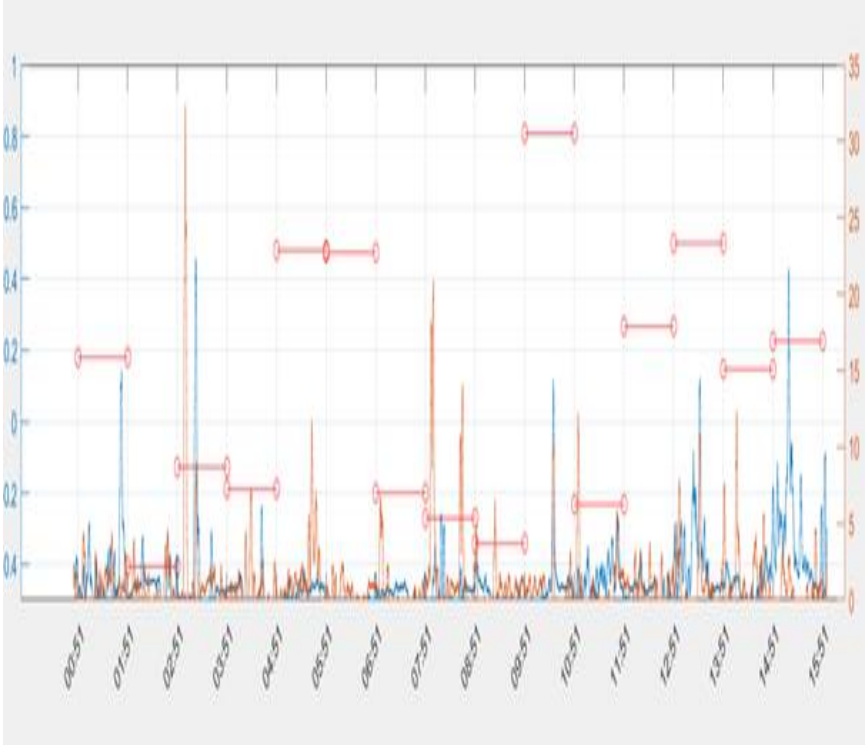

Figure 6. An example for the results of motion energy analysis with cross correlation

Table 3 Psychometric Properties of the Measurements in the Study

	N	*M*	α	min-max		*N*	*M*	α	min-max		*N*	*M*	α	min-max
ECR-AAV	15	3.29	.94	2.00-4.07	ATQ-NA	14	4.35	.65	2.74-6.64	IPCI-CD	8	0.78	.71	0.63-3.88
ECR-AAX	15	3.82	.88	1.87-5.73	ATQ-OS	13	5.24	.31	3.62-6.08	IPCI-VS	8	0.53	.61	0.13-0.88
ECR-Total	15	3.55	.94	1.87-5.73	ATQ-ES	15	4.87	-.12	3.93-5.60	IPCI-CD	8	1.1 6	.34	0.63-1.63
ECR-T-AAV	6	3.19	.74	1.17-6.00	ATQ-EC	15	4.37	.81	2.80-5.60	IPCI-SA	8	1.09	.82	0.38-1.75
ECR-T-AAX	7	3.57	.87	1.71-6.14	ATQ-Total	13	4.74	.31	2.85-6.08	IPCI-NAS.	8	1.88	.78	1.38-2.38
ECR-T-Total	7	2.83	.48	1.43-5.00	BSI-ANX.	8	1.15	.91	0.25-2.35	IPCI-OA	8	1.97	.84	1.63-2.25
ECR-P-AAV	6	2.88	.89	1.17-5.00	BSI-DEP.	7	1.80	.93	0.57-2.57	IPCI-SS	8	2.16	.93	2.00-2.50
ECR-P-AAX	6	2.80	.76	1.83-3.67	BSI-N.SELF	8	1.27	.92	0.63-2.25	IPCI-IN	8	1.47	.91	1.25-1.63
ECR-P-Total	8	2.63	.91	1.23-2.63	BSI-SOMA.	8	0.79	.92	0.25-1.63	IPCI-Total	8	1.38	.82	0.13-2.50
SONI-HT	15	5.13	.81	4.13-6.00	BSI-HOST.	8	0.95	.65	0.13-1.88	TIO-T-Goal	7	3.77	.65	2.71-4.71
SONI-AVIT	15	2.48	.85	1.93-3.45	BSI-Total	7	1.27	.98	0.14-2.57	TAS-T-Bond	8	4.63	.56	2.13-5.88
SONI-HI	15	3.95	.73	1.80-5.40	TAS -P-Goal	8	4.66	.80	3.63-5.88	TAS -T-Task	8	3.92	.66	1.00-5.37
SONI-HM	15	3.81	.63	2.33-5.27	TAS -P-Bond	7	4.57	.88	2.14-5.71	TAS -T-Total	7	4.05	.83	1.00-5.86
SONI-AVM	15	3.40	.83	2.80-4.07	TAS -P-Task	8	4.20	.91	0.13-5.63	TAS -P-Total	7	4.55	.85	0.14-5.86
SONI-TOTAL	15	3.67	.79	1.80-6.00										

Note. ECR: The Experiences in Close Relationships Questionnaire; AAV: Attachment Avoidance, AAX: Attachment Anxiety; ECR-T: Therapist Attachment to Patient, ECR-P: Patient Attachment to Therapist; SONI: The Selfobject Needs Inventory, HT: Hunger for Twinship, AVIT: Avoidance from Idealization and Twinship,HI: Hunger for Idealization, HM: Hunger for Mirroring, AVM: Avoidance from Mirroring; ATQ: The Adult Temperament Questionnaire, NA: Negative Affectivity, OS: Orienting Sensitivity, ES: Extraversion, EC: Effortful Control; BSI: The Brief Symptom Inventory, ANX: Anxiety, DEP: Depression, N.SELF: Negative Self, SOMA: Somatizaiton, and HOST: Hostilite; IPCI: Interpersonal Circumplex Inventory, DC: Domineering/controlling, VS: Vindictive/self-centered, CD: Cold-distant, SA: Socially-avoidant, NAS: Nonassertive, OA: Overly accommodating, SS: Self-sacrificing, IN: Intrusive-needy; TAS:The Therapeutic Alliance Scale, P: Patient, T: Therapist

Table 4 Measuring Micro and Macro Outcomes of Therapy Process across Different Phases

Beginning	Early Middle	Late Middle	Final
Therapeutic Alliance (P & T)	Therapeutic Alliance (P & T)	Therapeutic Alliance (P & T)	Therapeutic Alliance (P & T)
Attachment Anxiety and Avoidance (P & T)	Attachment Anxiety and Avoidance in Therapy (P & T)	-	Attachment Anxiety and Avoidance (P & T)
Symptoms (P)	-	-	Symptoms (P)
Selfobject Needs (P & T)	-	-	Selfobject Needs (P &T)
Problems in Interpersonal Relationships (P)	-	-	Problems in Interpersonal Relationships (P)

Note. P: Patient, T: Therapist

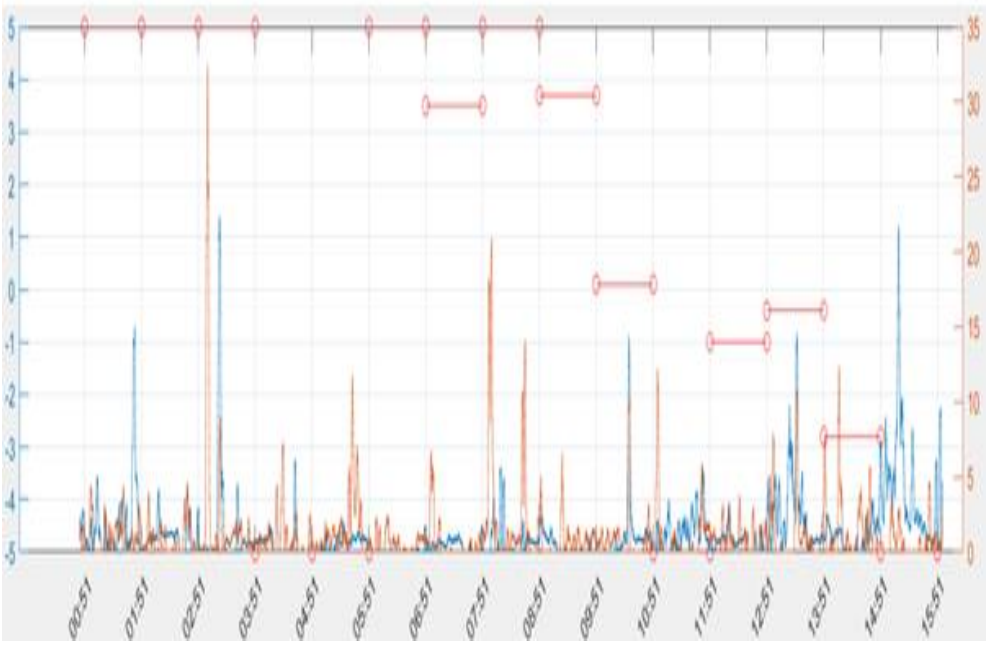

Figure 7. An example for the results of motion energy analysis with Time Lags

In Figure 6 and 7, while *orange line* represents the amount of the patient's head movements, *blue line* represents therapist's head movements. In the Figure 6, *the orange* ***straight*** *lines* represent the highest cross correlation value for a given one-minute interval. For example, in time interval between 09:51 and 10:51, the highest value for cross correlation was .80. In the Figure 7, *the orange* ***straight*** *lines* represent the time lag in which the highest cross correlation occured. For example, the highest cross correlation value for 00:51-01:51 time interval was within 5 seconds time lag. This means that the patient followed the therapist's head movement's changes five seconds behind.

After, the motion energy analysis of all session units, the sequences whose cross correlation values were higher than .40 (which is moderate; Cohen, 1992) were chosen to be used for micro analysis of nonverbal interaction in therapy dyads. These sequences are called *as coordinated interaction unit*s. Two example photos were given below to represent coordinated and uncoordinated action units. At the first photograph representing coordinated interaction unit (Figure 8), both partners act in higher motion energy values by accompanying each other's facial emotion. At the second photograph (Figure 9) demonstrating uncoordinated interaction unit, while one of the partners increased her motion energy by smiling, other partner detaches with a decrease in motion energy value.

2.4.1.2.Micro Analysis Of Coordinated Interaction Units

Content analysis was applied to understand the dynamics of nonverbal communication within the therapy dyads. There were five communication modalities observed: a) eye contact, b) facial emotion, c) self regulatory behaviors (e.g., touching chin, nose, mouth, cheek, ear, forehead, and hair, and eating lips), d) talk silence turns, and e) head nods and vocal prompts. Selection of communication modalities was inspired by Bebee and Lachmann's (1996, 1998, 2002, 2014) categories (i.e., attention, affect, orientation, and touch). Different from mother-infant interaction, interactive touching behavior was not applicable to adult psychotherapy dyads. Also, vocal affect, which is generally analyzed in mother infant studies, was beyond the scope of the present study. Content analyses

(Downe-Wamboldt, 1992; Krippendorff, 2004) included two steps to determine predictability, stability, and rhythm of these communication modalities. The first one was *manifest content analysis*, and the second one was *latent pattern content* analysis.

Figure 8 An example for coordinated interaction units

Figure 9. An example for uncoordinated interaction units

2.4.1.2.1.Manifest Content Analysis

Manifest content corresponds to Bebee and Lachman's (1996) "real time" and "second by second" dimensions while depicting the results of microanalysis. Second by second coding of manifest content of these communication modalities was used to see individual patterns of self regulation systems of the therapist and the patient. While coding manifest content of these communication modalities, the coder turned the audio off and coded each communication modality separately for

both the therapists and the patients. Consequently, for both the patient and the therapist, the coder watched each one-minute interval for five times, because there were five communication modalities to be analyzed. Standardization of manifest coding is presented below.

- While coding eye contact, the coder coded “gaze on” and “gaze off” behaviors at a given second based on two categories “exist” or “none”. The direction of the gaze off was not coded unless it was directed to the camera.
- While coding head nods, vocal prompts, and self regulatory behaviors, the coder coded these behaviors at a given second by two categories “exist” or “none”.
- While coding facial emotion, the valence of facial expressive behavior was coded as either positive or negative (Kring & Sloan, 2007). Intensity of positive or negative expressions was evaluated on a 4-point scale (i.e., slight, moderate, high, and very high). Dominant emotional expression on the face, which was rated both during and at the end of the coding, was based on Ekman and Friesen (1975) classification of basic facial expressions (i.e., Surprise, anger, contempt, happiness, fear, sad). Examples for coding criteria for the same dyad are presented in Table 5.

2.4.1.2.2.Latent Pattern Content Analysis

Based on manifest contents of interactive dynamics, each one-minute interval was watched by the coder twice in order to understand the underlying meaning of nonverbal exchanges in dyads via latent pattern content analysis. The first observations were isolated from verbal communication in dyads, whereas thesecond observations were done together with the interpretation of the verbal content to investigate the congruence between nonverbal expressions and spoken language and the validity of facial emotions by taking the context into consideration. While watching one-minute interactions in therapy dyad, the coder holistically observed combinations of different communication modalities (e.g., mutual gaze and facial emotion, self-touch and facial emotion, mutual gaze, and talk-silence turns). For instance, sometimes therapists may respond to the increases

in facial emotion via different communication modalities (e.g., vocal prompt) rather than changing her facial expression. The coder, first transcribed the analyzed unit, and then, created scripts to understand implicit relational dynamics developed in observed units. These scripts corresponds to Bebee and Lachmann's (1996) "expectations" dimension of their results.

Table 5 Valence and Intensity of the Emotional Expression on the Face

Emotion	*Intensity*			
Slight shift from neutral face	**1**	2	3	4
Making a mimic with one part of the face like rising brows, drooping or stretching lip without moving the other parts of the face	1	**2**	3	4
Positive				
Emotion	*Intensity*			
Smiling	**1**	2	3	4
Smiling without showing teeth	1	**2**	3	4
Smiling with showing teeth	1	2	**3**	4
Laughing with body movements	1	2	3	**4**
Raising eyebrows expressing surprise or approval	1	**2**	3	4
Negative				
Emotion	*Intensity*			
Crying	1	2	**3**	4
Cry jerkily	1	2	3	**4**
Raising eyebrows to punctuate	1	**2**	3	4
Eating lips while listening	1	**2**	3	4
"I do not know" face with dropped lip	1	**2**	3	4
Sick/disgusted by stretching the lip (corner becomes visible)	1	**2**	3	4

Note. Sometimes positive and negative expressions were observed together on the face. In such cases, expression got both positive and negative valence and separate intensity (e.g., sad-happy face)

CHAPTER 3

RESULTS

In this section of the present dissertation, firstly the differences between Sample 1 and Sample 2 will be presented. Then, the results for temperament, attachment, selfobject needs of therapy dyads, and patients' symptoms and problematic styles in interpersonal relationships, and distribution of subjective features of each therapy dyad in Sample 1 will be reported. Afterwards, the results of motion energy analysis, microanalysis of selected coordinated interaction units, and content analysis of coordinated interaction units (i.e., interrater reliability results for manifest codings of nonverbal behaviors, and latent pattern categories for interactive and self regulation dynamics based on both coder's classification and quantitative analyses) will be presented. And in the last part of this section, the findings on micro and macro outcomes for Sample 1 will be reported.

3.1. Differences between Sample 1 and Sample 2

Before presenting the findings of the study, it is important to examine the differences between Sample 1 and Sample 2 in terms of the therapeutic alliance scores reported by the patients, since the therapists of the Sample 1 were blind to the aims of the study, while the therapist of the Sample 2 (the researcher) was not. *T*-test analyses did not reveal any significant differences between the therapeutic alliance scores of the Sample 1 and Sample 2 patients in terms of bond and goal (see Table 6). However, the patients in Sample 2 evaluated the task factor of the therapeutic alliance with significantly with lower scores than patients of the Sample 1. Thus, it was decided to analyze the data of the two samples separately, and report them individually.

3.2. Results for Sample 1

3.2.1.Results for Temperament, Attachment, Selfobject Needs of Therapy Dyads

The individual characteristics of both the therapists and the patients were described to be used for further interpretation of the results, especially for defining the relational dynamics between each therapist-patient pair based on nonverbal exchanges. Table 7 presents a summary of the descriptive statistics for the temperament, attachment, and selfobject needs of both the therapists and the patients in Sample 1. The results revealed that *orienting sensitivity* -a type of temperament- and *hunger for twinship* –a type of selfobject needs- were prominent characterics of both the patients and the therapists. In other words, the study sample consisted of individuals who were sensitive to low-intensity perceptual stimulations and who want to be with people having similar problems and needs with them. Another dominant characteristic of Sample 1 was higher attachment axiety compared to attachment avoidance. The results of categorization of the attachment scores (taking 4 as the midpoint; and one of the therapists who was higher than sample mean on avoidance dimension was classified as fearful; names of categories were based on Bartholomew, 1990) showed that only 3 participants were securely attached; 2 participants dismissive, 3 participants were fearful and three particants were preoccupied.

3.2.2.Results for Ptients' Symptoms, and Problematic Styles in Interpersonal Relationships.

The results of descriptive analyses of the patients' symptoms, and also, problematic styles in interpersonal relationships are presented in Table 8. Based on the distributions of the means, it was found that patients were suffering from depression, negative self -image, and anxiety more than other psychological problems. In addition to that, self-sacrificing, overly accommodating, and non-assertive styles were more prominent than other styles in their interpersonal relations.

Table 6 The Differences between the Researcher Therapist and the Other Therapists in terms of the Therapeutic Alliance Scores Reported by Patients

Therapeutic Alliance	Therapist Group	Mean	*SD*	*t*(45)	*p*	CI
Task	Researcher	4.10	.62	-2.06	0.051*	-0.90—0.00
	Other	4.55	.72			
Bond	Researcher	4.76	.34	-0.32	0.751	-0.52— 0.38
	Other	4.83	.73			
Goal	Researcher	4.85	.56	-0.70	0.491	-0.64—0.31
	Other	5.01	.74			

Note. The researcher therapist was evaluated by 2 patients, and the other therapists were evaluated by 6 patients at 6 different time points

3.2.3.Results for Distributions of Individual Characteristics in Each Therapy Dyad

The amount of the fit between the therapist's and the patient's individual characteristics in each dyad was calculated by subtracting the total scores of each patient from his/her therapist's scores (the calculation was defined by the researcher). If the difference was ranged between 0 and 0.99, 1 and 2.99, 3 and 4.99, or 5 and 6.99, it was named as full, close, lower, or no fit, respectively (see differences on Table 9 and Figures 10-21).

Results revelaed that there was a full fit between the therapist and the patient in Dyad 1 on attachment avoidance, avoidance of idealization and twinship needs, hunger for idealization and mirroring, and negative affectivity and orienting sensitivity. Also, there were close fits between them on their attachment anxiety (higher for the patient), twinship needs (higher for therapist), extraversion and effortful control (higher for the patient).

Table 7 Individual Characteristics of the Therapists and the Patients as Measured at Time 1

	Therapists						Patients					
Temperament	Min	Max	*M*	*SD*	Skewness	Kurtosis	Min	Max	*M*	*SD*	Skewness	Kurtosis
Orienting Sensitivity	4.90	6.18	5.26	.48	1.94	4.11	3.75	5.73	5.06	.75	-1.29	1.02
Extraversion	4.44	5.22	4.87	.31	.01	-1.27	3.78	5.67	4.89	.70	-.57	.03
Effortful Control	4.00	5.57	4.90	.78	-.08	-2.68	1.13	5.50	3.98	1.61	-1.17	1.79
Negative Affect	3.91	5.00	4.47	.44	-.30	-1.71	2.73	5.36	4.18	1.0	-.40	-1.68
Attachment												
Attachment Anxiety	2.94	4.39	3.77	.64	-.72	-1.83	2.39	5.22	3.57	1.28	.23	-2.61
Attachment Avoidance	2.11	4.33	3.14	.94	.39	-2.00	1.56	4.22	2.96	1.23	-.07	-3.03
Selfobject Needs												
Hunger for Twinship	4.38	6.13	5.10	.62	.77	.43	4.25	6.50	5.04	.81	1.43	2.07
Hunger for Mirroring	2.50	4.83	3.92	.77	-1.33	3.06	2.17	5.17	3.64	1.13	-.15	-1.11
Hunger for Idealization	2.29	5.00	3.71	1.02	-.17	-1.38	2.71	6.00	3.86	1.12	1.74	3.89
Avoidance of Mirroring	2.67	5.33	3.56	1.04	1.18	.61	2.00	5.83	3 1.	41	2.30	5.50
Avoidance of Idealization and Twinship	1.18	3.55	2.39	.99	-.20	-2.23	1.27	3.64	2.24	.88	.67	-.30

Table 8 Time 1 Scores of the Patients on Symptoms and Interpersonal Problems

Symptoms	Min	Max	*M*	*SD*	Skewness	Kurtosis
Depression	.50	3.25	2.03	1.09	-.61	-1.40
Anxiety	.08	2.62	1.02	.93	.99	.78
Hostility	.14	1.57	.83	.59	-.23	-1.61
Somatization	.00	2.33	.83	.90	.93	.08
Negative self-image	.17	2.42	1.06	.94	.60	-1.67
Interpersonal Problems	Min	Max	*M*	*SD*	Skewness	Kurtosis
Self-sacrificing	.50	4.00	2.25	1.44	.000	-2.30
Overly accommodating	.00	3.75	2.17	1.45	-.29	-.73
Nonassertive	.50	3.00	2	1.01	-.49	-1.29
Intrusive-needy	.25	3.50	1.63	1.46	.48	-2.13
Socially-avoidant	.00	2.75	1.08	.93	1.18	2.33
Cold-distant	.25	2.25	1.08	.73	.64	-.30
Domineering/controlling	.00	1.50	.67	.59	.04	-.92
Vindictive/self-centered	.00	1.50	.54	.578	1.15	-.06

In Dyad 2, there were full fits between the therapist and the patient on many of the temperament features and avoidance of all selfobject needs and hunger for idealization, whereas there was a close fit in terms of attachment. In Dyad 3, there was a full fit for attachment, selfobject needs (except for the higher need for the idealization in the patient), and temperament (except a close fit onorienting sensitivity with higher scores for the therapist). In Dyad 4, there was a ful fit on attachment anxiety, all selfobject needs, and many temperament features, whereas there was a close fit for attachment avoidance (higher for the patient), and a lower

fit for the effortful control (higher for the therapist). In Dyad 5, there was a close fit between the therapist and the patient in terms of their attachment anxiety and avoidance. They fully fitted each other in all selfobject needs (except for avoidance of mirroring) and temperament features (except for negative affectivity). However, the therapist was higher on all other features. Dyad 6 had full fit on all temparement characteristics (except for effortful control which was higher for the therapist) and avoidance of idealization and twinsip. Also, they had close fit on attachment types (higher avoindace for the therapist), and rest of the selfobject needs (higher for the patient except for avoidance of mirroring).

Table 9 The Match between the Characteristics of the Patients and Therapists

	AAV	AAX	HT	AVIT	HI	HM	AVM	NA	OS	ES	EC
Dyad 1	0	1.55	-1.88	0.46	-0.58	-0.5	-0.17	0.91	0.09	-1.44	1.00
Dyad 2	1.22	1.67	-0.62	-0.82	-2.29	-2.33	-0.33	0.18	0.83	-0.11	0.25
Dyad 3	-0.56	-0.17	-0.12	0.37	1.42	-0.33	-0.16	-0.81	-2.43	0.56	-0.25
Dyad 4	1.67	0	.5	0.64	0.15	0.5	0.5	0.18	0.28	0.89	-4.5
Dyad 5	-1.89	-2.44	0	-0.82	0.57	-0.17	-1.5	-1.91	-0.27	0.89	-0.38
Dyad 6	-1.61	-1.66	1.75	-0.73	1.57	1.17	-1.67	-0.27	0.37	-0.66	-1.63

Note. AAV: Attachment Avoidance, AAX: Attachment Anxiety, HT: Hunger for Twinship, AVIT: Avoidance of Idealization and Twinship,HI: Hunger for Idealization, HM: Hunger for Mirroring, AVM: Avoidance of Mirroring, NA: Negative Affectivity, OS: Orienting Sensitivity, ES: Extraversion, EC: Effortful Control

3.2.4.Results of Motion Energy Analysis

The mean of the numbers of the total 250 coordinated interaction units, means of the time lags, the sums and means of cross-correlations (higher than .40) were found as 41.67, 2.45, 23.8, and 0.57, respectively (see Table 10). Sample 1 had moderate levels of positive nonverbal head synchrony with time delays rather than exact synchrony. The mean of the numbers of the coordinated interaction units of Dyad 1, 2, 3, and 6 were lower than the sample's mean, but Dyad 4 and 5 had higher numbers of units. Each therapy dyad's cross-correlations, time lags, and sequences are shown in Table 11 and Table 12.

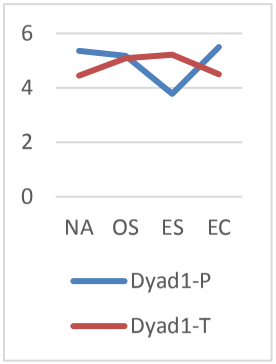

Figure 10 Dyad 1's temparements

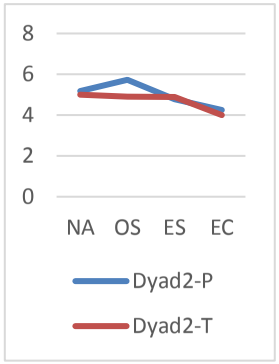

Figure 11 Dyad 2's temparements

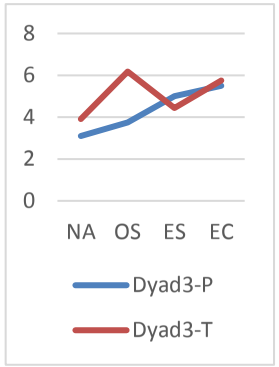

Figure 12 Dyad 3's temparements

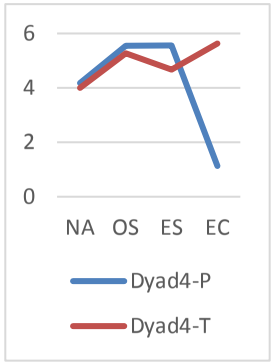

Figure 13 Dyad 4's temparements

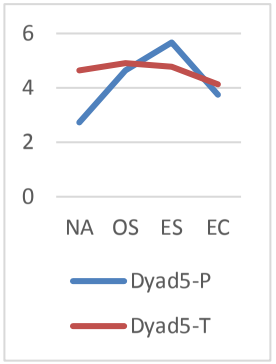

Figure 14 Dyad 5's temparements

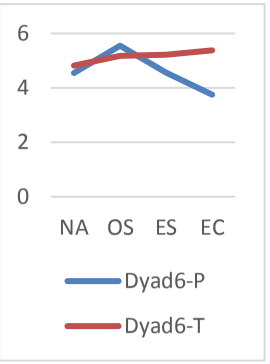

Figure 15 Dyad 6's temparements

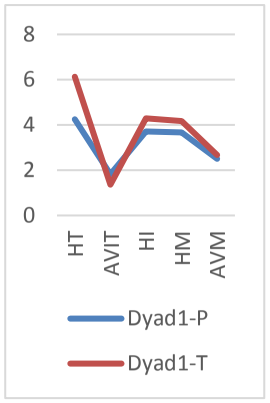

Figure 16 Dyad 1's selfobject needs

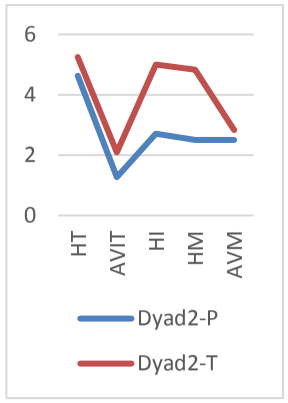

Figure 17 Dyad 2's selfobject needs

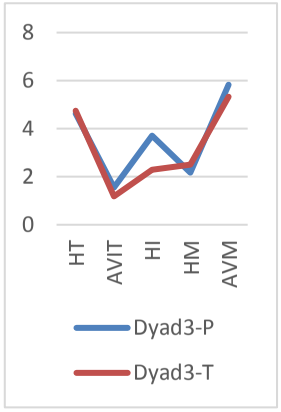

Figure 18 Dyad 3's selfobject needs

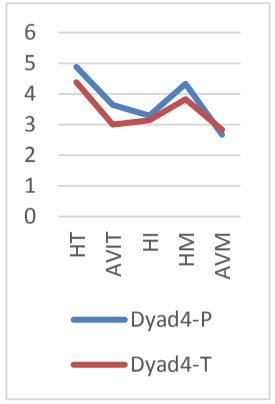

Figure 19 Dyad 4's selfobject needs

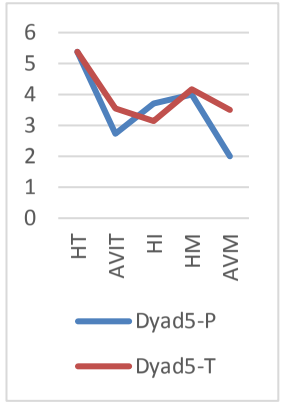

Figure 20 Dyad 5's selfobject needs

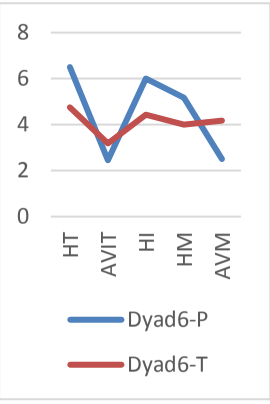

Figure 21 Dyad 6's selfobject needs

Note. NA: Negative Affecticity, OS: Orienting Sensitivity, ES: Extraversion, EC: Effortful Control, HT: Hunger for twinship, AVIT: Avoidance of idealization and twinship, HI: Hunger for idealization, HM: Hunger for mirroring, and AVM: Avoidance of Mirrroring

Table 10 Results of Motion Energy Analysis for Sample 1

Dyad	Total analyzed units	Mean of |lag|	Way of lags	Sum of Cross Correlations	Mean of Cross Correlations
Dyad 1	38	2.63	22(-) 16(+)	20.76	0.55
Dyad 2	39	2.24	14(-) 23(+)	24.28	0.62
Dyad 3	48	1.93	18(-) 28(+)	28.56	0.60
Dyad 4	44	2.64	23(-) 20(+)	23.83	0.54
Dyad 5	43	2.2	17(-) 22(+)	25.49	0.59
Dyad 6	38	2.96	19(-) 19(+)	19.88	0.54

Note 1. In Dyad 1, 6th session was missing data because of the camera problem**,** and there was no coordinated action unit in 9th session of Dyad 3. In Dyad 4, 7th & 17th sessions were missing data because of synchronized video problem, and 3th session was not analyzed in Dyad 5. There was no coordinated action unit in 12th session of Dyad 6.
Note 2. S: Session

3.2.5.Results of Microanalysis of Selected Coordinated Interaction Units.

Microanalysis of nonverbal exchanges in each therapy dyad was conducted to define self and interactive regulation dynamics at second by second level. The number of the coordinated interaction units was too high to code (n = 250). Therefore, separate criteria (see Table 13) were defined for each dyad's results to control the complexity of the data and to make findings more comparable (see Table 8). For instance, for Dyad 1, the cut-off value was determined as .40, because most of the positive synchrony values were distributed around .40-.50. However, for Dyad 3, the cut-off value was .50, because there were many positive synchrony values around .50. Thus, the total number of the coded coordinated action unit was 210.

3.2.6.Results of Content Analysis of Coordinated Interaction Units

Manifest content analysis was applied to each communication modality to understand latent pattern contents in exchanges in each dyad. A different coder did also do manifest content analysis to 10% of the data (n = 27). Thus, interrater reliability values for two different codings were calculated. The results revealed that the amount of the agreement between two raters was strong in many of the communication modalites (see Table 14). However, their agreements were at moderate level in therapists' eating lips behavior and head nods, and patient's vocal prompts, and at poor level in patients' facial emotions and eating lips behavior.

3.2.6.1.Latent Pattern Content Analysis of Manifest Contents

Latent pattern content analysis of manifest contents generated self and interactive nonverbal dynamics. A focus group was conducted with three psychoanalytic self psychology oriented experienced psychotherapists to name these dynamics. Nonverbal exchanges in therapy dyads consisting interactive regulation dynamics were named as interactive regulations, interactive dysregulations, ruptures, repairs, and heightened affective moments. Subcategories of the interactive regulation were *interactive positive emotion regulation which yields closeness*, *interactive regulation in which the patient is active*, *interactive regulation based on negative emotion*, *interactive regulation based on behavioral mimicry, reciprocity of affirmativeness*, *attunement*, and *reflectiveness*. Subcategories of the interactive dysregulation were *interactive disorganization*, *emotional reciprocity based on negative emotion*, *interactive dysregulation*, *chase and dodge*, *approach-avoidance dilemma*, and *still face*. Subcategories of the rupture were *ruptures due to withdrwal*, *discordance*, *rejection*, *judgmental*, *giving up to repair a rupture*, *unresponsiveness rather than being reflective*, and *avoiding positivity and closeness*. Subcategories of the repair were *attempting to repair partner's rupture*, and *keeping own rupture as an optimal frustration*. The last category of interactive regulation dynamics was heightened affective moments. Some examples for each interactive dynamic are presented in Table 15 (see Appendix B for details). The results of latent pattern content analysis of manifest contents also revealed 6 self regulation dynamics, namely focusing on the partner, avoiding the partner, facial emotional expressiveness, affirmativeness, self-regulatory behaviors, and

displacement of selfobject needs. Some examples for each self regulation dynamic for each patient or therapist in each therapy phase are presented in Table 16 (see Appendix C for details). Comparisons between and within dyads on both interactive regulations and self regulations are in the followings.

3.2.6.1.1.Results for Interactive Regulation Dynamics of Each Dyad across Different Phases of Therapy

In the first phase of the therapy, Dyad 1's interactive regulation dynamics were attunement, approach-avoidance dilemma, ruptures due to withdrawal, giving up to repair a rupture, keeping own rupture as an optimal frustration, attempting to repair partner's rupture by patient, interactive positive emotion regulation which yields closeness initiated the by patient, avoiding positivity and closeness by the therapist, and interactive regulation based on negative emotion. In the second phase of the therapy for Dyad 1, new patterns, such as emotional reciprocity based on negative emotion, unresponsiveness rather than being reflective, heightened affective moment based on happy toreunioninteractions, still face, avoiding positivity and closeness by the patient, interactive disorganization, and interactive regulation based on behavioral mimicry were added. In the third phase of the therapy, new patterns, namely, giving up to repair a rupture by the patient, interactive dysregulation, and discordance, were added. In the final phase, there was not any new interactive patterns. In the first phase of the therapy, Dyad 2's interactive regulation patterns were ruptures due to withdrawal, interactive positive emotion regulation which yields, avoiding positivity and closeness by therapist, approach-avoidance dilemma, interactive regulation based on negative emotion, interactive disorganization, keeping ow rupture as an optimal frustration, unresponsiveness rather than being reflective, and discordance. In the second phase, there were interactive dysregulation, interactive disorganization, heightened affective moments based on happy toreunioninteractions, and chase and dodge. In the third phase, emerging patterns were the reciprocity of affirmativeness, reflectiveness, and judgmental. And in the final phase, previous patterns were mostly continued.

Table 11 Results of Motion Energy Analysis on Positive Nonverbal Head Synchrony in Dyads 1, Dyad 2, and Dyad 3

Dyad 1				Dyad 2				Dyad 3			
S	Sequence	*r*	Lag	S.	Sequence	*r*	Lag	S.	Sequence	*r*	Lag
1	05:20-06:20	.45	-2.6	1	05:03-06:03	.79	0.7	1	01:19-02:19	.83	0.1
2	03:16-04:16	.42	-0.3	1	14:03-15:03	.49	1.1	1	04:19-05.19	.47	1.2
3	02.19-03:19	.83	-1	2	01:19-02:19	.89	0	1	10:19-11:19	.60	-0.3
3	01:19-02:19	.69	0.6	2	09:19-10:19	.76	1.2	1	14:19-15:19	.69	4.7
4	01:35-02:35	.63	-0.7	2	08:19-09:19	.53	-0.6	2	09:24-10:24	.40	5
4	00:35-01:35	.57	3.1	3	12:25-13:25	.63	5	2	12:24-13:24	.51	-4.1
4	06.34-00:35	.51	0.6	3	11:25-12:25	.57	-2.8	3	13:31-14:31	.44	3.5
5	02:22-03:21	.45	0.9	3	05:25-06:25	.55	3.7	4	08:25-09:25	.43	1
5	05:22-06:22	.44	2.4	3	04:25-05:25	.47	5	4	02.25-03:25	.83	0.4

Table 11 Continued

7	00:28-01:29	.64	-4	4	00:38-01:38	.42	-0.4	5	04:16-05:16	.67	2.4
7	03:29-04:29	.64	4.2	5	05:19-06:19	.93	1.9	6	05:20-06:20	.55	-0.3
7	10:29-11:29	.61	-3.1	5	13:19-14:19	.47	5	6	07:20-08:20	.48	-0.7
8	05:23-06:22	.68	-0.6	6	13:06-14:06	.72	1	6	08:20-09:20	.60	-0.7
8	03:23-04:23	.43	-0.8	6	03:07-04:07	.58	3.2	7	00:18-01:18	.82	-5
9	05:18-06:17	.40	-1.3	7	00:50-01:50	.96	0.2	7	06:17-07:18	.68	3
10	05:25-06:25	66	4.1	7	07:50-08:50	.84	-0.6	7	10:18-11:18	.55	-5
10	12:25-13:25	.58	-0.9	8	07:43-08:43	.56	2.6	7	13:18-14:18	.57	3.2
10	06:25-07:24	.52	-4	9	06:45-07:45	.59	-0.2	8	05:19-06:19	.68	1.8
10	10:25-11:25	.50	-5	9	00:45-01:45	.57	4.7	8	07:19-08:19	.58	-0.8
11	06:17-07:18	.53	5	9	12:45-13:45	.50	4.5	8	11:19-12:19	.45	5

Table 11 Continued

12	07:54-08:54	.69	-4.7	10	08:41-09:41	.85	0	10	04:22-05:22	.49	5
12	04:54-05:54	.71	-4.2	9	05:45-06:45	.46	-0.3	10	03:21-04:21	.60	0.1
12	02:54-03:54	.53	1.7	10	06:41-07:41	.81	0.3	10	05:22-06:22	.78	0.1
12	05:54-06:54	.44	5	10	02:41-03:41	.57	-5	10	10.22-11:21	.67	-0.3
13	00:30-01:30	.57	2.3	10	05:41-06:41	.48	1.3	10	14:22-15:22	.67	0.6
13	09:30-10:30	.49	-1.5	11	14:52-15:51	.85	-0.9	11	00:34-01:34	.65	5
13	08.30-09.30	.42	5	11	1:52-2:52	.70	1.2	11	05:34-06.34	.46	1.8
14	08:19-09:19	.62	-4.6	11	5:51-6:52	.61	-5	11	07:34-08:34	.69	0
15	02:18-03:18	.58	2	11	13:52-14:52	.60	3.1	11	10:34-11:34	.73	-2.4
15	14:18-15:18	.49	1.4	12	8:16-9:16	.43	-1	12	03:13-04:13	.62	4.1

Table 11 Continued

15	13:20-14:20	.44	-0.2	12	9:16-10:16	.42	1.3	12	04:13-05:13	.49	0.9
16	00.41-01:41	.74	-3.5	13	5:35-6:34	.91	0.4	13	01:31-02:31	.59	0.6
16	01:41-02:41	.60	3.6	14	9:51-10:51	.81	0.1	13	11:31-12:31	.62	-0.3
16	12:41-13:41	.46	-0.4	14	12:51-13:51	.50	-0.4	14	04:19-05:19	.60	-0.3
17	01:27-02:28	.48	-2.9	14	5:51-6:51	.47	5	14	06:19-07:19	.50	5
17	06:28-07:28	.47	-5	14	4:51-5:51	.48	-5	15	03:42-04:42	.51	-3.2
17	00:28-01:27	.43	4.7	15	8:04-9:04	.58	5	15	09:42-10:42	.48	-0.1
17	08:28-09:28	.42	-2.1	15	10:04-11:04	.48	-5	15	13:42-14:42	.56	1.1
		Dyad 3		15	1:04-2:04	.45	-2.8	15	14:42-15:42	.66	-0.1
16	12:34-13:34	.63	0.2					16	01:34-02:34	.53	-2.5

Table 11 Continued

17	02:01-03.01	.54	-2.7	16	02:34-03:333	.47	5
17	04:01-05:01	.69	1	16	04:34-05:34	.46	0.9
17	08:01-09:01	.48	0	16	05:34-06:34	.79	0.6
				16	06:34-07:34	.77	-0.6

Table 12 Results of Motion Energy Analysis on Positive Nonverbal Head Synchrony in Dyads 4, Dyad 5, and Dyad 6

Dyad 4				Dyad 5				Dyad 6			
S	Sequence	*r*	Lag	S	Sequence	*r*	Lag	S	Sequence	*r*	Lag
1	00:50-01:50	.50	-5	1	08:22-09:22	.49	-3.3	1	12:21-13:21	.46	1.8
1	01:50-02:50	.53	0.9	1	10:22-11:22	.53	-2.3	2	02:22-03:21	.41	0.7
2	00:20-01:20	.70	-5	2	02:19-03:19	.79	-2.3	2	09:22-10:22	.43	-1.6
2	03:20-04:20	.69	0.3	2	06:19-07:19	.78	0.1	3	00:33-01:33	.52	3

Table 12 Continued

2	06:20-07:20	.56	-1.8	2	08:19-09:19	.55	-1.6	3	01:33-02:33	.47	5
3	00:16-01:16	.64	-2.7	2	09:19-10:19	.49	1.8	3	05:33-06:33	.62	-0.5
3	02:16-03:16	.40	4.6	4	01:30-02:30	.55	1.2	3	08:33-09:33	.46	0.2
3	03:16-04:16	.45	-1.7	4	06:29-07:29	.66	-0.7	3	14:33-15:33	.46	-3.8
3	11:16-12:16	.54	4.8	4	11:30-12:30	.53	1.9	4	12:42-13:42	.49	2.6
3	13.13-14:16	.56	-0.3	5	04:23-05:23	.69	4.4	5	01:35-02:35	.54	1.3
4	00:28-01:29	.76	-0.1	5	08:23-09:23	.62	-2.8	5	03:35-04:35	.82	-1.6
4	01:29-02:29	.55	-5	5	10:23-11:23	.53	3.3	5	08:35-09:35	.45	3.6
4	08:29-09:29	.40	3	6	00:16-01:16	.65	5	5	13:35-14:35	.55	0.6
5	00:24-01:24	.40	1.46	6	01:16-02:16	.59	0	6	07:47-08:47	.48	5
5	06:24-07:24	.52	1.2	6	02:16-03:16	.52	-2.2	6	11:47-12:47	.48	-5

Table 12 Continued

6	07:20-08:20	.80	0.4	6	06:16-07:16	.54	-0.1	7	05:47-06:47	.51	-3.2
8	00:26-01:26	.61	-5	7	07:17-08:17	.58	-1.3	7	13:47-14:47	.51	-5
9	00:17-01:17	.63	-0.5	7	09:17-10:17	.69	0	8	07:10-08:10	.42	-5
9	13:17-14:17	.44	-2.5	7	11:17-12:17	.57	0.1	8	14:10-15:10	.66	0.6
10	02:02-03:02	.63	-5	7	14:17-15:17	.56	2	9	03:55-04:55	.46	3.4
10	04:02-05:02	.55	3.4	8	02:19-03:19	.56	-2	9	09:55-10:55	.55	-3.4
10	08:02-09:02	.48	-0.3	8	03:19-04:19	.56	0.2	9	11:55-12:55	.60	-4.5
10	15:02-16:02	.49	1.2	9	14:05-15:05	.72	2	10	03:23-04:23	.52	1.7
11	10:46-11:49	.49	0.2	10	01:46-02:47	.57	0.1	10	05:23-06:23	.46	-5
12	00:59-01:59	.55	-2.1	10	06:47-07:47	.54	3.7	10	07:23-08:23	.55	4.9
12	07:59-08:59	.44	5	10	08:47-09:47	.80	1.8	10	14:23-15:23	.63	5

Table 12 Continued

13	02:34-03:34	.71	5	10	13:47-14:47	.61	5	11	00:53-01:53	.71	-4.5
13	05:34-06:34	.57	5	11	06:46-07:46	.49	4.8	11	07.53-08:53	.56	-5
13	12:34-13:34	.44	-0.2	11	12:45-13:46	.65	-3.1	11	08:53-09:53	.53	-4.9
13	13:34-14:34	.45	-5	12	01:00-02:00	.49	3.5	11	13:53-14:53	.53	1.3
14	00:37-01:37	.60	-5	12	02:00-03:00	.56	4.1	13	02:55-03:56	.47	2.7
14	01:37-02:37	.41	0.5	12	09:00-10:00	.50	-4.1	13	13:56-14:56	.57	-3.3
14	03:37-04:37	.55	0	12	14:00-15:00	.51	4.2	14	00:46-01:46	.67	-4.4
14	12:37-13:37	.55	-0.4	13	03:28-04:28	.71	-0.1	14	06:46-07:46	.92	4.4
15	03:32-04:32	.55	4.3	13	12:28-13:28	.53	-5	14	10:46-11:46	.55	-1.2
15	07:32-08:32	.63	1.1	14	02:22-03:21	.80	0	15	09:56-10:56	.53	-2
15	08:32-09:32	.47	-2.3	14	07:22-08:22	.54	-1	15	10:56-11:56	.59	0.2

Table 12 Continued

15	12:32-13:32	.58	5	14	12:21-13:22	.56	2.8	15	11:56-12:56	.45	-0.5
15	13:32-14:32	.48	5	15	04:27-05:27	.50	-2				
15	14:32-15:32	.44	-3.9	15	13:27-14:27	.52	0.4				
16	03:41-04:41	.62	-2	16	02:37-03:37	.54	0				
16	07:41-08:41	.43	-3.9	16	06:36-07:37	.70	-4.8				
16	12:41-13:41	.50	0.2	16	10:37-11:37	.62	0.2				
16	14:41-15:41	.54	-2.7								

Table 13 Number of Coded Coordinated Interaction Units with Cut-off Values

Dyad	Number of Coded Units	Cut off
Dyad 1	37	>.40
Dyad 2	34	>.45
Dyad 3	35	>.50
Dyad 4	31	>.50
Dyad 5	35	>.50
Dyad 6	38	>.45

Note. If there was not any value higher than .45 & .50 in a given sequence, .40 correlation coefficient was used as the cut-off point

Table 14 Interrater Reliability Results for Manifest Coding of Each Communication Modality in Sample 1

	Therapists (N = 27)*				Patients (N = 27)*			
	Researcher Mean	Rater Mean	α	Intraclass r	Researcher Mean	Rater Mean	α	Intraclass r
Gaze on	41.43	41.03	.99	.99	29.89	30.43	.87	.87
Gaze off	17.89	18.44	.99	.99	30.46	30.29	.87	.88
Facial Emotion	41.19	42.15	.89	.89	44.11	53.85	.47	.36
Eating Lips	0.85	0.93	.31	.32	2.44	2.78	.83	.83
Face Touch	1.93	2.08	.99	.99	4.19	4.37	.99	.99
Hair Touch	0.44	0.52	.91	.91	2.00	1.63	.85	.85
Nodding	7.04	8.85	.63	.63	3.19	4.17	.97	.97
Vocal Prompt	2.85	3.15	.94	.94	0.48	0.81	.74	.72
Camera	0.19	0.26	.94	.93	1.74	2.50	.80	.79

Note. *For "gaze off", N = 26

Dyad 3's interactive regulations patterns revealed that in the first phase of therapy, there were attunement, attempting to repair partner's rupture by the patient, the reciprocity of affirmativeness, interactive positive emotion regulation which yields closeness, keeping own rupture as an optimal frustration, rejection, interactive regulation based on negative emotion, and ruptures due to withdrawal. In the second

phase of the therapy, interactive dysregulation, emotional reciprocity based on negative emotion, interactive regulation based on behavioral mimicry, Interactive regulation in which the patient is active were added. In the third phases of the therapy, there were approach-avoidance dilemma, interactive disorganization, discordance, heightned affective moments based on happy toreunioninteractions, avoiding from positivity and closeness by the therapist, and reflectiveness. And in the final phase, there was not any new interactive patterns.

Results for Dyad 4's interactive regulation patterns of showed that in the first phase of the therapy, emotional reciprocity based on negative emotion, interactive regulation based on behavioral mimicry, attunement, reciprocity of affirmativeness, keeping own rupture as an optimal frustration, interactive regulation in which the patient is active, interactive positive emotion regulation which yields closeness, reflectiveness, giving up to repair a rupture by the patient, interactive disorganization, attempting to repair partner's rupture by the patient, discordance, being judgmental, heightened affective moments based on happy toreunioninteractions, avoiding positivity and closeness by therapist, reciprocity of affirmativeness, rejection, and interactive regulation based on mutual negative emotion were present. In the second phase, there was not any different interactive pattern from the first phase. In the third phase, approach-avoidance dilemma, and chase and dodge emerged appeared as new interactive patterns. In the final phase, there was not any new interactive patterns.

Dyad 5's interactive regulation patterns in the first phase were attunement, attempting to repair partner's rupture by the patient, interactive dysregulation, interactive regulation based on behavioral mimicry, emotional reciprocity based on negative emotion, approach- avoidance dilemma, avoiding positivity and closeness, interactive positive emotion regulation which yields closeness, and interactive disorganization. In the second phase, new patterns were keeping own rupture as an optimal frustration, unresponsiveness rather than being reflective, discordance, and interactive regulation based on negative emotion, emerged. In the third and final phases, there were not any new patterns.

Table 15 Results of Latent Pattern Content Analysis of Manifest Contents

Interactive regulation	**Interactive positive emotion regulation which yields closeness** Accompanying the partner's increased positive emotion	**Interactive regulation in which the patient is active** While the therapist is anxious to talk and performs body shifts, gaze aversions, neutral facial expressions, and hair touches, the patient performs head nods to regulate the therapist.	**Interactive regulation based on negative emotion** The therapist or the patient mirrors the negative emotion on the partner's face	**Interactive regulation based on behavioral mimicry** One partner imitates the other partner's body shift, or punctuation	**Reciprocity of affirmativenes** Mirroring the head nods or the vocal prompts of the partner	**Attunement** Affirmative gestures as response to changes in the partner's body (e.g., shrugging), head movements, or emotional expressions on face (e.g., punctuation, positive and negative emotion)	**Reflectiveness** The therapist's leaning her head while interpreting with sad emotion on her face is responded with a decrease in interactive defensive positive emotion by the patient
Interactive dysregulation	**Interactive disorganization** The therapist's need for self-regulation by withdrawal causes speech overlap	**Emotional reciprocity based on negative emotion** Concurrence of different combinations of self-touch, displacement, body and head shifts, shaking legs, note-taking, or withdrawal behaviors in moments of sadness in both the patient and the therapist	**Interactive dysregulation** The valence of the positive emotion is too high, includes dysregulated body shifts of the patient and high pitch laughs of the therapist	**Chase and dodge** After a mismatch of the therapist's mutual focus attempt which came after a mutual focus moment with emotional expressiveness of the therapist, the patient's avoidant response triggers the therapist's approaching behavior by asking questions at the cost of interrupting the patient's speech. The patient needed to regulate her arousal resulting from seeing emotional expression. She was able to listen unless eating her lips, making body shifts and answering without looking at the therapist's face. The therapist engaged in approaching behaviors, which were affirmative gestures, and interrupte the patient's speech by asking question.		**Approach avoidance dilemma** When the therapist comes eye contact, the patient who was waiting to the therapist for a while,gaze avert from the therapist	**Still face** The therapist's note-taking with gaze off in a closed body posture causes consecutive disruptions in patient's experiences (i.e., unresponsiveness) which lead her to look at the therapist's notes and then at the camera.

Table 15 continued

Rupture	**Rupture due to withdrawal** Leaving from mutual focus	**Discordance** The therapist excessively closed her upper body while listening with gaze off and taking notes	**Rejection** Not accompanying the patient's positive emotion and not responding to her need for approval, (even gaze off of therapist), while the patient was waiting	**Judgmental** Sarcastic smile with affirmative gestures as a response to the patient's big smile	**Giving up to repair a rupture** After ruptures of the therapist in the patient's being reliably seen experiences, they became detached without insistence of the patient to repair the rupture as opposed to earlier	**Unresponsiveness rather than being reflective** Not accompanying the patient's defensive positive emotion to contain underlying negative emotions; however, the lack of affirmativeness and rigid stability in her emotional expressiveness	**Avoiding Positive and Closeness** After sharing mutual positive (sometimes defensive) emotion, the therapist left mutual focusing

Repair	**Keeping own rupture as an optimal frustration.** Head nods after interactive disorganization and/or discordance	**Attempting to repair partner's rupture** Attempt to repair the partner's rupture due to withdrawal (i.e., detach or separate moments, and silent moments like broken fluency in the narrative) by implicit or explicit approaching behavior to bring the partner to mutual focusing like talking, asking questions, express emotions (e.g., positive- defensive or not), perform body or head shifts, insist on looking at the partner's face
Heightened affective moments	The patient's playful behavior was responded with surprised face from the therapist Happy to reunion interactions	

Dyad 6's results of interactive regulation showed that in the first phase of the therapy, there were interactive positive emotion regulation which yields closeness, approach avoidance dilemma, chase and dodge, reflectiveness, interactive dysregulation, emotional reciprocity based on negative emotion, still face, keeping own rupture as an optimal frustration, discordance, interactive regulation based on behavioral mimicry, attempting to repair partner's rupture by the patient, avoiding positivity and closeness. In the second phase of the therapy, attunement, interactive regulation based on negative emotion emerged were present. In the third phase, there was heightened affective moments based on happy to reunion interaction. And in the final phase, there was not any new interactive patterns.

3.2.6.1.2.Results for Self Regulation Dynamics of Each Dyad across Different Phases of Therapy

Table 16 contains some exemplar findings for latent pattern contents of self regulation dynamics based on nonverbal behaviors that were observed across different phases of Dyad 1's therapy (see Appendix M for all findings about each therapy dyad).

3.2.6.2.Results of latent pattern content analysis based on quantative analyses.

To objectively see the differences between the dyads, durations of mutual eye contact between partners with emotional expressions on the face in each coordinated interaction unit were categorized into seven dimensions, namely *mutuality* (i.e., total mutual eye contact duration), *mutual eye contact with mutual ambivalent emotional expressions on the face*, *mutual eye contact with mutual neutral faces*, *mutual eye contact with mutual negative emotion on the face* (i.e., negativity), *mutual eye contact with mutual positive emotion on the face* (i.e., positivity), *mutual eye contact with unmatched emotion on the faces of partners*, and *duration of detachment/separateness* (i.e., not mutual eye contact). Mean values of the ratio of an interactive dimension duration to one minute were provided in the Figures 22-27 (The bottom of the each graph represents the start of the therapy and the top represents the end of the final phase. Thus, the graphs should be read from buttom to top). Moreover, multivariate analysis of the differences

between therapy dyads in these interactive regulation dimensions were presented in the following.

Descriptive results for interactive regulations across different phases of the therapy showed that, Dyad 2 and Dyad 6 had an increasing trend in duration of mutual eye contact, but Dyad 1, Dyad 3, Dyad 4 (except for an increase in the final phase), and Dyad 5 had a decreasing trend. The increasing trend of the duration of mutual eye contact with mutual ambivalent emotions on faces did not change in Dyad 1 and Dyad 6 during the proces. There was an increasing trend for Dyad 5 and Dyad 2 (there was no increase in the second phase and there was a little decrease in the final phase in Dyad 2). Dyad 3 had mutual eye contact with mutual ambivalent emotions only at the first and final phases of the therapy with a decreasing trend. Results of mutual eye contact with mutual neutral facial expression showed that Dyad 1 and Dyad 4 had an increasing trend across the therapy phases. Dyad 2 had an increasing trend, which then, turned to a decline. Dyad 3 had an increasing trend with a higher increase in the third phase. Dyad 5 had an increasing trend except for a little decrease in the second phase. Dyad 6 had an increasing trend with the highest duration in the second phase.In terms of mutual eye contact with mutual negative emotion on the face, there was a decreasing trend in Dyad 5 (except for in the high values in the third phase), whereas there was an increasing trend in Dyad 1, Dyad 2, Dyad 3 (except for in high values in the first phase), Dyad 4, and Dyad 6. According to mutual eye contact with mutual positive emotion on the face results, there was a decreasing trend in Dyad 1 (except for an increase in the final phase), whereas there was an increasing trend in Dyad 2 (except for a decrease in the final phase), Dyad 3 (highest values in the second phase), Dyad 4 (highest values in the second phase), and Dyad 5 (the trend was declining in the third phase, and it increased again in the final phase).

Table 16 Example Findings for Latent Pattern Content Analysis of Self-Regulation Characteristics of Dyad 1

		Beginning **(1-2-3)**	**Earlier Middle** **(4-5-6-7-8)**	**Late Middle** **(9-10-11-12-13-14)**	**Final** **(15-16-17)**
Focusing	Therapist	Listening with gaze on, ending gaze off when the patient is gaze on	Gaze off at the beginning of her speech	Gaze off while talking to look at the camera	Talking with fast rhythmic gaze on/off pattern
	Patient	Listening with gaze on Block off maximum 7 seconds	Gaze on at most for three seconds while talking	Her gaze on pattern while listening was disrupted by employing block gaze avert and fast rhythmic changes	Block off for maximum 21 seconds
Displacement of Selfobject Needs	Therapist	At the beginning of her speech	After mutual slight positive emotion while listening	After being unable to take the speech turn	Before/end of her talk
	Patient	After increased therapist's positive emotion	At the moment of her long avoidance	Before the therapist's talk	None
Affirmative	Therapist	To encourage the patient's eye contact	Before her speech	To invite the patient to gaze on	During her gaze off
	Patient	Constantly while listening to the therapist	Reasonable amount while listening with shared positive emotion	Not always while listening Frequent nodding to take speech	Reasonable amount while listening During gaze off

Table 16 Contunied

Facial Emotional Expressiveness	Therapist	Dominantly neutral Accompanying the patient's positive emotion	Dominantly neutral Slightly positive while talking	Stable moderately or slightly negative emotion while the patient was crying	Stable slightly positive when the patient was unstable with positive and negative
	Patient	Unstable with interactive positive emotion Accompanying the therapist's positive emotion	Stable slightly negative emotion with interactive positive emotion Unstable positive emotion and negative emotion blocks	Mostly unstable Stable while expressing moderate negative emotion Crying	After highly and moderately positive emotion, became slightly negative while listening to the therapist, and then became unstable
Self-Regulatory Behavior	Therapist	None	After shared positive emotion	After looking at the camera while talking	After being emotionally unmatched with the patient
	Patient	While listening to the therapist with eye contact	Before interactive positive emotion	Rapid while listening emotionally expressive therapist	Constant face touches/touching with positive emotion

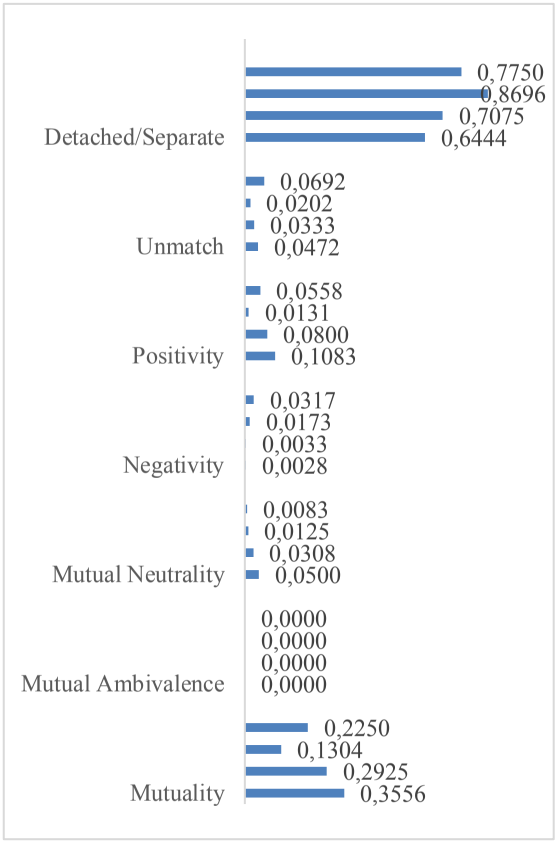

Figure 24 Dyad 1's interactive regulation dynamics across phases

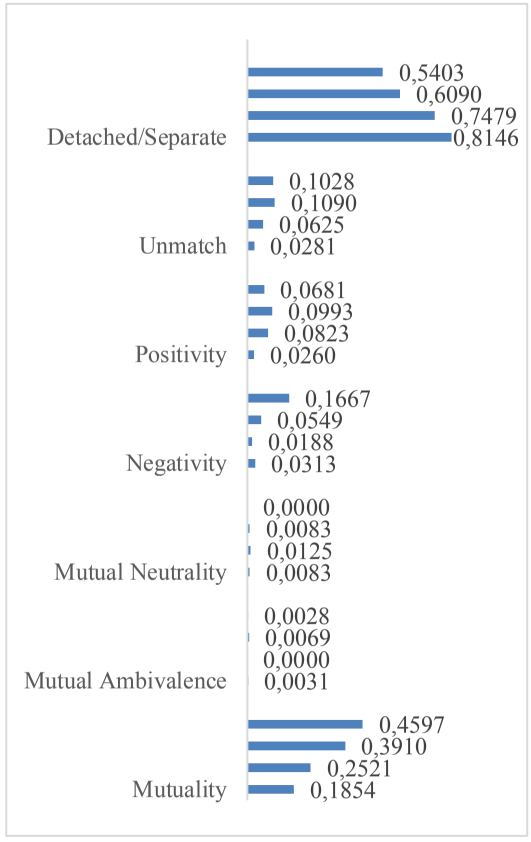

Figure 24 Dyad 2's interactive regulation dynamics across phases

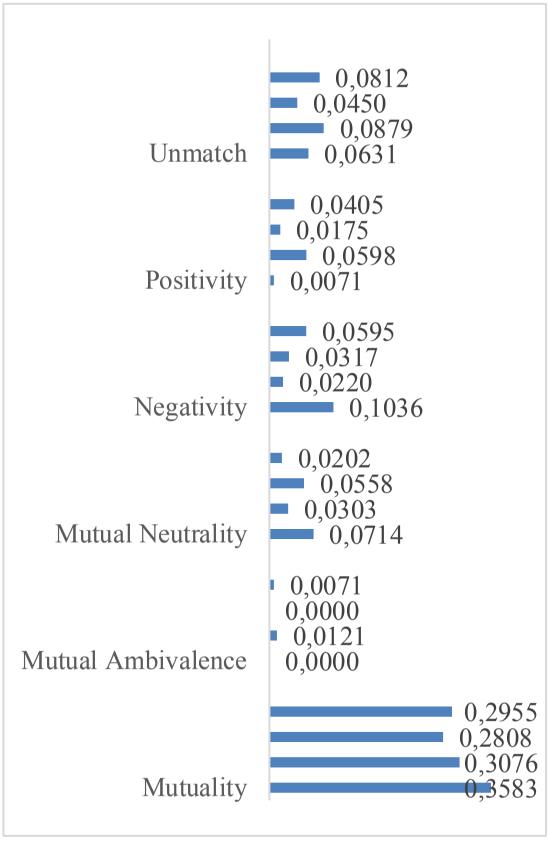

Figure 24 Dyad 3's interactive regulation dynamics across phases

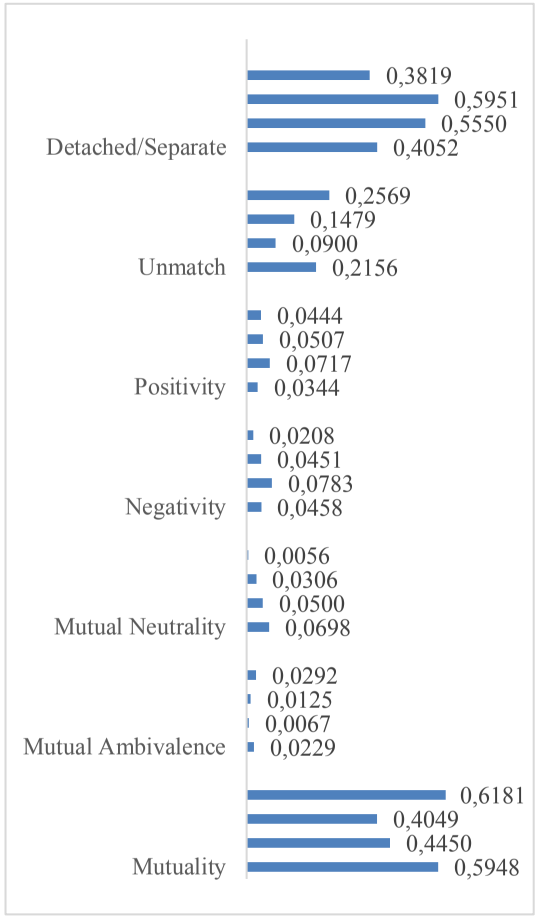

Figure 27 Dyad 4's interactive regulation dynamics across phases

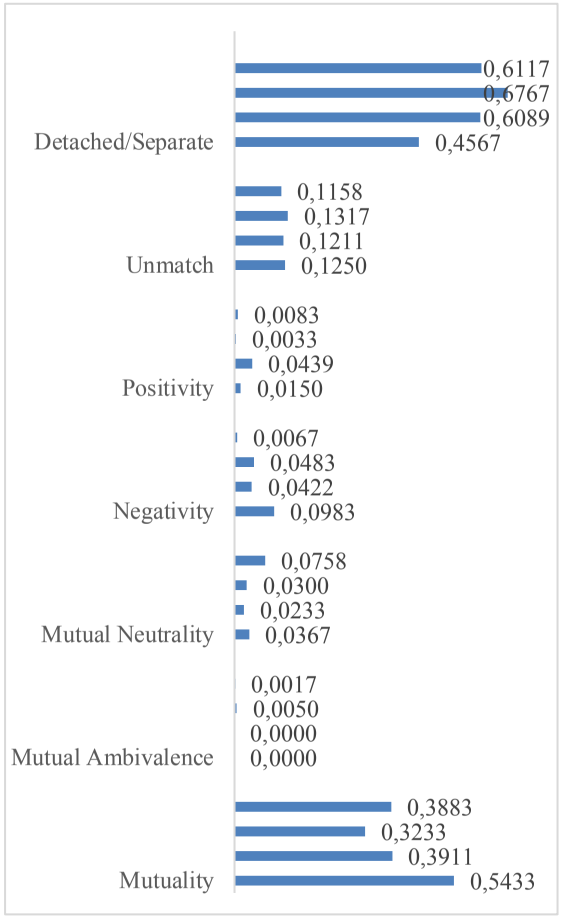

Figure 27 Dyad 5's interactive regulation dynamics across phases

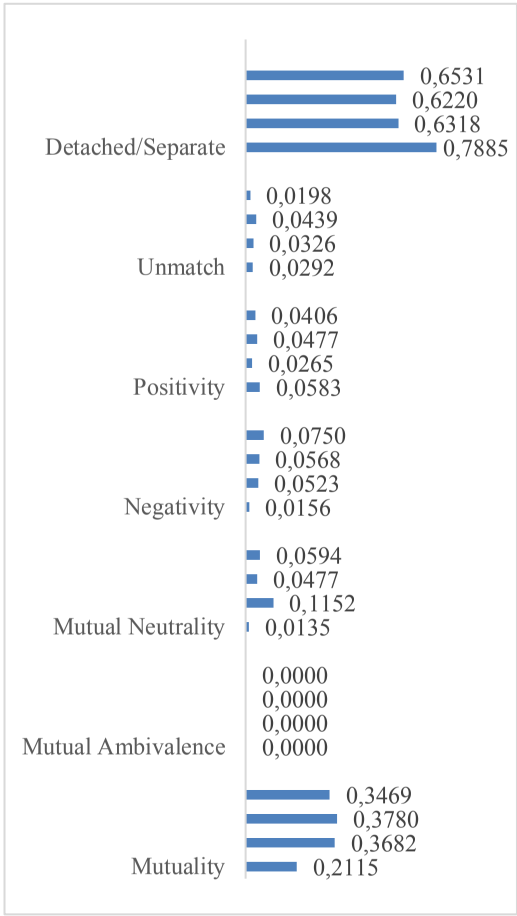

Figure 27 Dyad 6's interactive regulation dynamics across phases

Analysis of mutual eye contact with unmatched emotions on partners' face revealed that there was an decrasing trend in Dyad 1 (except for an increase in the final phase), and Dyad 5 (except for an increase in the third phase, whereas there was a increasing trend in Dyad 2 (except for a decline in the final phase), Dyad 3 (except for a decrease in the third phase, and increase again in the final phase), Dyad 4 (still the first phase had one of the highest values), and Dyad 6 (except for a decline in the final phase).

3.2.6.2.1.Multivariate Analysis of Variance (MANOVA) Results of Mean Differences between Six Therapy Dyads and Interactive Regulation Dynamics

MANOVA results revealed that there were mean differences between six therapy dyads and interactive regulation dynamics (Wilks's $\lambda = 0.49$, $F(35, 835.341) = 4.40$, $p < 0.000$). Statistically significant differences were found in all dynamics except for mutual positivity and mutual negativity (see Table 17)

Results for mean comparisions among the dyads showed that Dyad 1 had significantly lower mutuality and higher detachment/separateness than Dyad 4, Dyad 5, and Dyad 6. Also, Dyad 1 had significanlty lower mutual eye contact with mutual ambivalent and unmatched emotions than Dyad 4. However, Dyad 1 had more unmatched mutuality than Dyad 5, and less mutual neutrality than Dyad 6.

Dyad 4 had significantly higher scores on all of the interactive regulation dimensions, and significantly lower scores on detachment/separateness (except for on mutual neutrality as compared to Dyad 2 and Dyad 3) and mutual ambivalent dimensions than Dyad 5. Finally, Dyad 6 had lower values on all significant dimensions (except for mutual neutrality) and higher detachment/separateness than Dyad 4. However, Dyad 6 had higher mutual neutrality than Dyad 2, and lower mutual unmatched emotions than Dyad 5.

Table 17 MANOVA Results for Difference between Dyads in Interactive Regulation Dynamics

IRD	Dyad	*M*	*SD*	CI*		*F*(5)	η^2		Dyad	*M*	*SD*	CI		*F*(5)	η^2	IRD	Dyad	*M*	*SD*	CI		*F*(5)	η^2
M	1^{abc}	0.22	0.14	-.41	-.16	10.20	.20	U	1^{ab}	0.04	0.05	-.20	-.08	14.59	.26	MN	1^{a}	0.02	0.03	-.09	-.00	3.13	.08
	2^{d}	0.32	0.17	-.30	-.07				2^{c}	0.08	0.07	-.14	-.03				2^{b}	0.01	0.02				
	3^{e}	0.31	0.13	-0.23	-.00				3^{d}	0.07	0.08	-.16	-.04				3	0.04	0.06				
	4^{adef}	0.50	0.23	-.30	-.06				4^{acde}	0.18	0.13	-.17	-.05				4	0.04	0.06				
	5^{b}	0.40	0.19	-.32	-.07				5^{bf}	0.12	0.11	.09	.20				5	0.04	0.10				
	6^{cf}	0.33	0.17	.05	.29				6^{ef}	0.03	0.04	.03	.15				6^{ab}	0.06	0.08				
MA	1^{a}	0.00	0.00	-.03	-.01	8.69	.17	D/S	1^{abc}	0.78	0.14	.17	.41	10.20	.20	N	1	0.02	0.03			1.37	.03
	2^{b}	0.00	0.01	-.02	-.01				2^{d}	0.68	0.17	.17	.41				2	0.06	0.10				
	3^{c}	0.01	0.02	-.02	-.00				3^{e}	0.69	0.13	.00	.23				3	0.05	0.10				
	4^{abcde}	0.02	0.03	-.01	.01				4^{adef}	0.50	0.23	.06	.30				4	0.05	0.06				
	5^{d}	0.00	0.01	.01	.03				5^{b}	0.60	0.19	.07	.32				5	0.04	0.06				
	6^{e}	0.00	0.00						6^{cf}	0.67	0.17	-.29	-.05				6	0.05	0.08				

Table 17 Countunied

P	1	0.05	0.07	2.08	.05	P**	5	0.02	0.05	2.08	.05
	2	0.07	0.10				6	0.04	0.05		
	3	0.03	0.06								
	4	0.05	0.07								

Note. IRD: Interactive Regulation Dynamics, M: Mutuality, MA: Mutual Ambivaalence, U: Unmatch, D/S: Detached/Separate, P: Positivity, MN: Mutual Negativity, N: Negativity *CI 95 % for signifancant values on superscripts, respectively

Note 2. Dyads sharing same superscripts were significantly different from each other at $p < .01$; **: Positivity Continued

3.2.6.2.2.Multivariate Analysis of Variance (MANOVA) Results of Mean Differences between Different Attachment Types of the Therapists and Interactive Regulation Dynamics

MANOVA results revealed that there were mean differences between different attachment types of the therapists (taking 4 as the midpoint; and one of the therapist's score was higher than sample mean on avoidance dimension, thus she was classified as fearful) and interactive regulation dynamics (Wilks's $\lambda = 0.59$, $F(21, 574.842) = 5.16$, $p < .001$). Statistically significant differences were found in all dynamics except for mutual positivity and mutual negativity (see Table 18). Results of mean comparisions between dyads showed that there were significantly lower mutuality and mutual neutrality, and higher detachment/separateness in the dyads with preoccupied attached therapist as compared to the dyads who had a fearful therapist. Also, dyads who had secure therapist had significantly higher mutuality, mutual ambivalent and unmatched emotions, and lower detachment/separateness.

3.2.6.3.Results of Quantative Analyses of Self Regulation Dynamics

Descriptive findings about the self regulation systems of both the therapist and the patient based on the mean duration of each communication modalities ratio to one minute in each coordinated interaction unit across different phases of the therapy were illustrated in Figures 28-33. MANOVA results showed that therapy dyads were different from each other in self regulation dynamics (Wilks's $\lambda = 0.091$, $F(60, 907.52) = 10.09$, $p < .001$) except for affirmative gestures of patients (see Table 19).

Dyad 2's therapist's focus onto her partner increased during the process. She had significanlty lower values than Dyad 1's therapist and higher values than Dyad 3's therapist. Her avoidance of the patient decreased during the process. She had significanlty higher values than the therapists of Dyad 1 and Dyad 4, and lower values than therapists of Dyad 3 and Dyad 6.

Table 18 MANOVA results for Differences between Therapists' Attachment Styles and Interactive Regulation Dynamics

IRD		*M*	*SD*	CI		*F*(3)	η^2	IRD		*M*	*SD*	CI		*F*(3)	η^2	IRD		*M*	*SD*	CI		*F*(3)	η^2
M	1^{ab}	0.27	0.16	-.18	-.02	13.45	.16	N	1	0.04	0.08			.23	.00	D/S	1^{ab}	0.73	0.16	.02	.18	13.45	.16
	2^{c}	0.31	0.13	-.33	-.14				2	0.05	0.10						2^{c}	0.69	0.13	.14	.33		
	3^{ad}	0.37	0.18	-.30	-.08				3	0.05	0.07						3^{ad}	0.63	0.18	.08	.31		
	4^{bcd}	0.50	0.23	-.23	-.04				4	0.05	0.06						4^{bcd}	0.50	0.23	.04	.23		
MA	1^{a}	0.00	0.01	-.03	-.01	13.96	.17	P	1	0.06	0.09			2.38	.03								
	2^{b}	0.01	0.02	-.02	-.00				2	0.03	0.06												
	3^{c}	0.00	0.00	-.02	-.00				3	0.03	0.05												
	4^{abc}	0.02	0.03						4	0.05	0.07												
MN	1^{a}	0.01	0.03	-.07	-.01	4.64	.06	U	1^{a}	0.06	0.06	-.17	-.07	14.46	.17								
	2	0.04	0.06						2^{b}	0.07	0.08	-.16	-.05										
	3^{a}	0.05	0.09						3^{c}	0.08	0.09	-.15	-.05										
	4	0.04	0.06						4^{abc}	0.18	0.13												

Note 1. 1: preoccupied attachment, $n = 71$; 2: dismissive attachment, $n = 35$; 3: fearful attachment, $n = 73$; 4: secure attachment, $n = 31$, *Note 2*. IRD: Interactive Regulation Dynamics, M: Mutuality, MA: Mutual Ambivalence, U: Unmatch, D/S: Detached/Separate, P: Positivity, MN: Mutual Neutralityy, N: Negativity, *Note 3*. Dyads sharing same superscripts were significantly different from each other at $p < .01$, *Note 4*. CI %95 respectively based on superscript

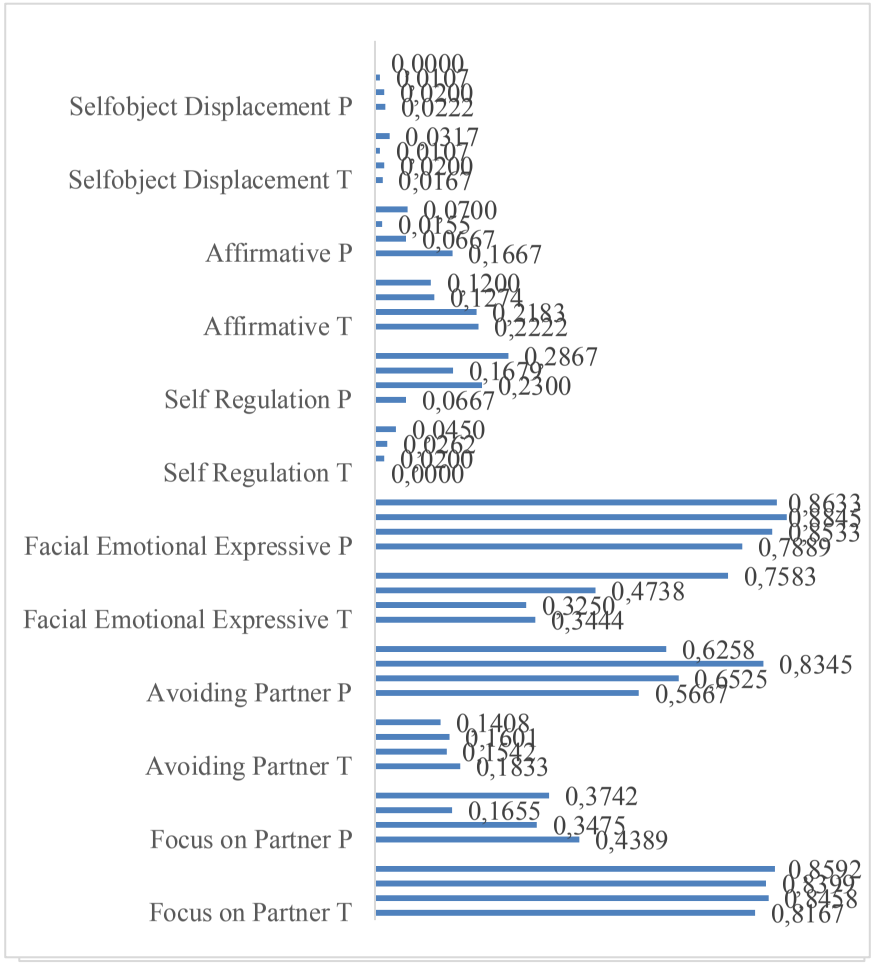

Figure 29 Dyad 1's self regulation dynamics across phases

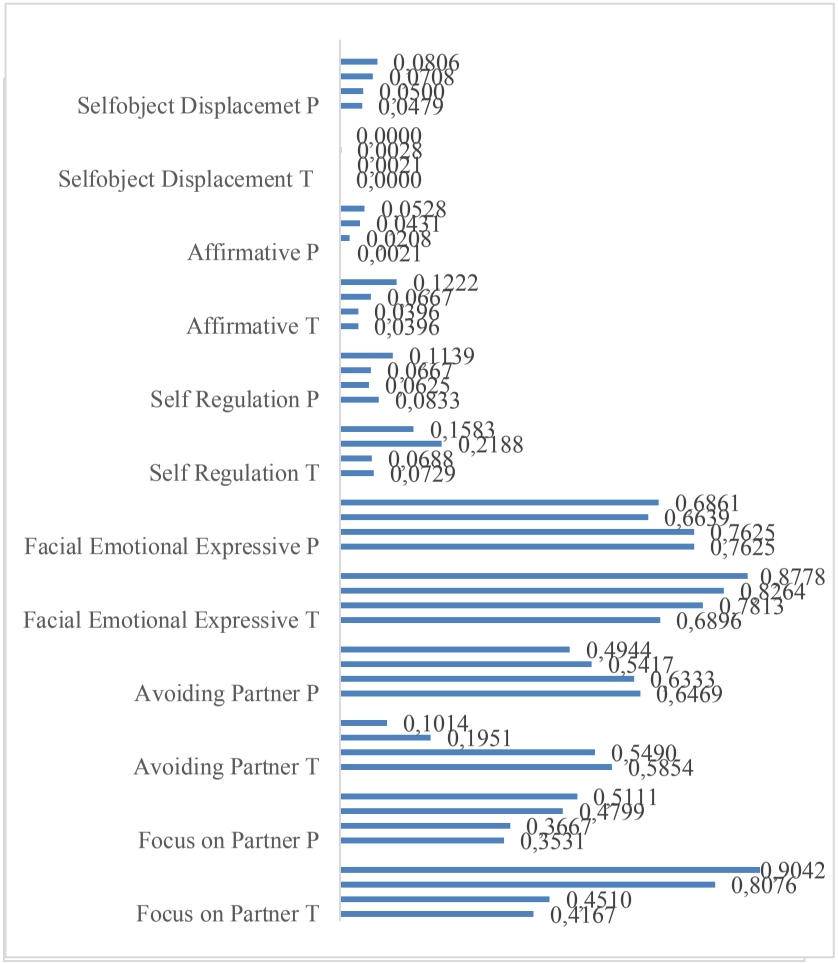

Figure 29 Dyad 2's self regulation dynamics across phases

Figure 30

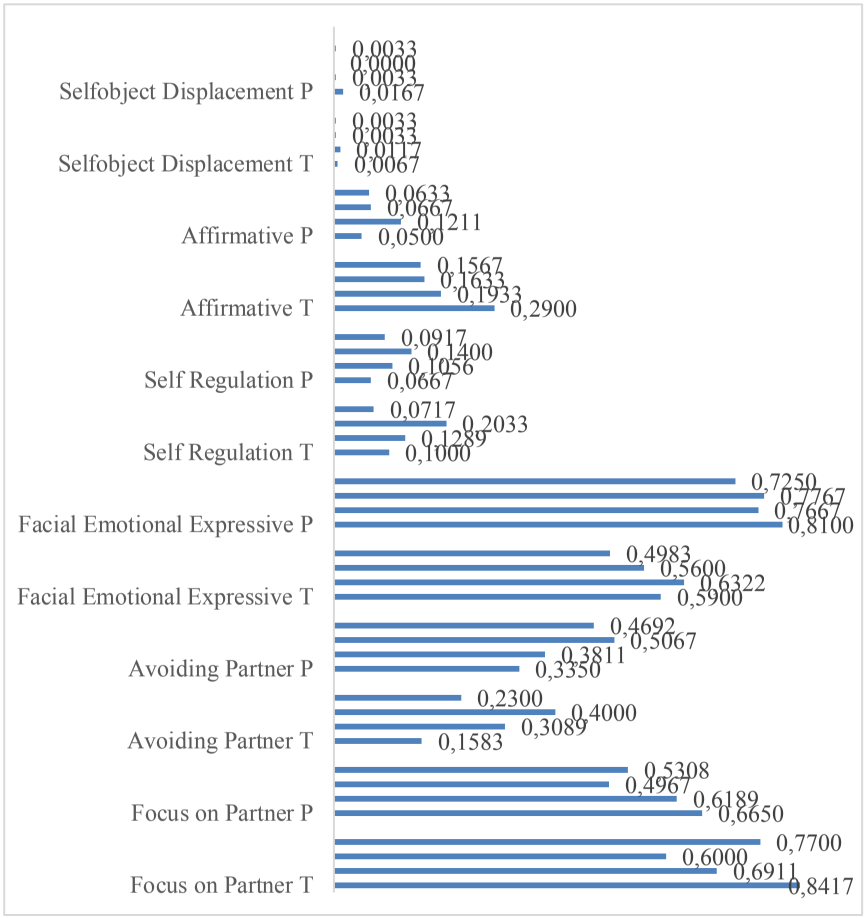

Figure 33 Dyad 3's self regulation dynamics across phases

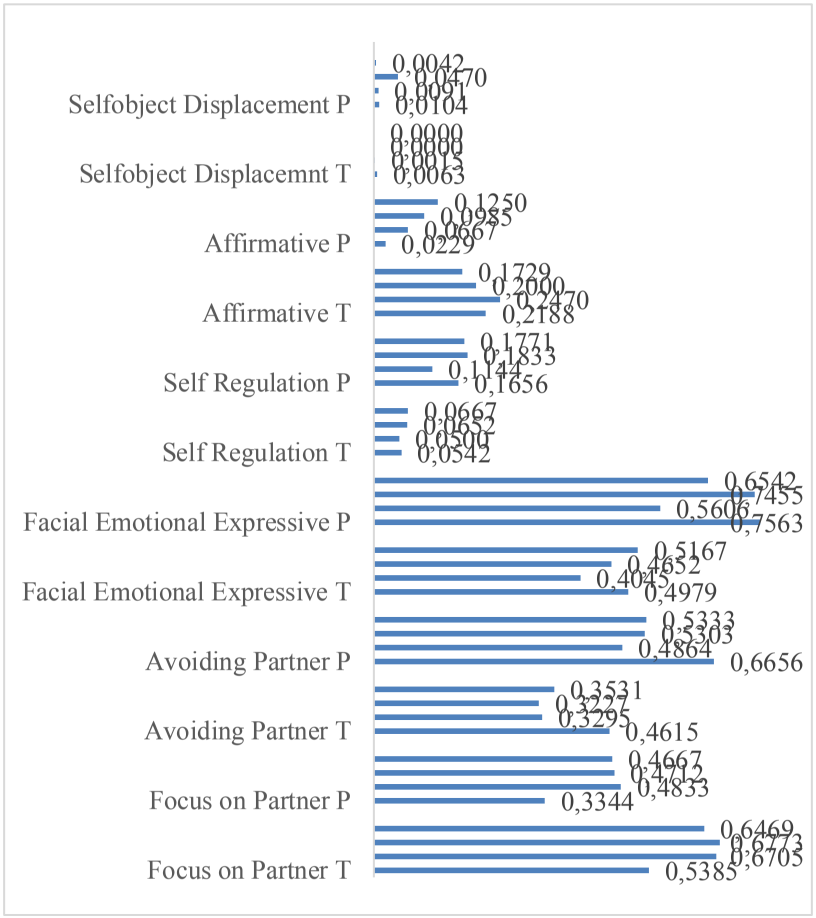

Figure 33 Dyad 4's self regulation dynamics across phases

Table 19 Results for Differences in Self Regulation Dynamics of Dyads

SRD		*M*	*SD*	CI		*F*(5)	η^2	Dyad	*M*	*SD*	CI		*F*(5)	η^2	Dyad	*M*	*SD*	CI		*F*(5)	η^2
FPT	1^{a}	0.84	0.11	0.00	0.07	21.87	.35	FPP 1^{abcde}	0.29	0.20	-0.26	-0.01	20.88	.34	AFT 1^{abcd}	0.16	0.11	-0.32	-0.08	20.99	.35
	2^{abc}	0.65	0.25	0.00	0.29			2^{afgh}	0.43	0.18	-0.52	-0.27			2^{ef}	0.35	0.25	-0.53	-0.28		
	3^{abdef}	0.44	0.19	0.05	0.00			3^{bfi}	0.69	0.16	-0.44	-0.18			3^{aeghi}	0.56	0.19	-0.24	-0.00		
	4^{cdg}	0.78	0.15	0.00	0.09			4^{cgj}	0.60	0.21	-0.42	-0.16			4^{bfgj}	0.22	0.15	-0.32	-0.09		
	5^{ae}	0.72	0.17	0.00	0.09			5^{dhk}	0.58	0.18	-0.28	-0.03			5^{ch}	0.28	0.17	-0.33	-0.09		
	6^{afg}	0.64	0.19	0.04	-0.26			6^{eijk}	0.44	0.20	-0.39	-0.13			6^{dij}	0.36	0.19	0.00	0.26		
				0.00	-0.47						-0.31	-0.04						0.21	0.47		
				0.00	-0.41						-0.28	-0.02						0.16	0.41		
				0.00	-0.32						0.12	0.37						0.08	0.32		
				0.02	0.01						0.03	0.29						-0.27	-0.02		
											0.01	0.26									
FET	1^{a}	0.50	0.38	-0.47	-0.12	9.07	.18	AFP 1^{abcd}	0.71	0.20	0.28	0.53	20.99	.34	AFP** 6^{dhij}	0.55	0.21	0.04	0.32	20.99	.34
	2^{abcd}	0.79	0.22	0.15	0.502			2^{efg}	0.58	0.18	0.18	0.44						0.03	0.29		
	3^{be}	0.47	0.27	0.04	0.392			3^{aeh}	0.30	0.17	0.168	0.42						-0.37	-0.12		

Table 19 Continued

	4^{ef}	0.68	0.23	0.15	0.502			4^{bfi}	0.40	0.21	0.038	0.29					-0.28	-0.02						
	5^{c}	0.58	0.20	-0.39	-0.03			5^{cgj}	0.42	0.18	0.15	0.41												
	6^{df}	0.47	0.19	0.03	0.39																			
SRD	Dyad	*M*	*SD*	CI		*F*(5)	η^2		Dyad	*M*	*SD*	CI		*F*(5)	η^2		Dyad	*M*	*SD*	CI		*F*(5)	η^2	
SRT	1^{ab}	0.03	0.03	-0.19	-0.03	4.68	.10	FEP	1^{abc}	0.86	0.15	0.02	0.28	4.28	.10	SRP	1^{abc}	0.21	0.24	.04	.22	8.85	.18	
	2^{ac}	0.14	0.19	-0.17	-0.02				2^{a}	0.71	0.20	0.02	0.29				2^{ad}	0.08	0.09	.08	.27			
	3	0.10	0.11	0.00	0.16				3^{b}	0.71	0.23	0.06	0.31				3^{be}	0.03	0.04	.02	.19			
	4	0.08	0.13						4^{c}	0.78	0.17						4^{def}	0.19	0.12	-.21	-.01			
	5^{b}	0.12	0.10						5	0.76	0.22						5^{c}	0.10	0.09	-.25	-.06			
	6^{c}	0.06	0.05						6	0.68	0.18						6^{f}	0.16	0.13	-.22	-.03			
AT	1^{a}	0.16	0.09	.03	.16	11.86	.23	AP	1	0.06	0.13			1.66	.04	DSP	1^{abcde}	0.01	0.02	.01	.03	8.55	.17	
	2^{abcd}	0.06	0.05	-.15	-.02				2	0.03	0.05						2^{a}	0.06	0.04	.01	.03			
	3^{ef}	0.11	0.08	-.19	-.06				3	0.08	0.09						3^{b}	0.01	0.02	.01	.03			
	4^{b}	0.15	0.09	-.21	-.09				4	0.10	0.10						4^{c}	0.02	0.04	.001	.02			

Table 19 Continued

	5[ce]	0.19	0.10	-.15	-.02				5	0.09	0.17					5[d]	0.00	0.01	.01	.03
	6[df]	0.21	0.12	-.1	-.04				6	0.08	0.11					6[e]	0.02	0.08		
DST	1[a]	0.02	0.03	-.08	-.02	9.14	.18	DST**	5[d]	0.01	0.01	.015	.08	9.14	.18					
	2[abcde]	0.00	0.00	.02	.08				6[e]	0.00	0.01									
	3[b]	0.00	0.01	.01	.07															
	4[c]	0.00	0.01	.029	.09															

Note 1. Dyads sharing same superscripts were significantly different from each other at $p < .05$

Note 2. FPT/P: Focus on Partner Therapist/ Patient, FET/P: Facial Emotional Expressiveness Therapist/Patient P, AFT/P: Avoiding Partnet Therapist/ Patient, AT/P: Affirmative Therapist/Patient, DST/P: Displacement of Selfobject Therapist/Patient, SRT/P: Self regulation Therapist/Patient; SRD: Self regulation Dynamics

Note 3. AFP** Continued ** DST Continuedinued

Her emotional expressiveness, which was significantly higher than all therapists (except for a nonsignificant difference with Dyad 4's therapist), increased during the process. The amount of her self regulative behaviors increased during the process. In terms of her affirmative gestures, although the amount of these behaviors increased during the process, she used these gestures significantly less than other therapists (except for being nonsignificantly lower than Dyad 3's therapist). She had the lowest values on displacements of selfobject needs among the therapists (but significantly different only from Dyad 1's therapist). The patient had significantly lower gaze on values than other patients (except for a nonsignificant difference with Dyad 6, and being higher than Dyad 1). However, her gaze on the therapist increased during the process. There was a decrease in her avoidance of the therapist, which was significantly higher than many of the patients (except for being nonsignificantly different from Dyad 6, and being lower than Dyad 1). Her emotional expressiveness, which decreased during the last two phases of the therapy was only significantly lower than the emotional expressiveness of Dyad 1's patient. Her usage of affirmative gestures, which was lower than all patients (but the differences were not significant), increased during the therapy process. The patient had the highest values on the displacement of selfobjects needs than other patients and they were significant differences and the number of these behaviors increased during the therapy process.

The results for Dyad 3's therapist, who had significantly the lowest gaze on values among therapists, did not change the amount of the focus onto her partner (except for a decrease in the third phase). She had significantly the highest score on avoidance of the patient as compared to the other therapists. Also, her avoidance increased in the third phase. Her facial emotional expressiveness, which was significantly lower than only Dyad 2's therapist, showed an increasing trend during the process except for a decrese in the third phase. Her engagement to self regulatory behaviors showed a decreasing trend, however, it turned an increasing trend from third phase. The differences between her and other therapists based on self regulatory behaviors were not significant. Her affirmative gestures were significantly lower than Dyad 5 and Dyad 6. Affirmativeness increased during the

process except for a decrease in third phase. She had only significant lower values on the displacements of selfobject needs than Dyad 1. In terms of the displacements of selfobject needs, there was an increasing trend during the process; it was significantly lower than only the therapist of Dyad 1. The results for Dyad 3's patient showed that she had significantly higher eye contact values than Dyad 1, Dyad 2, and Dyad 6. There was a heterogeneity in her focusing with an increase in the third phase, and a decrease in the second and the final phases. The patient had significantly lower scores on avoidance of the therapist than Dyad 1, Dyad 2, and Dyad 6. Although she was less expressive than all patients (except for being higher than Dyad 6), this difference is statistically significant only for Dyad 1. Her emotional expressiveness yielded the same pattern with her gaze on behavior. Her usage of self regulatory behaviors was significantly lower than Dyad 1, Dyad 2, Dyad 4, and Dyad 6, and the amount of these behaviors increased during the process. Compared to the beginning of the therapy, her affirmativeness decreased during the process (no significant differences with other patients). Displacement of selfobject needs of the patient was significantly lower than only Dyad 4. Her displacements increased in the second and the final phase as compared to the beginning phase (except for a decrease in the third phase).

The results for Dyad 4's therapist showed that the amount of her gaze on behavior increased (except for the lowest level in the second phase), and so, her avoidance of the partner decreased (except for the highest level in the second phase) as the therapy progressed. Both the therapist and the patient was not significantly different from any of the therapists or patients in terms of their focus on their partners. Still, the patient's gaze on behavior decreased during the process. The therapist, who had significanlty higher facial emotional expressiveness than the therapists of Dyad 2 and Dyad 6, was less expressive in the second and the third phase of the therapy as compared to the beginning phase. Her expressiveness increased in the final phase; even to a higher value than the beginning value. The patient expressed more emotions as therapy progressed (except the final phase in which her expressiveness decreased to a degree that was lower than the previous phases). She was not significantly different from other patients in terms of facial emotional

expressiveness. The amount of the self regulatory behaviors increased through the therapy process. The patient's self regultory behaviors were at the same degree at the begining and final phases, whereas there was a decrese in the second phase, and an increase in the third phase. Both the therapist and the patient were not different from other patients or therapists in terms of their usage of the self regulatory behaviors. The therapist affirmativeness was mostly in the same amount during the process, except for a decrease in the final phase. Her usage of affirmative gestures was significantly higher than Dyad 2. Affirmative gestures of the patient decreased during the process. Her affirmativeness was not significantly different from other patients' affirmativeness. The therapist's displacement of selfobject needs decreased during the process She engaged in this behavior significanlty less frequently than Dyad 1's therapist. The patient's displacement of selfobject needs decreased during the process (except for an increse in the third phase). The displacement of selfobject needs of the patient was significantly lower than the Dyad 1's.

The results for Dyad 5's therapist revealed that the frequency of her looks to her partner's eyes were significanlty higher than it was in Dyad 3, and nonsignificantly higher than they were in Dyad 2 and Dyad 6. Her focus onto the partner was highest in the first phase as compared to other phases. Her focus got worse in the third phase as compared to the second phase, however, it was recovered in the final phase. Her facial emotional expressiveness was limited through the process, except for the highest expressiveness in the second phase. She had significantly less expressiveness than Dyad 2-therapist. The patient's emotional expressiveness decreased during the process (except for a slight increase in the third phase). Self regulatory behaviors of the therapist were significantly lower than Dyad 2's therapist. The patient's self regulatory behaviors were significantly lower than Dyad 1's patient. Both the therapist's and the patient's usage of self regulatory behaviors increased during the process, except the lowest value observed in the final phase. The therapist's affirmative gestures were significantly higher than Dyad 2 and Dyad 3. Her affirmativeness decreased during the process. Compared to the beginning phase, the patient's affirmativeness increased during the process,

especially in the third phase. The amount of the patient's affirmative gestures was not significantlty different from other patients' affirmative gestures. The therapist's displacement of selfobject needs, which was significantly lower than only Dyad 1's therapist, showed a stable trend during the process (except for an increase in the second phase). The patient's displacement of selfobject needs, which was significantly lower than displacements of Dyad 2's patient, decreased during the process.

The results for the Dyad 6 reveled that the level of looking to the partner's eyes for the therapist was significantly lower than the therapists of Dyad 1, Dyad 3, and Dyad 4, and significantly higher than Dyad 3's therapist. Her avoidance of the partner was significantly higher than the therapists of Dyad 1 and Dyad 4, and significantly lower than Dyad 3's therapist. Her gaze on behaviors increased during the process (except for a decline in the final phase). The patient's gaze on values were significantly lower than the patients of Dyad 3, Dyad 4, and Dyad 5, and significantly higher than Dyad 1's patient. The lowest amount of the patient's eye contact was observed in the first phase. During the process, the duration of her eye contact decreased. Facial emotional expressiveness of the therapist was significantly lower than therapists of Dyad 2 and Dyad 4. Her expressiveness values decreased in the second and the third phases, while it increased in the final phase as compared to the beginning phase. The patient's emotional expressiveness was significantly lower than Dyad 1's patient. The highest amount of the emotional expressivess was observed in the beginning phase. In the second phase, there was a decline. Then, it increased in the third phase, and then decreased again in the final phase. Self regulatory behaviors of the therapist was significanlty lower than Dyad 2's therapist. Her self regulative behaviors increased throughout the process (except for a slight decline in the second phase). The patient used self regulatory behaviors significantly more than only Dyad 3's patient. The patient's need for regulative behaviors increased as compared to beginning phase (except for a slight decline in the second phase). Affirmative gestures of the therapist, which were significantly higher than therapists of Dyad 2 and Dyad 3, decreased throughout process (except for an incline in the second phase). The level of patient's affirmative gestures that

increased during the process were not significantly different from other patients' affirmative gestures. In terms of displacement of selfobject needs of the therapist, there was a decline throughout the process. Therapist values on displacements of selfobject needs were only significanlty lower than Dyad 1's therapist. There was a declining trend in the patient's the displacements of selfobject needs (except for an incline in the third phase). She had significantly lower values on the displacements of selfobject needs than Dyad 2's patient.

3.2.6.3.1.Results for Differences in Self Regulation Dynamics between Therapy Dyads based on Attachment Types of the Therapists.

The results of Multivariate Anova analysis yielded that based on therapist's attachment categories (taking 4 as the midpoint; and one of the therapists who was higher than sample mean on avoidance dimension was classified as fearful) therapy dyads were different from each other on self regulation dynamics (except for facial emotional expressiveness of patient, self regulation of therapist, and affirmative gestures of patients; Wilks's $\lambda = 0.27$, $F(36, 576.85) = 8.83$, $p < .001$; see Table 20 for means, standard deviations, F values, confidence intervals, and effect size).

The results of MANOVA regarding the differences in self regulation dynamics between dyads based on the therapists' attachments revealed that dyads having anxious therapists had higher values on all significant dimensions (except for affirmativeness of the therapist and the displacements of patient's selfobject needs), and lower values on avoidance of the patient compared to dyads having avoidant therapists. Also, dyads having anxious therapists were significantly higher on the patients' values of avoidance and the displacement of selfobject needs, and the therapists' focus on the patients, but lower on the patient's focus, and therapists' affirmativeness than dyads having fearful therapists. Furthermore, dyads having anxious therapists had significantly higher values on the patients' avoidance, and lower values on the patients' focus as compared to the dyad having a secure therapist. Dyads having avoidant therapists had higher values on the therapists' focus, and lower values on the patients' focus, avoidance, and self regulatory behaviors and therapists' affirmativeness compared to the dyads who had fearful

therapists. Dyads having avoidant therapists had significantly lower values on the patients' self regulatory behaviors and the therapists' focus, but higher values on the therapists' avoidance than the dyad who had a secure therapist. Finally, dyads having fearful therapists had significantly lower values in terms of the therapists' focus, but higher values on the therapists' affirmativeness than the dyad having a secure therapist.

3.2.7.Results for Micro and Macro Outcomes of Sample 1

3.2.7.1.Results for Micro Outcomes

As presented in Table 21, Dyad 1's therapist was attached to her patient more avoidantly than her attachment to her partner. However, as compared to her attachment to her partner, the patient was attached to her therapist more securely (i.e., still high on avoidance but with lower anxiety). Also, the patient's attachment security to her therapist was higher than the therapist's attachment to patient. Dyad 2's therapist reported less attachment anxiety and more attachment avoidance to her patient as compared to the attachment to her partner. The patient was more secure in both dimensions as compared to the attachment to her partner. Also, while the therapist was more anxiously attached to her patient as compared to the patient, the patientwas more avoidantly attached to her therapist as compared to the therapist. Similarly to her attachment to her partner, Dyad 3's patient reported less attachment anxiety and more attachment avoidance to her therapist as compared to the attachment to her partner. Dyad 3's therapist reported less attachment anxiety and avoidance to her patient as compared to the attachment to her partner. The patient was more securely attached to her therapist in comparision with her therapist's attachement to her.

Dyad 4's therapist was avoidantly attached to the patient. Still, the therapist was more secure with her partner. The patient was securely attached to her therapist; she even had lower attachment anxiety and avoidance as compared to her attachment to her partner. Both the therapist and the patient in Dyad 5 were more avoidantly attached to each other as compared to their attachment to their partners (except for being less anxious with the partner for the therapist).

Table 20 MANOVA Results for Differences in Self Regulation Dynamics of Dyads Based on the Attacments Styles of the Therapist

SRD	Dyad	*M*	*SD*	CI		*F*(5)	η^2		Dyad	*M*	*SD*	CI		*F*(5)	η^2		Dyad	*M*	*SD*	CI		*F*(5)	η^2
FPT	1[a]	0.75	0.21	0.21	0.41	25.27	.27	FET	1[a]	0.64	0.34	.03	.32	5.66	.07	AT	1[a]	0.11	0.09	-.13	-.05	12.52	.15
	2[abc]	0.44	0.19	-0.34	-0.14				2[ac]	0.47	0.27	.00	.24				2[b]	0.11	0.08	-.14	-.04		
	3[b]	0.68	0.18	-0.46	-0.22				3[bd]	0.52	0.20	-.38	-.04				3[abc]	0.20	0.11	.00	.11		
	4[c]	0.78	0.15						4[cd]	0.68	0.23	.01	.31				4[c]	0.15	0.09				
FP P	1[abc]	0.36	0.20	-.44	-.23	26.24	.28	FEP	1	0.79	0.19			2.35	.03	AP	1	0.04	0.10			2.44	.03
	2[ad]	0.69	0.16	-.24	-.07				2	0.71	0.23						2	0.08	0.09				
	3[bd]	0.51	0.20	-.35	-.13				3	0.72	0.21						3	0.08	0.14				
	4[c]	0.60	0.21	.07	.28				4	0.78	0.17						4	0.10	0.10				
AVT	1[a]	0.25	0.21	-.41	-.21	25.20	.29	SRT	1[a]	0.08	0.14			.25	.00	DST	1[a]	0.01	0.02	.00	.02	3.69	.05
	2[abc]	0.56	0.19	.14	.34				2	0.10	0.11						2[a]	0.00	0.01				
	3[b]	0.32	0.18	.22	.46				3	0.09	0.08						3	0.00	0.01				
	4[c]	0.22	0.15						4	0.08	0.13						4	0.00	0.01				

Table 20 Continued

APP	1[abc]	0.65	0.20	.24	.45	27.64	.29	SRP	1[a]	0.15	0.20	.04	.19	7.56	.10	DSP	1[a]	0.04	0.04	.00	.04	3.94	.05
	2[ad]	0.30	0.17	.08	.24				2[abc]	0.03	0.04	-.17	-.02				2	0.01	0.02				
	3[bd]	0.48	0.20	.14	.36				3[b]	0.13	0.12	.02	.19				3[a]	0.01	0.06				
	4[c]	0.40	0.21	-.29	-.08				4[c]	0.19	0.12	-.25	-.06				4	0.02	0.04				

Note 1. Dyads sharing same superscripts were significantly different from each other at $p < .05$, *Note 2*. FPT/P: Focus on Partner Therapist/ Patient, FET/P: Facial Emotional Expressiveness Therapist/Patient P, AFT/P: Avoiding Partnet Therapist/ Patient, AT/P: Affirmative Therapist/Patient, DST/P: Displacement of Selfobject Therapist/Patient, SRT/P: Self regulation Therapist/Patient; SRD: Self regulation Dynamics

Table 21 Attachment within Therapy Partners in the Early Middle Phase of the Process

	Dyad 1		Dyad 2		Dyad 3		Dyad 4		Dyad 5		Dyad 6	
	AAX	AAV	AAX	AAV	AAX	AAV	AAX	AAV	AAX	AAV	AAX	AAV
TRP	4.28	2.67	4	2.33	3	4.17	2.94	2.11	4.39	4.33	4	3.22
TP	2.78	4.39	3.11	2.76	2.44	3.94	2.61	3.93	3.83	2.88	2.56	4.11
PRP	4.28	4.22	5.22	4	2.44	4	4.61	2.11	2.5	1.89	2.39	1.56
PT	2.89	3.67	3.06	3.11	1.33	1.53	3.28	2.50	1.39	2.06	2.67	2.44

Note. AAX: Attachment Anxiety; AAV: Attachment Avoidance, TRP: Therapist attachement to Romantic Partner, TP: Therapist Attachment to Patient, PRP: Patient Attachment to Romantic Partner, PT: Patient Attachment to Therapist

While the patient's attachment anxiety to her therapist was higher than the therapist's, the therapist's attachment avoidance to her patient was more than the patient's. Dyad 5's therapist was more securely attached to her patient as compared to the attachment to her partner, whereas the patient attached to her therapist more avoidantly and less anxiously as compared to the attachment to her partner. Also, therapist's attachment security was higher than the patient's, particularly on avoidance dimension. Dyad 6's therapist was less anxiously but more avoidantly attached to her patient as compared to her attachment to her partner.

Table 22 indicates and Figures 34-51 ilustrate the therapeutic alliance within therapy dyads across different phases of the therapy on task, bond, and goal dimensions (blue lines represent patients' rates, and orange lines represent therapists' rates). Dyad 1's patient rated the alliance as better than her therapist on all dimensions. Her evaluations on task and goal dimensions had a stable trend across sessions except for decreases in task and goal in the sixth session. Her ratings

of bond showed a decreasing trend. Dyad 1's therapist had an increasing trend in all dimensions, except for decreases in task in the fifth session and in goal in the tenth session, and bond in the final session. Dyad 2's patient mostly rated the alliance as better than the therapist. Her ratings showed a decreasing trend in both task and bond dimensions including distinct fractions or ascents, particularly in the tenth session. Her ratings on task showed a stable trend with decreases in the second and fifth sessions. She had a stable trend in goal dimension, which increased after the tenth session. The therapists' ratings on task and goal dimensions revealed increasing trends except for a decrease in goal in the second session. Also, similarly to her patients, the therapist's ratings on bond dimension had an increasing but irregular trend containing fractions and ascents. Dyad 3's patient mostly rated the alliance better than her therapist on all dimensions. Her ratings on task factor showed a decreasing trend except for increases in second and tenth sessions, whereas there was an increasing trend of ratings on the bond dimension with a decline in the sixth session. Also, the patient had a stable trend in goal dimension except for an incline in the second session. The therapist's ratings on the task dimension showed a stable trend but decreases in the fifth and fifteenth sessions, whereas she had decreasing trends on both bond and goal dimensions except for increases in tenth and final sessions. Dyad 4's therapist rated the alliance mostly better than the patient, particularly in task dimension, whereas the patietn rated better than the therapist in bond dimension. However, their values were too close each other. The patient's ratings on all dimensions had increasing trends, except for declines in bond in the fifth session, and goal in the fifth session. The therapist did also have increasing trends in all dimensions except for decreases in bond and task dimensions in the fifth session, and in bond in the sixteenth session, and in goal dimension in the second session. Dyad 5's therapist rated the alliance mostly better than the patient on all dimensions. The patient had increasing trends in all dimensions except for declines in all dimensions in the fifteenth session, and in bond dimension in the sixth session, and a decrease in task dimension in the final session. The therapist had increasing trends in task and goal ratings except for decreases in task in the second and tenth sessions, and a decrease in goal dimension

from the fifteenth session on, whereas there was a stable trend on her ratings of bond (only one decline in the tenth session). On all dimensions, Dyad 6's patient ratings were better than her therapist's ratings. There was an increasing trend in patient's ratings except for a decline in task and goal in the second session, and in the task and bond in the tenth session . The therapist's ratings on the task dimension showed an increasing (still very close to stable) trend with a decline in the second and fifth sessions. Her ratings on the bond dimension first showed an increasing trend, then it became a decreasing trend with an incline in the final phase. The therapist's ratings on goal dimension had a decreasing trend until the tenth session, then it turned to an increasing trend.

3.3.7.2.Results for Macro Outcomes of Sample 1

The results of Wilcoxon Signed Ranks Test (see Table 23 and 24) showed that there were significant differences only for avoidance of twinship and idealization needs, and hunger for idealization need. There was a significant decrease in avoidance of twinship and idealization needs only for one of the patients. Two of the patients' hunger for idealization needs significantly decreased at the end of the therapy process. The results for macro outcomes of the study showed that many of the patients in Sample 1 reported increased amount of *negative self* as a symptom at the end of the therapy process. This finding is quite compatible with the results showing that at the end of therapy process, many of the patients reported higher levels of attachment anxiety due to which they had negative self-perceptions. Moreover, many of the patients in Sample 1 had improvements in socially-avoidant and nonassertive styles in relationships at the end of the psychotherapy process. This finding may be related to the increases in mirroring needs of many of the patients that may be considered as an improvement in their healthy self-esteem. However, many of the participants' defensive attitudes towards twinship and idealization needs increased at the end of the therapy.

Table 22 Therapuetic Alliance Evalution during Therapy Process

Dyad 1							Dyad 2						Dyad 3					
	Task		Bond		Goal		Task		Bond		Goal		Task		Bond		Goal	
T.A.	P	T	P	T	P	T	P	T	P	T	P	T	P	T	P	T	P	T
1	5,5	4,33	5,42	4,25	5,75	4,17	5	4	5,5	4,83	4,92	4,09	5,25	4,58	4,58	5	5,42	4,5
2	5,5	4,42	5,33	4,33	5,83	4,08	3,58	3,55	5,17	4,64	4,5	3,75	5,42	4,58	5,27	4,75	5,92	3,75
3	5,25	4,25	5	4,67	5,42	4,5	3,67	4,11	5,25	5,09	4,42	4	4,92	3,5	5	4,58	5,25	3,17
4	5,33	4,42	5,25	5,08	5,75	4,75	5	4,33	5	5,33	5,92	4,17	5,33	4,5	5,08	4,92	5,42	4,42
5	5,42	4,75	5,08	5,08	5,67	5,33	5	4,17	5,33	4,92	5,25	4,33	5,08	3,92	5,17	4,55	5,25	3,42
6	5,5	4,83	5,25	4,67	5,83	4,92							4,58	4,27	5,17	5	5,42	4,42
	Dyad 4						Dyad 5						Dyad 6					
	Task		Bond		Goal		Task		Bond		Goal		Task		Bond		Goal	
	P	T	P	T	P	T	P	T	P	T	P	T	P	T	P	T	P	T
1	3,75	3,58	4,83	4,5	4,75	3,92	3,42	3,75	2,58	4,83	3,17	3,58	4,08	3,17	4,08	3,83	4,67	3,08
2	3,75	3,83	4,83	4,58	5	3,75	3,58	3,58	3,17	4,67	3,33	4,17	3,33	3,08	5	3,92	3,67	2,83
3	4,17	3,67	4,42	4,5	4,75	3,92	3,83	3,83	3,42	4,67	4,36	4,42	4,83	3,33	5,08	3,42	4,67	2,82
4	4,75	4,67	5,42	5,25	5,5	4,67	4	3,75	4,3	4,42	4,83	4,5	4,58	3,33	5,25	3,67	5	3,33
5	4,58	4,67	5,08	5,08	5,33	5,33	3,83	4	3,67	4,67	3,92	4,17	5	3,5	5,75	4,75	5,92	3,75
6	4,75	5,33	5,67	5,5	5,83	5,75	3,42	4	3,67	4,67	4,17	4,17						

Note. T.A.: Time of assessment; 1: 1th session, 2: 2th Session, 3: 5th or 6th sessions, 4: 10th session, 5: 15th or 16th Session or end of therapy, 6: End of therapy

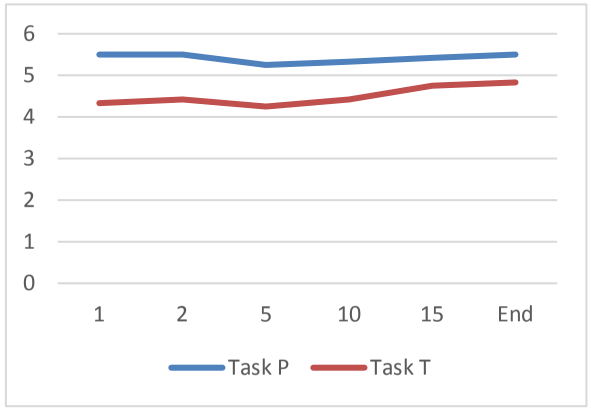

Figure 39 Dyad 1's theraputic alliance on task factor

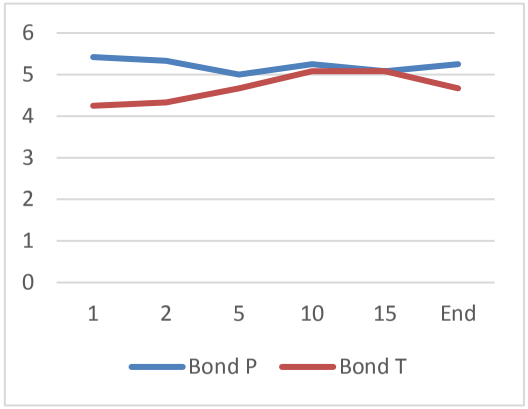

Figure 39 Dyad 1's theraputic alliance on bond factor

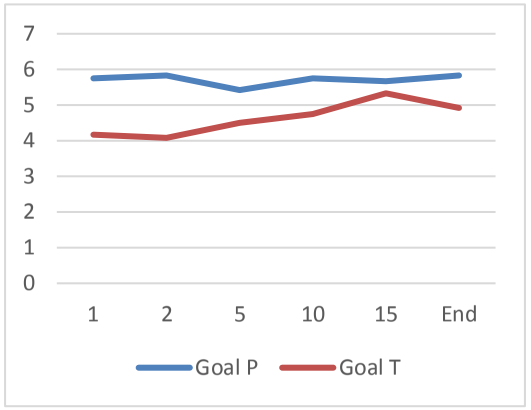

Figure 39 Dyad 1's theraputic alliance on goal factor

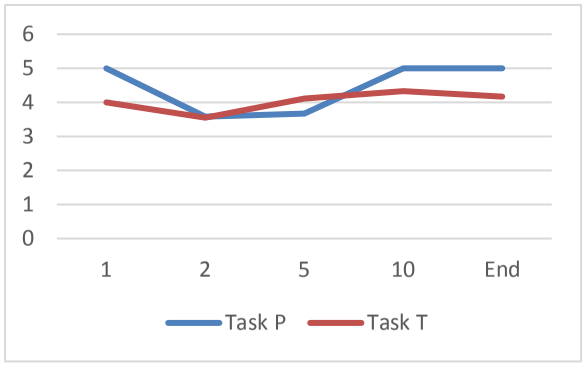

Figure 39 Dyad 2's theraputic alliance on task factor

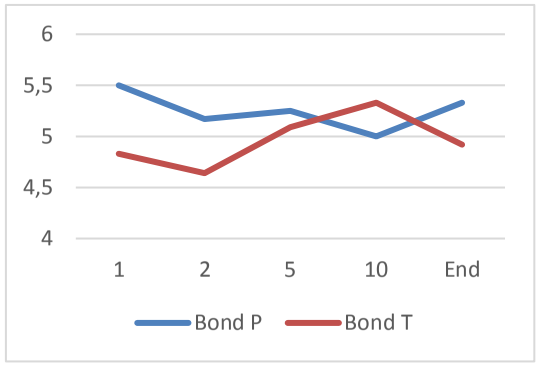

Figure 39 Dyad 2's theraputic alliance on bond factor

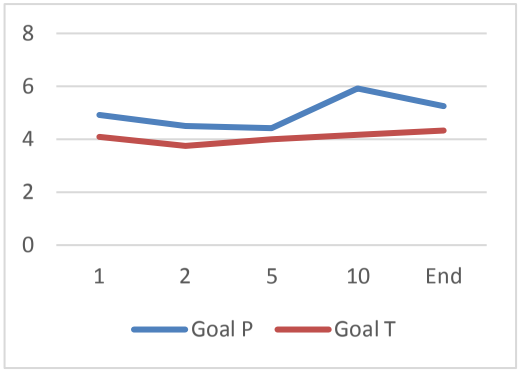

Figure 39 Dyad 2's theraputic alliance on goal factor

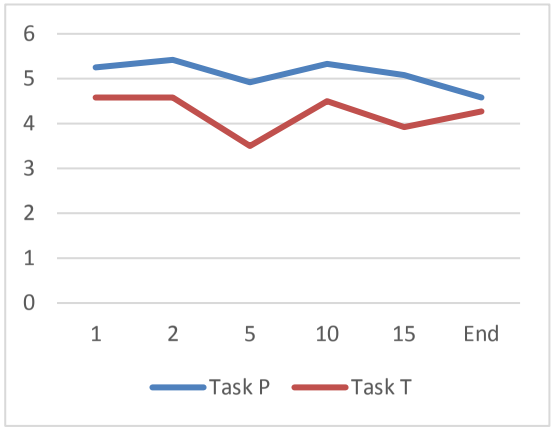

Figure 45 Dyad 3's theraputic alliance on task factor

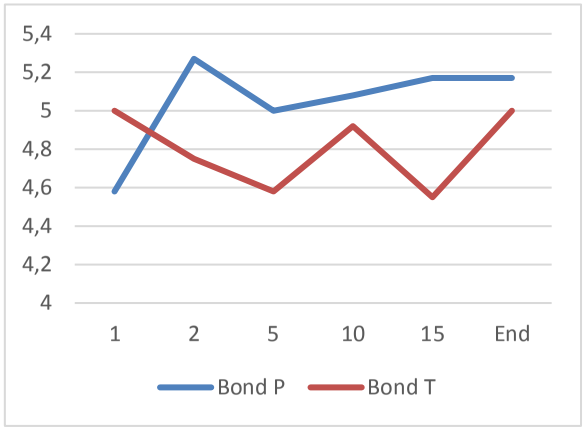

Figure 45 Dyad 3's theraputic alliance on bond factor

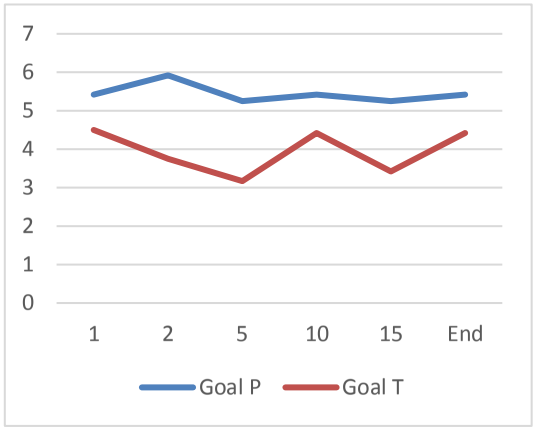

Figure 45 Dyad 3's theraputic alliance on goal factor

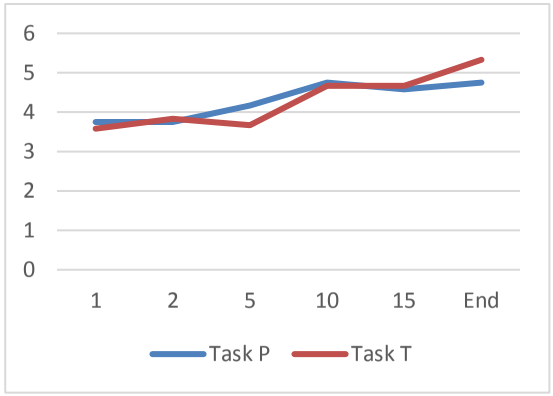

Figure 45 Dyad 4's theraputic alliance on task factor

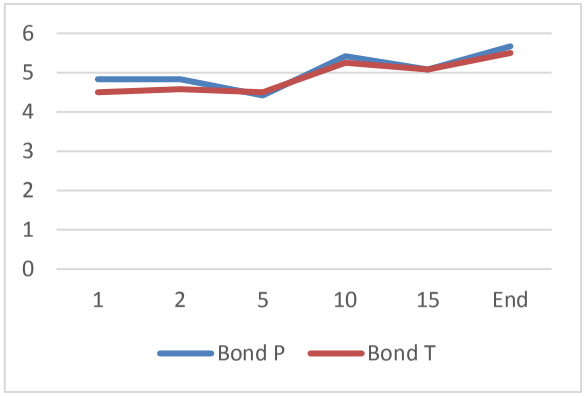

Figure 45 Dyad 4's theraputic alliance on bond factor

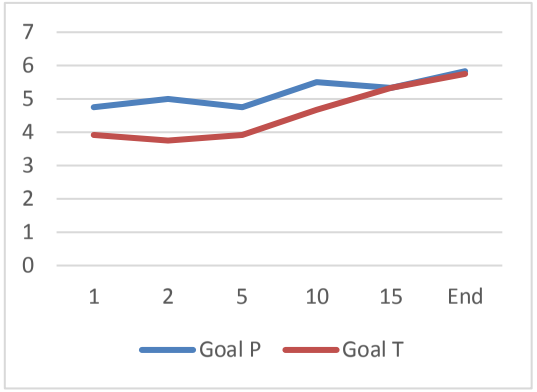

Figure 45 Dyad 4's theraputic alliance on goal factor

Figure 51 Dyad 5's theraputic alliance on task factor

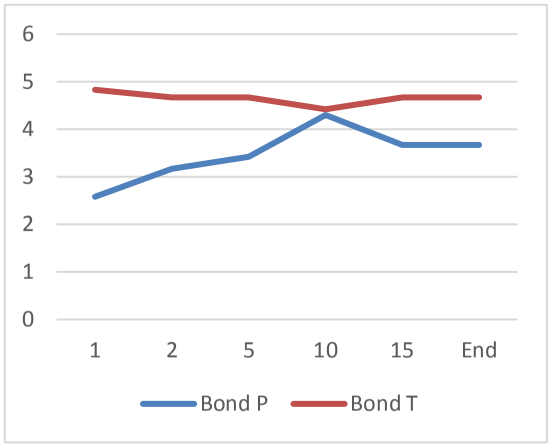

Figure 51 Dyad 5's theraputic alliance on bond factor

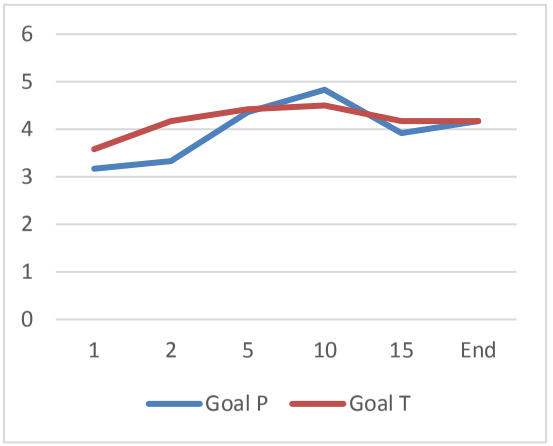

Figure 51 Dyad 5's theraputic alliance on goal factor

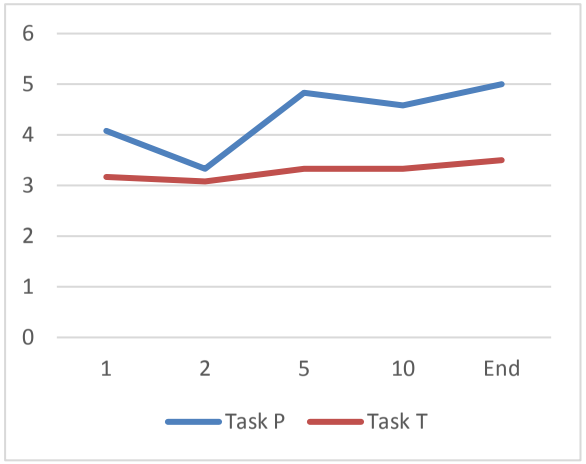

Figure 51 Dyad 6's theraputic alliance on task

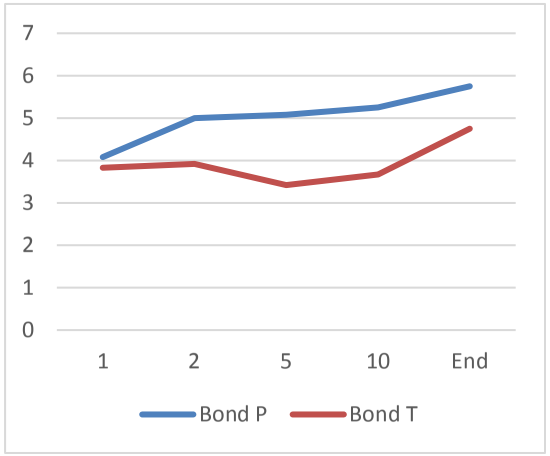

Figure 51 Dyad 6's theraputic alliance on bond factor

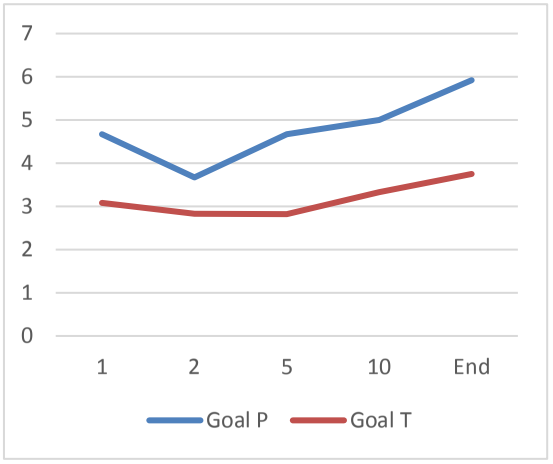

Figure 51 Dyad 6's theraputic alliance on goal factor

The results for each Dyad showed (see Figures 52-57) that there were improvements in Dyad 1's patient on attachment avoidance, hunger for twinship, anxiety, depression, somatization, styles in interpersonal relationships based on over accommodation, vindictive/self-centered, socially avoidant, and nonassertiveness, whereas there were increases in attachment avoidance, avoidance of idealization and twinship, hunger for mirroring, avoidance of mirroring needs, negative self-image, and cold distant style in relationships. There was not any difference in hunger for idealization, hostility, and self-sacrificing and domineering/controlling roles in relationships. Dyad 2's patient had improvements in attachment avoidance, avoidance of mirroring, and several problematic styles in interpersonal relationships (i.e., overly accommodating, cold distant, nonassertive, and intrusive/needy dimensions), whereas she had increases in attachment anxiety, hunger for twinship, avoidance of idealization and twinship, hunger for idealization, hunger for mirroring, depression, negative self-image, hostility, and controlling/domineering, vindictive/self-centered, and socially avoidant styles in relationships. There was not any difference in self-sacrificing style. Dyad 3's patient had improvements in hunger for twinship, avoidance of mirroring, and several problematic styles in relationships (i.e., controlling/domineering, cold-distant, socially avoidant, and nonassertiveness). She reported increases in attachment avoidance and anxiety, avoidance of idealization and twinship, hunger for idealization, hunger for mirroring, anxiety, hostility, overly accommodating and vindictive/self-centered styles in relationships. There was not any differences in depression, negative self-image, and self-sacrificing and intrusive needy styles in relationships. Dyad 4's patient had improvements in attachment avoidance, anxiety, depression, negative self image, somatisation, and several problematic interpersonal styles (i.e., vindictive/self-centered, cold-distant, and intrusive/needy). She had increases in attachment anxiety, hunger and avoidance of all selfobject needs, and different problematic interpersonal styles (i.e., overly accommodating, self-sacrificing, domineering/controlling, socially avoidant, and nonassertiveness). There was not a difference in hostile symptoms. Dyad 5's patient had improvements in both attachment avoidance and anxiety, hunger for

twinship, hunger for idealization, and hunger for mirroring, and several problematic styles in relationships such as cold-distant, socially avoidant, and intrusive/needy. She had increases in avoidance of idealization, twinship, and mirroring, anxiety, depression, negative self-image, hostility, and different problematic styles in relationships such as self-sacrificing, domineering/controlling, and non-assertiveness. There was not any difference in somatization, overly accommodating, and vindictive/self-centered features. Dyad 6's patient had improvements in avoidance of idealization and twinship, hunger for idealization, anxiety, depression, hostility, and several problematic styles in relationships (i.e., overly accommodating, self-sacrificing, cold-distant, socially avoidant, and nonassertiveness). She had increases in attachment anxiety, hunger for twinship, hunger for mirroring, avoidance of mirroring, negative self-image, and intrusive/needy style. There was not any differences in attachment avoidance, somatization, and domineering controlling and vindictive/self-centered styles.

3.3. Results for Sample 2

In this section of the present dissertation, firstly the results for temperament, attachment, selfobject needs of therapy dyads, and patients' symptoms and problematic styles in interpersonal relationships, and distribution of subjective features of each therapy dyad in Sample 2 will be reported. Then, the results of motion energy analysis, microanalysis of selected coordinated interaction units, and content analysis of coordinated interaction units (i.e., interrater reliability results for manifest coding of nonverbal behaviors, and latent pattern categories for interactive and self-regulation dynamics based on both coder's classification and quantitative analyses) will be presented. And in the last part of this section, the findings on micro and macro outcomes for Sample 2 will be reported.

Table 23 Wilcoxon Signed Ranks Test Results for Macro Outcomes

	N	Mean	*SD*	*z*	*P*
Attachment					
AAX-First Session	6	3.57	1.27	-1.782[b]	0.075
AAX-Last Session	6	4.29	1.69		
AAV-First Session	6	2.96	1.23	-.406[b]	0.684
AAV-Last Session	6	3.12	1.29		
Selfobject Needs					
HT-First Session	6	5.04	0.80	-.531[b]	0.595
HT-Last Session	6	5.40	1.00		
AVIT-First Session	6	2.24	0.88	-1.992[b]	0.046
AVIT-Last Session	6	2.92	0.67		
HI-First Session	6	3.86	1.12	-.405[b]	0.686
HI-Last Session	6	4.10	0.81		
HM-First Session	6	3.64	1.13	-1.997[b]	0.046
HM-Last Session	6	4.81	1.16		
AVM-First Session	6	3.00	1.41	-.106[c]	0.916
AVM-Last Session	6	3.00	1.13		
Symptoms					
Anxiety-First Session	6	1.03	0.93	-.105[c]	0.917
Anxiety-Last Session	6	0.99	1.03		
Depression-First Session	6	2.03	1.09	-.552[c]	0.581
Depression-Last Session	6	1.68	1.12		
Negative Self-First Session	6	1.06	0.94	-1.625[b]	0.104
Negative Self-Last Session	6	1.50	1.30		
Somatization-First Session	6	0.83	0.90	.000[d]	1.000
Somatization-Last Session	6	0.78	0.99		
Hostility-First Session	6	0.83	0.59	-.921[b]	0.357
Hostility-Last Session	6	1.14	1.10		
Styles in Relationships					
Overly Accommodating-First Session	6	2.17	1.45	-.944[c]	0.345
Overly Accommodating-Last Session	6	1.72	0.99		
Self-sacrificing-First Session	6	2.25	1.44	-1.414[b]	0.157
Self-sacrificing-Last Session	5	2.50	1.53		
Domineering/Controlling-First Session	6	0.67	0.58	-.557[b]	0.577
Domineering/Controlling-Last Session	5	1.00	0.94		

3.3.1.Results for Temperament, Attachment, Selfobject Needs of Therapy Dyads

Table 25 presents a summary of the descriptive statistics for the temperament, attachment, and selfobject needs of both the therapist and the patients in Sample 2. The results revealed that based on the distributions of the mean, *orienting sensitivity* and *negative affectivity* -types of temperament- and *hunger for twinship* and *idealization* – types of selfobject needs- were prominent characteristics of the patients. *Negative affectivity* and *hunger for twinship* were prominent characteristics of the therapist. In other words, the second sample of the study consisted of patients who were sensitive to low-intensity perceptual stimulations and had tendencies to experience fear, frustration, discomfort, and sadness. In addition, the patients in Sample 2 wanted to be with people having similar problems and needs with them and had admirations to the others who are more experienced or competent than them. The therapist also tended to have negative emotions and wanted to be with people having similar problems and needs with her. The results of categorization of the attachment scores (taking 4 as the midpoint) showed that patients were fearful type and the therapist was secure type.

Table 23 Continued

Vindictive/Self-centered-First Session	6	0.54	0.58	-.378[b]	0.705
Vindictive/Self-centered-Last Session	6	0.58	0.72		
Cold-Distant-First Session	6	1.08	0.74		
Cold-Distant-Last Session	1	0.75			
Socially-Avoidant-First Session	6	1.08	0.93	-.316[c]	0.752
Socially-Avoidant-Last Session	6	1.06	0.68		
Nonassertive-First Session	6	2.00	1.01	-.755[c]	0.450
Nonassertive-Last Session	6	1.75	0.69		
Intrusive-Needy-First Session	6	1.63	1.46	-.680[c]	0.496
Intrusive-Needy-Last Session	6	1.50	1.14		

Note. b: Based on negative ranks, c: Based on positive ranks

Table 24 Ranks of Patients Based on Macro Outcomes

	Attachment	Selfobject Needs	Symptoms	Styles in Relationships
	AAX	HT	Anxiety	Overly Accommodating
BT. > AT.	1	3	3	3
BT. < AT.	5	3	3	2
BT. = AT.	0	0	0	1
	AAV	AVIT	Depression	Self-sacrificing
BT. > AT.	3	1	3	0
BT. < AT.	2	5	1	2
BT. = AT.	1	0	2	3
		HI	Negative Self	Domineering/Controlling
	BT. > AT.	2	1	1
	BT. < AT.	3	4	3
	BT. = AT.	1	1	1
		HM	Somatisation	Vindictive/Self-centered
	BT. > AT.	1	2	2
	BT. < AT.	5	1	2
	BT. = AT.	0	3	2
		AVM	Hostility	Cold-Distant
	BT. > AT.	3	1	0
	BT. < AT.	3	3	1
	BT. = AT.	0	2	0
				Socially-Avoidant
			BT. > AT.	4
			BT. < AT.	2
			BT. = AT.	0
				Nonassertive
			BT. > AT.	4
			BT. < AT.	2
			BT. = AT.	0
				Intrusive-Needy
			BT. > AT.	3
			BT. < AT.	2
			BT. = AT.	1

Note. BT: Before therapy, AT: After therapy

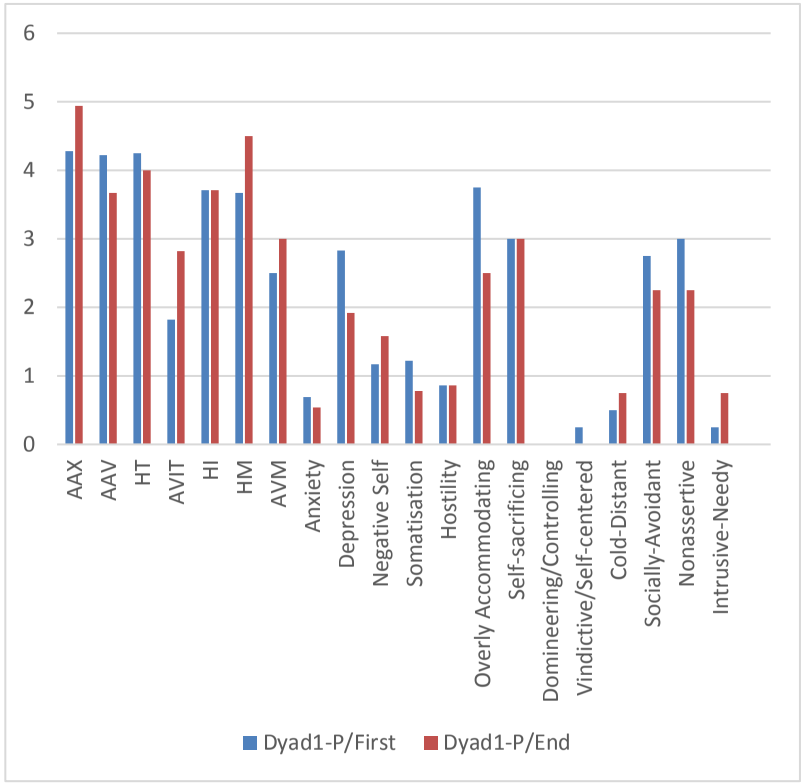

Figure 53 Patient's outcomes for Dyad 1

Note. AAV: Attachment Avoidance, AAX: Attachment Anxiety, HT: Hunger for Twinship, AVIT: Avoidance of Idealization and Twinship,HI: Hunger for Idealization, HM: Hunger for Mirroring, AVM: Avoidance of Mirroring

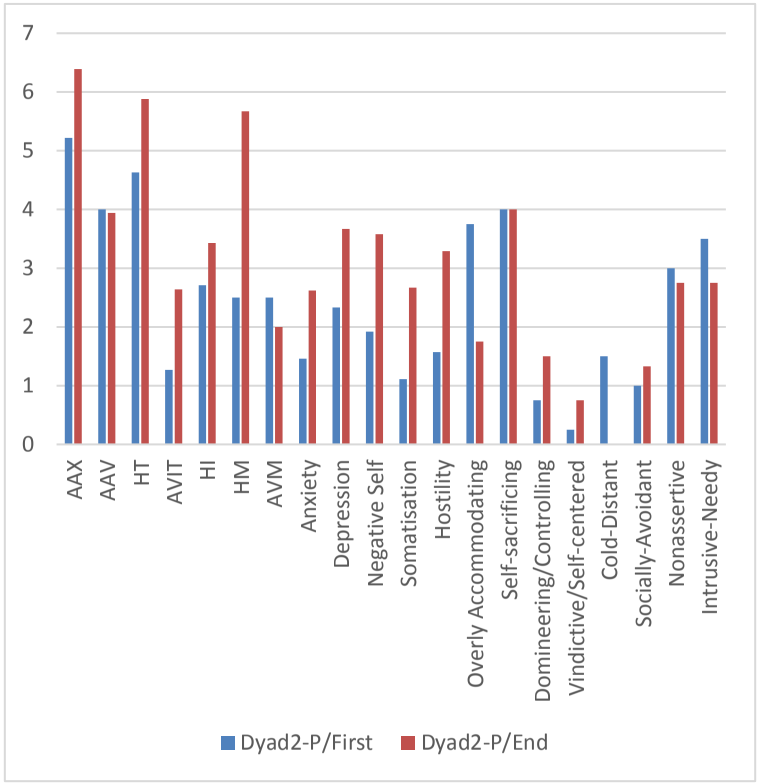

Figure 53 Patient's outcomes for Dyad 2

Note. AAV: Attachment Avoidance, AAX: Attachment Anxiety, HT: Hunger for Twinship, AVIT: Avoidance of Idealization and Twinship,HI: Hunger for Idealization, HM: Hunger for Mirroring, AVM: Avoidance of Mirroring

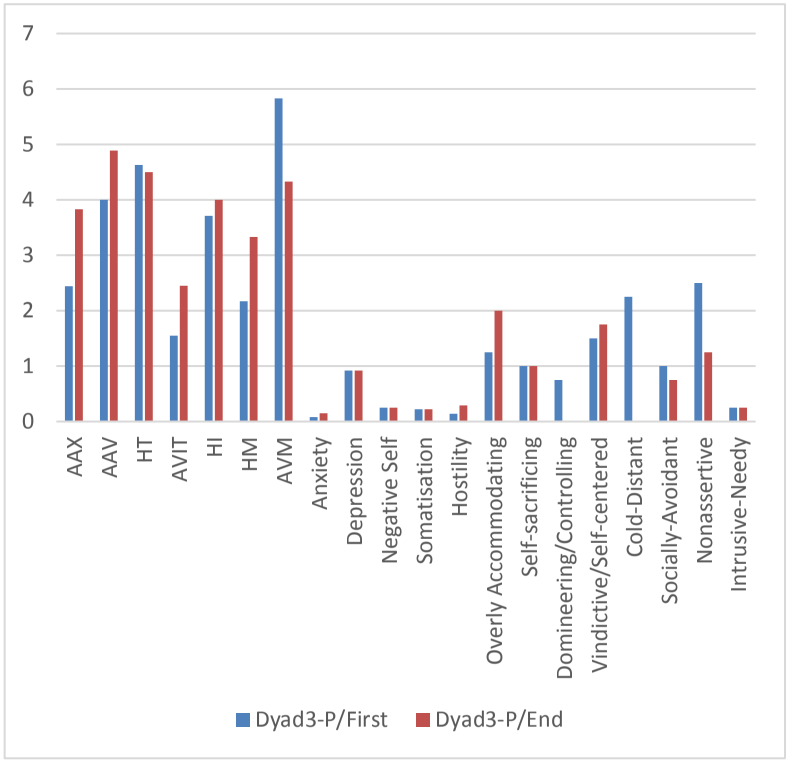

Figure 55 Patient's outcomes for Dyad 3

Note. AAV: Attachment Avoidance, AAX: Attachment Anxiety, HT: Hunger for Twinship, AVIT: Avoidance of Idealization and Twinship,HI: Hunger for Idealization, HM: Hunger for Mirroring, AVM: Avoidance of Mirroring

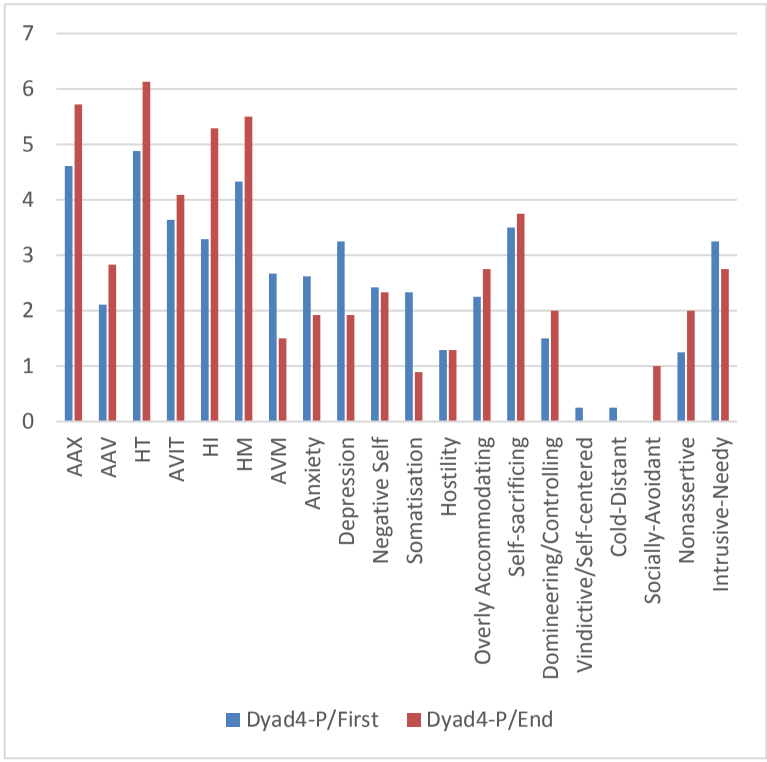

Figure 55 Patient's outcomes for Dyad 4

Note. AAV: Attachment Avoidance, AAX: Attachment Anxiety, HT: Hunger for Twinship, AVIT: Avoidance of Idealization and Twinship,HI: Hunger for Idealization, HM: Hunger for Mirroring, AVM: Avoidance of Mirroring

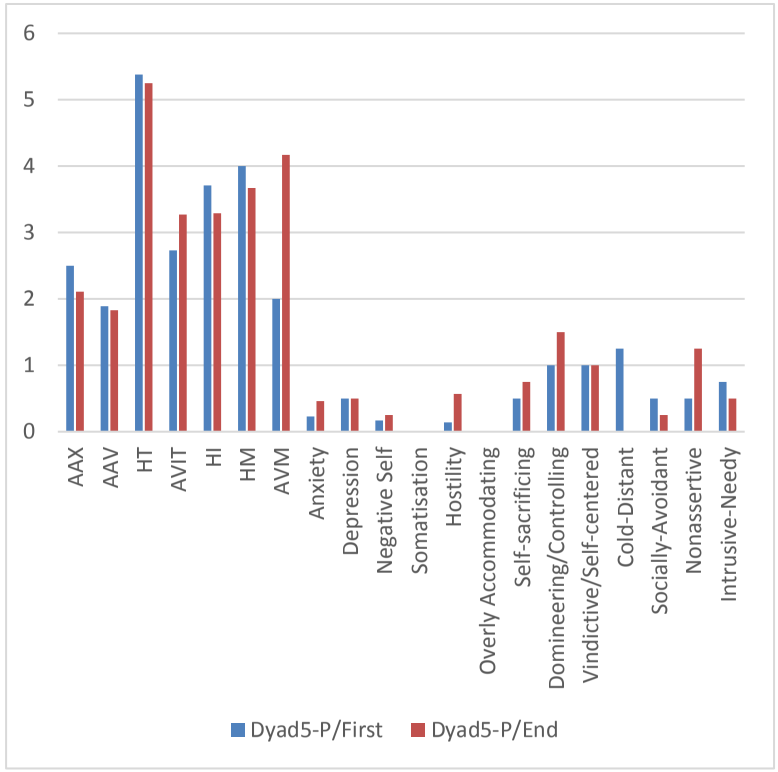

Figure 57 Patient's outcomes for Dyad 5

Note. AAV: Attachment Avoidance, AAX: Attachment Anxiety, HT: Hunger for Twinship, AVIT: Avoidance of Idealization and Twinship,HI: Hunger for Idealization, HM: Hunger for Mirroring, AVM: Avoidance of Mirroring

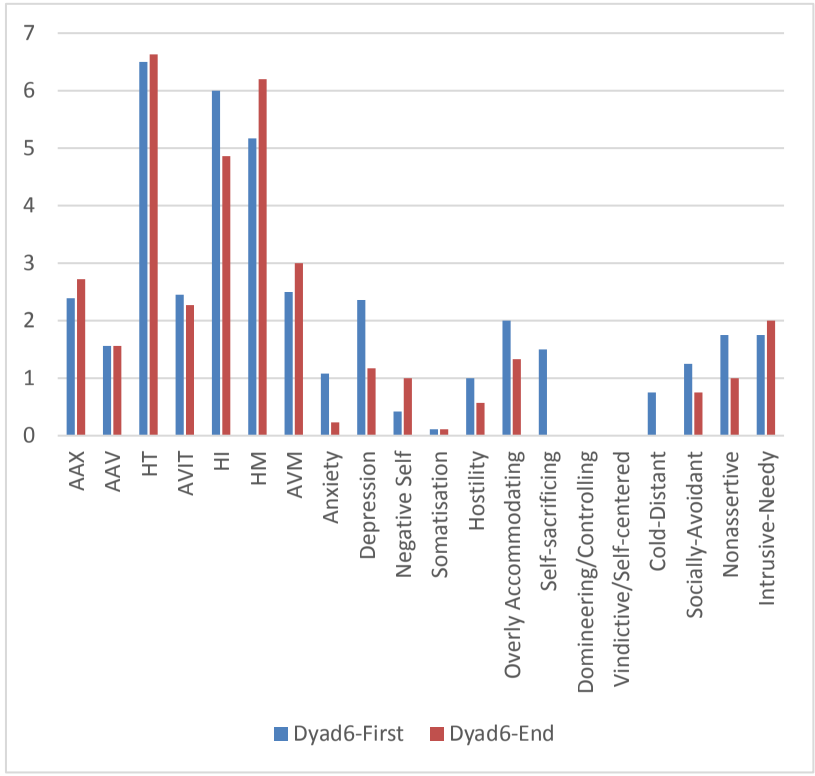

Figure 57 Patient's outcomes for Dyad 6

Note. AAV: Attachment Avoidance, AAX: Attachment Anxiety, HT: Hunger for Twinship, AVIT: Avoidance of Idealization and Twinship,HI: Hunger for Idealization, HM: Hunger for Mirroring, AVM: Avoidance of Mirroring

3.3.2.Results for Patients' Symptoms, and Problematic Styles in Interpersonal Relationships

The results of descriptive analyses of the patients' symptoms, and also, problematic styles in interpersonal relationships are presented in Table 26. It was found that - based on the distributions of the mean values- patients were suffering from anxiety, depression, and negative self–image more than other psychological problems. In addition to that, self-sacrificing, overly accommodating, and non-assertive styles were more prominent than other styles in their interpersonal relations.

Table 25 Individual Characteristics of the Therapists and the Patients as Measured at Time 1 in Sample 2

	Patients				Therapist	
Temperament	Min	Max	*M*	*SD*	*M*	
Orienting Sensitivity	4.55	5.55	5.05	0.71	4.73	
Extraversion	4.67	4.67	4.67	0.00	5.11	
Effortful Control	3.50	4.25	3.88	0.53	4.50	
Negative Affect	4.18	6.50	5.34	1.64	5.09	
Attachment						
Attachment Anxiety	4.72	4.94	4.83	0.16	3.61	
Attachment Avoidance	4.67	5.61	5.14	0.67	2.39	
Selfobject Needs						
Hunger for Twinship	4.00	5.25	4.63	0.88	6.88	
Hunger for Mirroring	3.17	4.50	3.83	0.94		4.17
Hunger for Idealization	4.43	4.86	4.64	0.30	4.57	
Avoidance of Mirroring	3.45	4.00	3.73	0.39	2.5	
Avoidance of Idealization and Twinship	3.67	5.50	4.58	1.30	1.91	

Table 26 Time 1 Scores of the Patients on Symptoms and Interpersonal Problems in Sample 2

Symptoms	Min	Max	*M*	*SD*	Interpersonal Problems	Min	Max	*M*	*SD*
Depression	1.08	1.67	1.38	0.41	Self-sacrificing	1.25	2.50	1.88	0.88
Anxiety	0.85	1.92	1.38	0.76	Overly accommodating	1.25	1.50	1.38	0.18
Hostility	1.14	1.43	1.29	0.20	Nonassertive	1.25	1.75	1.50	0.35
Somatization	0.22	1.11	0.67	0.63	Intrusive-needy	0.25	1.75	1.00	1.06
Negative self-image	0.83	2.17	1.50	0.94	Socially-avoidant	1.00	1.25	1.13	0.18
					Cold-distant	0	0	0	0
					Domineering/controlling	0.75	1.50	1.13	0.53
					Vindictive/self-centered	0.25	0.75	0.50	0.35

3.3.3.Results for Distributions of Individual Characteristics in Each Therapy Dyad

The differences between the therapist and the patient on individual characteristics is presented in Table 27, and illustrated in Figures 58-61.

Table 27 The Fit between the Individual Characteristics of the Therapy Partners

	AAX	AAV	HT	AVIT	HI	HM	AVM	NA	OS	ES	EC
Dyad 7	1.33	2.28	-1.63	1.54	0.29	0.33	1.17	-0.91	0.82	-0.44	-1
Dyad 8	1.11	3.22	-2.88	2.09	-0.14	-1	3	1.41	-0.18	-0.44	-.25

Note. AAV: Attachment Avoidance, AAX: Attachment Anxiety, HT: Hunger for Twinship, AVIT: Avoidance of Idealization and Twinship, HI: Hunger for Idealization, HM: Hunger for Mirroring, AVM: Avoidance of Mirroring, NA: Negative Affectivity, OS: Orienting Sensitivity, ES: Extraversion, EC: Effortful Control

Results revealed that there was a full fit between the therapist and the patient in Dyad 7 on hunger for idealization and mirroring (types of selfobject needs), and negative affectivity, orienting sensitivity, and extraversion (types of

temperament). Also, there were close fits between them on their attachment anxiety and avoidance (higher for the patient), avoiding twinship needs (higher for the patient), hunger for twinship (higher for the therapist), and effortful control (higher for the therapist). In Dyad 8, there were full fits between the therapist and the patient on hunger for idealization (higher for the therapist), orienting sensitivity (higher for the patient), extraversion (higher for the therapist), and effortful control (higher for the therapist). They had close fits on attachment anxiety (higher for the patient), hunger for twinship (higher for the therapist), avoiding twinship and idealization (higher for the patient), hunger for mirroring (higher for the therapist), and negative affectivity (higher for the patient). There were lower fits between the therapist and patient in terms of attachment avoidance (higher for the patient), and avoiding mirroring needs (higher for the patient).

3.3.4.Results of Motion Energy Analysis

The mean of the numbers of the coordinated interaction units, means of the time lags, the sums and means of cross-correlations (higher than .40) were found as 55.5, 1.85, 34.7, and .63, respectively (see Table 28). Sample 2 had moderate levels of positive nonverbal head synchrony with time delays rather than exact synchrony. Each therapy dyad's cross-correlations, time lags, and sequences are shown in Table 29.

3.3.5.Results of Microanalysis of Selected Coordinated Interaction Units

Microanalysis of nonverbal exchanges in each therapy dyad was conducted to define self and interactive regulation dynamics at second by second level. As it was in Sample 1, the number of the coordinated interaction units was too high to code. Therefore, separate criteria (see Table 30) were defined for each dyad's results to control the complexity of the data and to make findings more comparable.

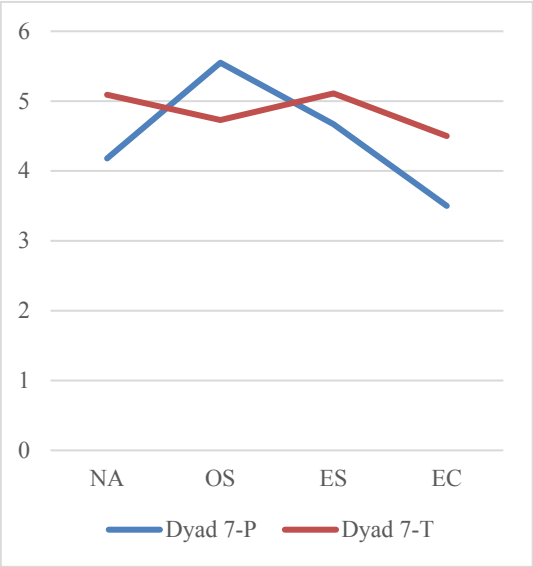

Figure 61 Dyad 7's temperaments

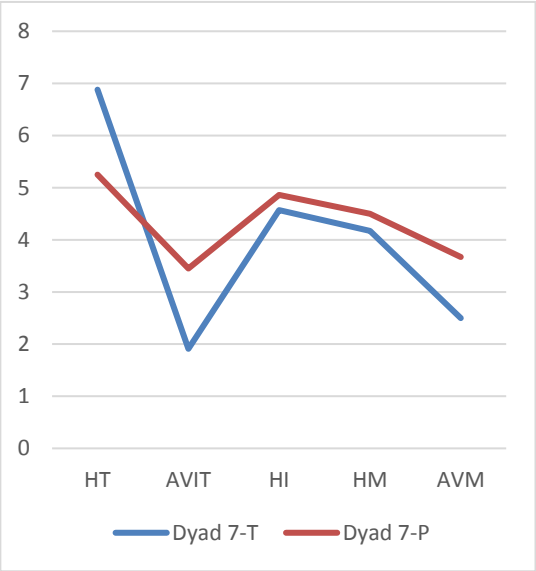

Figure 61 Dyad 7's selfobject needs

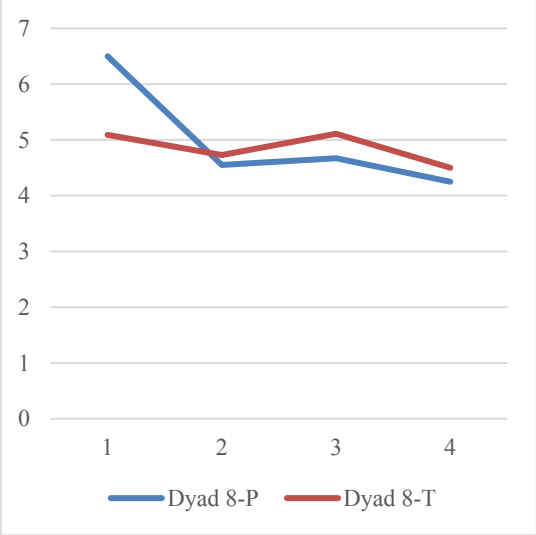

Figure 61 Dyad 8's temperaments

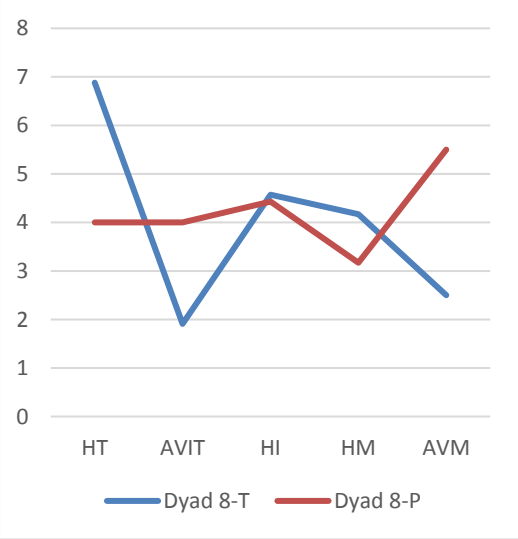

Figure 61 Dyad 8's selfobject needs

Note. NA: Negative Affectivity, OS: Orienting Sensitivity, ES: Extraversion, EC: Effortful Control; *Note*. HT: Hunger for Twinship, AVIT: Avoidance of Idealization and Twinship, HI: Hunger for Idealization, HM: Hunger for Mirroring, AVM: Avoidance of Mirroring

Table 28 Results of Motion Energy Analysis for Sample 2

Dyad	Total analyzed units	Mean of |lag|	Way of lags	Sum of Cross Correlation	Mean of Cross Correlation
Dyad 7	52	1.87	29 (-) 23 (+)	32.15	0.62
Dyad 8	59	1.77	26 (-) 30 (+)	37.27	0.63

Note. In Dyad 7, 15th session was missing data because of the synchronized video problem and 11th session was not included to microcoding due to the camera's shake

3.3.6.Results of Content Analysis of Coordinated Interaction Units

Manifest content analysis was applied to each communication modality to understand latent pattern contents in exchanges in each dyad. Another coder did also do manifest content analysis to 22 % of the data (n = 12). The second coder coded more data than Sample 1 to increase the reliability for Sample 2 because of the multiple roles of the researcher as being the therapist and the coder at the same time. The results of the interrater reliability analysis revealed that the amount of the agreement between two raters was strong in many of the communication modalities (see Table 31). However, their agreements were at moderate level in patient's head nods and vocal prompts, and at poor level in patients' facial emotions and eating lips behavior.

Table 29 Results of Motion Energy Analysis of Positive Nonverbal Head Synchrony in Dyad 7 and Dyad 8

Dyad 7								Dyad 8							
S	Time Sequence	*r*	Lag	S	Time Sequence	*r*	Lag	S	Time Sequence	*r*	Lag	S	Time Sequence	*r*	Lag
1	00:26-01:26	.92	-2.1	9	00:33-01:33	.70	-2.5	1	00:33-01:33	.58	2.1	9	02:40-03:40	.60	-0.2
1	02:26-03:26	.58	-0.9	10	00:26-01:26	.78	-0.5	1	03:32-04:33	.59	-2.2	9	03:40-04:40	.60	-5
1	12:26-13:26	.50	1.3	10	08:26-09:26	.71	-5	1	06:33-07:33	.72	5	9	07:40-08:40	.55	-5
2	00:40-01:40	.53	-3.2	11	01:11-02:11	.89	-0.6	1	13:33-14:32	.50	4.2	9	10:40-11:40	.57	3.2
2	06:40-07:40	.69	-3.1	11	04:11-05:11	.48	0.5	2	02:32-03:32	.68	-3.1	10	10:30-11:30	.59	1.1
2	11:40-12:40	.67	0.3	11	05:11-06:11	.48	3.6	2	10:32-11:32	.54	0.1	10	11:30-12:30	.69	-0.2
2	13:40-14:40	.49	2.5	12	00:23-01:23	.64	0.3	2	11:32-12:32	.48	-1.2	11	08:43-09:43	.41	-2.2
3	02:13-03:13	.77	-5	12	01:23-02:23	.59	-0.2	2	12:32-13:32	.64	0.7	11	11:43-12:43	.49	0.2
3	14.13-15:13	.44	-5	12	06:22-07:23	.49	1.2	3	05:30-06:29	.41	3	12	00:36-01:36	.52	1.3
3	15:13-16:13	.46	-5	12	11:23-12:23	.67	1	4	02:05-03:05	.47	0.4	12	05:36-06:36	.57	2.5
4	04:58-05:58	.82	1.9	13	00:47-01:47	.51	-0.3	4	10:05-11:05	.50	5	12	10:36-12:36	.66	-1.4
4	14:59-15:59	.54	-1.1	13	05:47-06:47	.50	1.2	5	01:24-02:25	.63	-0.4	13	00:25-01:24	.67	-4.5
5	00:34-01:34	.73	0.2	13	08:47-09:47	.62	0.1	5	03:25-04:25	.74	-0.1	13	08:25-09:25	.56	0.1
5	02:34-03:34	.48	-2.4	13	12:47-13:47	.47	-0.2	5	04:25-05:25	.83	-0.4	13	09:25-10:25	.54	-4.8
5	13:34-14:34	.63	0.4	14	00:24-01:24	.80	-3	5	05:25-06:25	.67	0.1	13	14:25-15:25	.85	0
6	06:05-07:05	.42	4.9	14	01:24-02:24	.73	-0.9	6	00:37-01:37	.75	0.2	14	00:33-01:33	.72	0.4
6	14:05-15:05	.41	2.8	14	02:24-03.24	.78	0.5	6	01:37-02:37	.97	-0.1	14	13:33-14:32	.67	-1.3
7	01:09-02:09	.63	-0.5	14	03:24-04:24	.49	2.1	6	03:37-04:37	.45	0	15	00:48-01:48	.47	-5
7	02:09-03:09	.65	0.5	14	05:24-06:24	.60	-2.6	6	04:37-05:37	.48	-4.4	15	06:48-07:48	.77	-0.4
7	04:09-05:09	.65	-0.6	14	07:24-08:24	.55	-4.5	6	11:37-12:37	.49	1.7	15	14:48-15:48	.58	-0.5
7	09:09-10:09	.49	2.4	16	01:07-02:07	.75	-4.8	7	00:49-01:49	.90	-2.8	16	00:26-01:26	.87	0.9
7	15:09-16:09	.51	-3.5	16	07:07-08:07	.72	0.1	7	03:49-04:49	.70	0.2	16	08:26-09:26	.61	-5

Table 30 Continued

Dyad 7								Dyad 8							
S	Time Sequence	*r*	Lag	S	Time Sequence	*r*	Lag	S	Time Sequence	*r*	Lag	S	Time Sequence	*r*	Lag
8	05:38-06:38	.80	-0.2	17	02:26-03:26	.56	-4.5	7	05:49-06:49	.66	0.1	16	09:26-10:26	.77	0.1
8	08:38-09:38	.49	0.3	17	03.26-04:26	.51	-3.	7	10:49-11:49	.71	-1.6	17	00:14-01:14	.72	0.1
8	09:38-10:38	.51	-0.4	17	04:26-05:26	.93	-0.2	8	02:47-03:47	.66	5	17	02:14-03:14	.56	0.9
8	11:38-12:38	.67	0.5					8	00.47-01:47	.73	-4.4	17	04:14-05:14	.78	0
8	13:38-14:38	.72	3					8	02:47-03:47	.66	5	17	07:14-08:14	.53	-2.1
								8	03:47-04:47	.58	0.1	17	12:14-13:14	.80	0.5
								8	05:47-06:47	.58	1.7				
								8	10:47-11:47	.51	4.6				
								9	01:40-02:40	.73	-3.3				

Table 31 Number of Coded Coordinated Interaction Units and the Criteria used for Coding

Dyad	Number of Coded Units	Criterion
Dyad 7	25	>.60
Dyad 8	30	>.60

Note. If there was not any value higher than .60 in a given sequence, .50 or .40 correlation coefficients were used as cut-off points

Table 32 Interrater Reliability Results for Manifest Coding of Each Communication Modality in Sample 2

	Therapists (n = 12)				Patients (n = 12)			
	Researcher Mean	Rater Mean	Cronbach's Alpha	Intraclass Averages	Researcher Mean	Rater Mean	Cronbach's Alpha	Intraclass Averages
Gaze on	53.88	53.96	.98	.98	43.83	42.13	.98	.97
Gaze off	6.13	6.04	.98	.98	16.17	18.04	.99	.97
Facial Emotion	44.92	42.25	.80	.80	20.58	55.92	.25	.17
Eating Lips	0.25	0.25	.14	.15	0.92	1.08	.91	.91
Face Touch	5.92	6.33	.99	.99	1.50	1.92	.94	.93
Hair Touch	.50	.75	.82	.82	1.67	2.50	.94	.94
Nodding	10.92	16.42	.97	.85	1.17	4.58	.81	.66
Vocal Prompt	6.25	8.67	.90	.80	0.25	0.83	.75	.69
Camera	0.17	0.42	.85	.82	1.25	0.75	.85	.82

3.3.7.Latent Pattern Content Analysis of Manifest Contents

3.3.7.1.Results for Interactive Regulation Dynamics of Each Dyad across Different Phases of Therapy

In the first phase of the therapy, Dyad 7's interactive regulation dynamics were reciprocity of affirmativeness, interactive positive emotion regulation yielding closeness initiated by both the patient and the therapist, emotional reciprocity based on negative emotion, attunement (i.e., head nods/head shifts or emotion expressions as a response to the partner's increased movements or changes in

emotions), interactive disorganization (i.e., speech overlap), attempt to repair partner's rupture by the therapist, reflectiveness, and interactive regulation based on behavioral mimicry (i.e., bodily mirroring), rupture because of withdrawal, discordance, and heightened affective moment based on the happy to reunion interactions. In the second phase of the therapy, interactive regulation based on negative emotion, and heightened affective moment based on catharsis were new patterns. In the third phase of the therapy, another new pattern was heightened affective moment based on mirroring playfulness. In the final phase, there was not any new interactive patterns.

In the first phase of the therapy, Dyad 8's interactive regulation dynamics were interactive positive emotion regulation yielding closeness initiated by both the patient and the therapist, emotional reciprocity based on negative emotion, attunement, interactive disorganization (i.e., speech overlap), attempt to repair the partner's rupture by the therapist, reflectiveness, interactive regulation based on negative emotion, and interactive regulation based on behavioral mimicry (i.e., bodily mirroring). In the second phase of the therapy, the new patterns were keeping her own rupture as an optimal frustration, and heightened affective moment based on "happy to reunion" interactions. In the third phase of the therapy, the new pattern was the avoiding positivity and closeness by the patient. In the final phase, there was not any new interactive patterns.

3.3.8.Results of Quantitative Analysis of Interactive Regulations

T-test results showed that Dyad 8 had significantly higher levels of mutuality, mutual eye contact with mutual ambivalent and unmatched emotions, and lower levels of mutual eye contact with mutual negative emotion and being detached/separate than Dyad 7 (see Table 32). As presented in the Figure 62 and Figure 63, descriptive results for interactive regulations across different phases of the therapy showed that Dyad 7 had increasing trends in duration of mutual eye contact (still highest value in the first phase), mutual eye contact with mutual positive emotions on faces (except the highest value in the first phase), mutual eye contact with mutual negative emotion on faces, and mutual eye contact with

unmatched emotions on faces (except for a decrease in the last phase). Dyad 7 had decreasing trends in mutual eye contact with mutual ambivalent emotions on faces, and being detached/separate levels (except for the highest value in the first phase). Dyad 8 had decreasing trends in mutual focusing (except for an increase in the second phase), mutual eye contact with mutual neutrality on faces (except for an increase in the second phase), and mutual eye contact with mutual positive emotion on faces. Dyad 8 had increasing trends in mutual eye contact with mutual ambivalent emotions on faces (except for a decrease in the second phase), mutual eye contact with mutual negative emotions on faces (except for a decrease in the final phase), mutual eye contact with unmatched emotions on faces (still highest value in the first phase), and detached or separate levels (except for a decrease in the second phase).

3.3.9.Results of Quantitative Analyses of Self-Regulation Dynamics

Descriptive findings about the self-regulation systems of both the therapist and the patient based on the mean duration of each communication modality's ratio to one minute in each coordinated interaction unit across different phases of the therapy were illustrated in Figures 64-65. Moreover, the results of independent samples *t*-test analysis to see differences between two therapy dyads in terms of self-regulation dynamics were presented in the following.

3.3.9.1.Results for Differences in Self-Regulation Dynamics across Therapy Dyads

The results of independent samples *t*-test analyses showed that therapy dyads were significantly different from each other in the patient's focus on and avoidance of the partner, and the therapist's self-regulatory behaviors (see Table 33). Dyad 7's patient had significantly lower focus on and higher avoidance of the therapist in comparison to Dyad 8's patient. The level of the therapist's self-regulatory behaviors was significantly higher with Dyad 7's patient than with Dyad 8's patient.

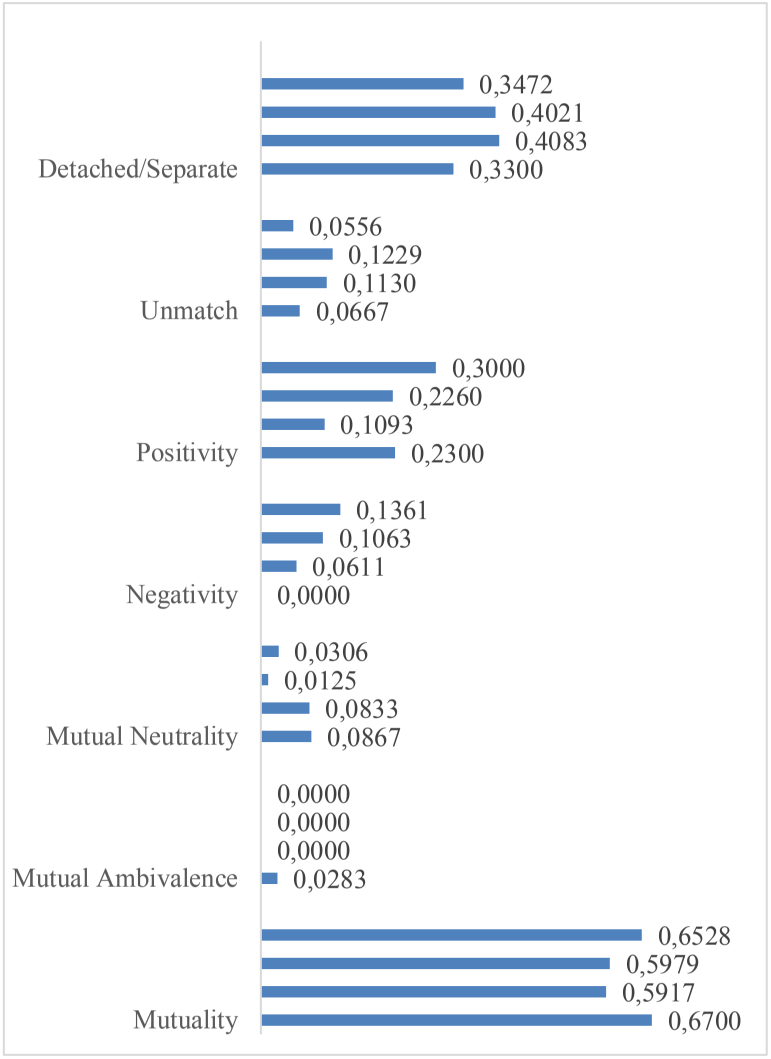

Figure 63 Dyad 7's interactive regulation dynamics across phases

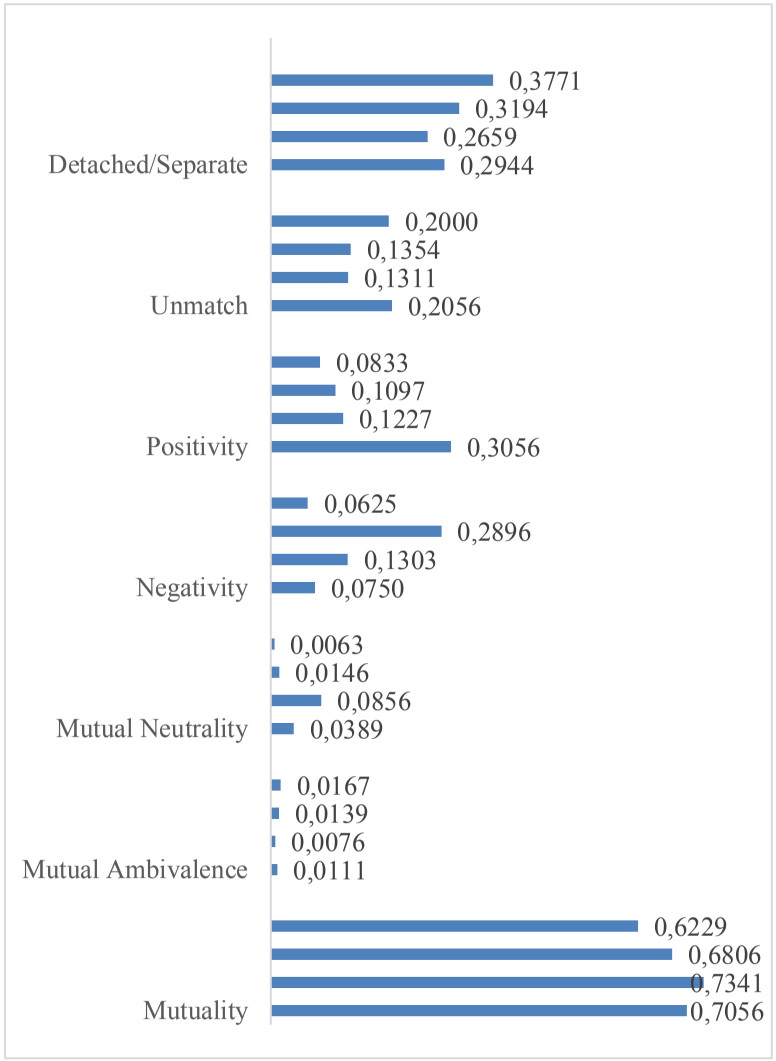

Figure 63 Dyad 8's interactive regulation dynamics across phases

Table 33 T-test results for the Differences between Dyads in terms of Interactive Regulations

	T	*df*	*p*	CI %95	
Mutuality	-2.77	50.47	0.01	-0.14	-0.02
Mutual Ambivalence	-0.87	44.16	0.39	-0.02	0.01
Mutual Neutrality	0.62	53.00	0.54	-0.03	0.06
Negativity	-2.04	50.06	0.05	-0.21	0.00
Positivity	1.25	44.91	0.22	-0.04	0.16
Unmatch	-1.82	52.10	0.07	-0.10	0.00
Detached/Separate	2.77	50.47	0.01	0.02	0.14

For Dyad 7, the therapist's focus onto her patient was almost same in the all phases except for a decrease in the last phase. Her avoidance of the patient increased in the last phase. The therapist's emotional expressiveness increased during the process. The therapist's self-regulatory behaviors decreased during the process except for an increase in the third phase. The therapist's affirmativeness was higher in the second and the third phases than it was in the first and final phases. The displacement of selfobject needs of the therapist was observed only in the final phase of the therapy. The patient of Dyad 7's focusing to partner increased during the process, however she had the highest value in the first phase. Consequently, her avoidance of the therapist decreased during the therapy process. As the therapy progressed, there were increases

in Dyad 7 patient's emotional expressiveness (except for an increase in the third phase), self-regulatory behaviors (particularly in the second and the third phases), affirmativeness (still not higher than it was in the first phase), and level of displacement of selfobject needs (except for a decrease in the final phase). In Dyad 8, the therapist's focus onto her patient was almost same in the all phases except for a decrease in the last phase. Her avoidance of the patient increased in the last phase. As the therapy progressed, there were increases in the therapist's emotional expressiveness (except for a decrease in the third phase and almost same level in the final phase) and level of self-regulatory behaviors (except for a decrease in the third phase), and affirmativeness (except for a decrease in the third phase). The displacement of selfobject needs of the therapist was observed only in the third phase of the therapy. Dyad 8 patient's focus on the therapist decreased during the therapy process (except for a little increase in the final phase). Consequently, her avoidance of the therapist increased during the process. As the therapy progressed, there were decreases in the patient's emotional expressiveness (except for an increase in the third phase) and displacement of the selfobject needs, while there were increases in the level of self-regulatory behaviors (except for a decrease in the second phase, and particularly highest in the third phase) and affirmativeness (with a slight decrease in the second phase).

3.3.10.Results for Micro Outcomes of Sample 2

As presented in Table 34, Dyad 7's patient was attached to her therapist less avoidantly and anxiously than her attachment to her partner. The therapist was attached to the patient of Dyad 7 more securely than her attachment to the patient of Dyad 8. The therapist was even less anxiously attached to the patient of Dyad 7 and more avoidantly attached to the patient of Dyad 8 than her attachment to partner. Also, as compared to her attachment to her partner, Dyad 8's patient was attached to her therapist more securely (i.e., still with high avoidance but with lower anxiety).

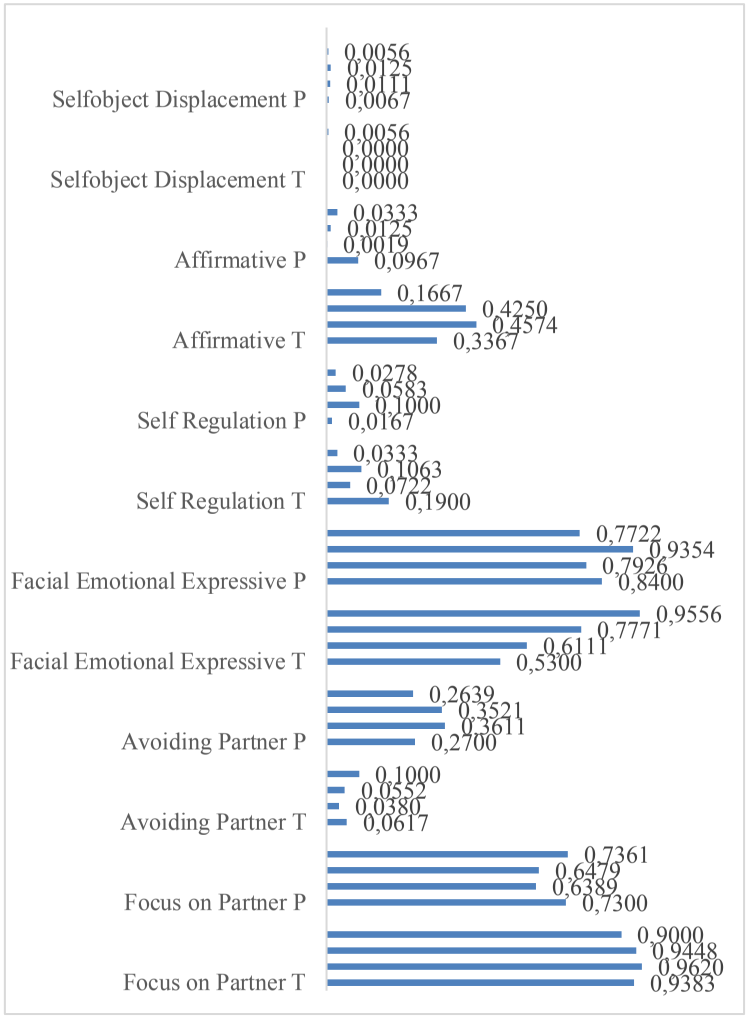

Figure 65 Dyad 7's self-regulation dynamics across phases

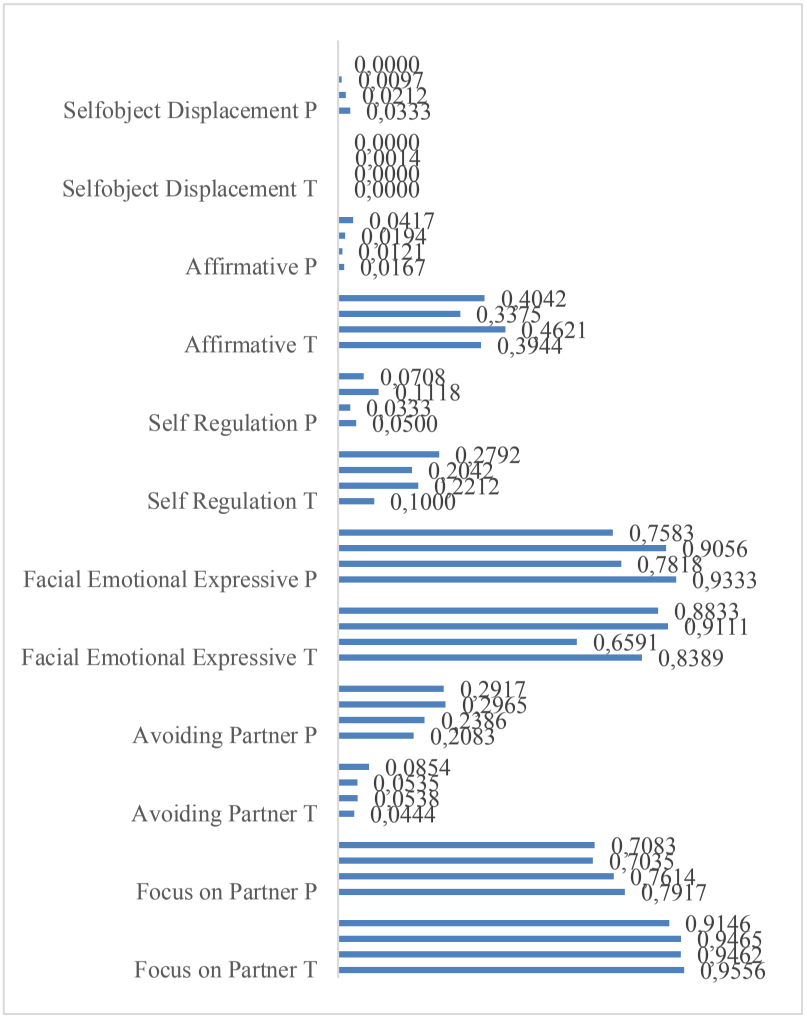

Figure 65 Dyad 8's self-regulation dynamics across phases

Table 34 The Differences between Dyad 7 and Dyad 8 in terms of Self-Regulation Dynamics

	t	*df*	*p*	CI %95	
Focusing on Partner T	0.08	53.00	0.94	-0.03	0.03
Focusing on Partner P	-2.01	50.09	0.05	-0.12	0.00
Avoiding Partner T	-0.08	53.00	0.94	-0.03	0.03
Avoiding of Partner P	2.01	50.09	0.05	0.00	0.12
Facial Emotional Expressiveness T	-1.52	43.29	0.14	-0.28	0.04
Facial Emotional Expressiveness P	0.05	53.00	0.96	-0.08	0.08
Self-Regulation T	-1.80	52.69	0.08	-0.23	0.01
Self-Regulation P	-0.39	53.00	0.70	-0.06	0.04
Affirmative T	-0.25	53.00	0.80	-0.09	0.07
Affirmative P	0.70	53.00	0.49	-0.02	0.03
Selfobject Displacement T	0.13	53.00	0.90	0.00	0.00
Selfobject Displacement P	-0.89	53.00	0.38	-0.02	0.01

The Figures 57-62 and Table 35 illustrate the therapeutic alliance within therapy dyads across different phases of the therapy on task, bond, and goal dimensions (blue lines represent patients' rates, and orange lines represent therapists' rates).

Table 35 Attachment Characteristics between the Therapist and the Patients

	Dyad 7		Dyad 8	
	AAX	AAV	AAX	AAV
Therapist to Romantic Partner	3.61	2.39	3.61	2.39
Therapist to Patient	2.61	2.39	3.67	3.67
Patient to Romantic Partner	4.94	4.67	4.72	5.61
Patient to Therapist	4.50	3.00	1.89	3.41

Note. AAX: Attachment Anxiety; AAV: Attachment Avoidance

Table 36 Therapeutic Alliance Evaluation during Therapy Process

Dyad 7							Dyad 8					
	Task		Bond		Goal		Task		Bond		Goal	
T.A.	P	T	P	T	P	T	P	T	P	T	P	T
1	4,92	4,33	5	4,75	5,42	4	3,33	3,67	4,18	5	4,08	3,33
2	4,58	4,67	4,92	5	5,08	4,17	3,83	3,83	4,75	5,08	4,67	3,92
3	4,75	3,25	5,08	4,92	5,33	3,67	3,25	3,25	4,42	5,08	4,83	3,92
4	3,75	3,83	4,67	5,42	4,08	4	3,17	3,42	4,27	4,75	4,33	4,17
5	4,58	4,67	5,17	5,08	4,58	4,58	4	5,08	4,58	4,67	5,33	5,5
6	4,58	4,25	5,08	5,33	4,58	4,75	4,42	4,42	5	4,92	5,83	5,33

Note. T.A: time of assessment; 1: 1th session, 2: 2th Session, 3: 6th session, 4: 10th session, 5: 15th of therapy, 6: End of Therapy

In Dyad 7, the therapist and the patient's mostly rated their alliance on task dimension similarly to each other, except for discrepancies in the sixth sessions. The patient had stable trends during the process except for fractions in task dimension, and an increasing trend in the bond dimension except for little decreases in the second and tenth sessions. The patient's ratings on the goal dimension showed a decreasing pattern except for an increase in the sixth session. Similarly to her patients, the therapist's ratings on task dimension had an irregular trend

containing fractions. The therapist's ratings had increasing trends in bond (except for decreases in the sixth and fifteenth sessions) and goal dimensions (except for a decrease in the sixth session). Dyad 8's therapist mostly rated the alliance as better than her patient, except for better ratings of the patient on the goal dimension. The patient's ratings on task and goal dimensions had increasing trends (except for decreases in the task in the sixth session and in the tenth sessions and in the goal in the tenth session). The patient's ratings on bond dimension had an increasing trend except for decreases in the sixth and tenth sessions. The therapist's ratings on the task dimension had an increasing trend except for decreases in the sixth and in the tenth sessions. The therapist's ratings on the bond dimension showed a stable trend except for decreases in the tenth and fifteenth sessions. The therapist's ratings on the goal dimension had an increasing trend except for a decrease the final session.

3.3.11.Results for Macro Outcomes of Sample 2

The results based on descriptive analyses showing the differences in attachment, selfobject needs, symptoms, and problems in interpersonal relationships of the patients as measured at the beginning and at the end of the psychotherapy process are depicted in Figures 72-73 (see also Table 36). There were improvements in Dyad 7's patient on attachment avoidance and anxiety, hunger for twinship, idealization, and mirroring, and avoidance of mirroring, anxiety, negative self-image, somatization, hostility, styles in interpersonal relationships based on self-sacrificing, socially-avoidant, nonassertiveness, and intrusive needy, whereas there were increases in depression and vindictive/self-centered style in interpersonal relationships. There was not any difference in over accommodation, and cold-distant roles in relationships. Dyad 8's patient had improvements in attachment avoidance and anxiety, hostility, anxiety, and styles in interpersonal relationships based on domineering/controlling, vindictive/self-centered, socially-avoidant, and intrusive needy, whereas there were also increases in hunger for twinship, avoidance of idealization and twinship, hunger for idealization, hunger for mirroring, depression, negative self-image, over accommodation and self-sacrificing roles in interpersonal relationships. There was not any difference in cold-distant and socially avoidant styles in the interpersonal relationships.

Figure 71 Dyad 7's therapeutic alliance on task factor

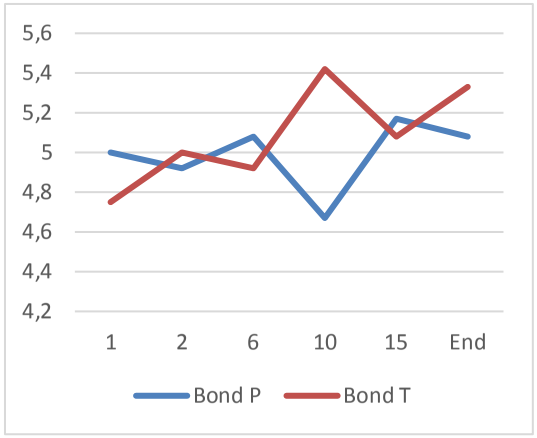

Figure 71 Dyad 7's therapeutic alliance on bond factor

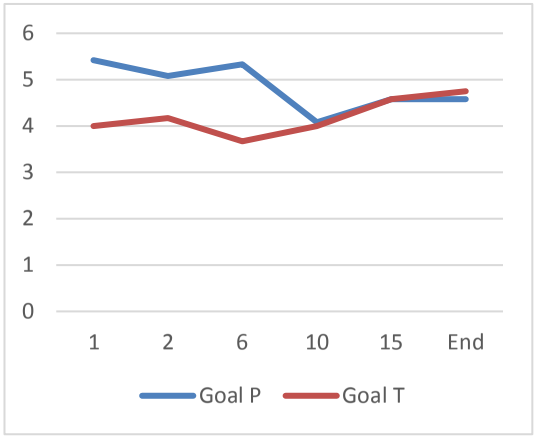

Figure 71 Dyad 7's therapeutic alliance on goal factor

Figure 71 Dyad 8's therapeutic alliance on task factor

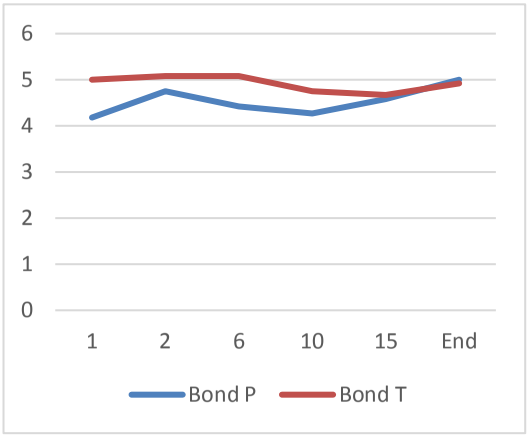

Figure 71 Dyad 8's therapeutic alliance on bond factor

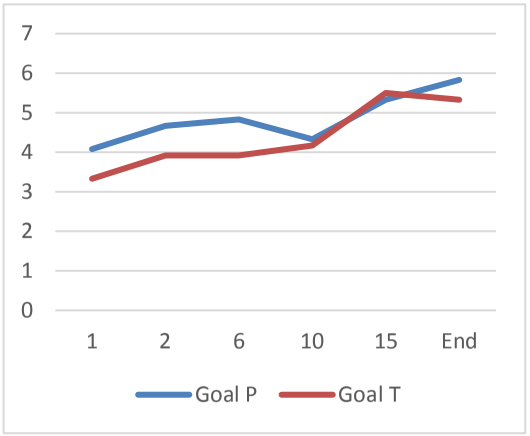

Figure 71 Dyad 8's therapeutic alliance on bond factor

Table 37 Time One and Time Two Scores of the Patients on Symptoms and Interpersonal Problems

	AAX	AAV	HT	AVIT	HI	HM	AVM	AX	D	NS	S	H	OA	SS	DC	VS	CD	SA	NA	IN
D7 F	4.94	4.67	5.25	3.45	4.86	4.5	3.67	1.92	1.67	2.17	1.11	1.43	1.5	2.5	1.5	0.25	-	1.25	1.75	1.75
D7 L	4.78	4.44	4.88	3.73	4.14	3.83	3.5	1.31	2.5	1.5	1	1.14	1.5	2	1.5	0.5	-	1	1	1.25
D8 F	4.72	5.61	4	4	4.43	3.17	5.5	0.85	1.08	0.83	0.22	1.14	1.25	1.25	0.75	0.75	-	1	1.25	0.25
D8 L	3.5	4.83	4.63	4.36	4.86	4	4.67	0.62	1.5	1.17	0.33	0.71	2	2.75	0.25	0	-	0	1.25	0

Note. D7F: Dyad 7 First Session, D7E: Dyad 7 Last Session, D8F: Dyad 8 First Session, D8L: Dyad 8 Last Session, AAV: Attachment Avoidance, AAX: Attachment Anxiety, HT: Hunger for Twinship, AVIT: Avoidance of Idealization and Twinship, HI: Hunger for Idealization, HM: Hunger for Mirroring, AVM: Avoidance of Mirroring, Anxiety, D: Depression, NS: Negative Self, Soma: Somatization, H: Hostility, OA: Overly Accommodating, SS: Self-sacrificing, DC: Domineering/Controlling, VS: Vindictive/Self-centered, CD: Cold-Distant, SA: Socially-Avoidant, NA: Nonassertive, and IN: Intrusive-Needy

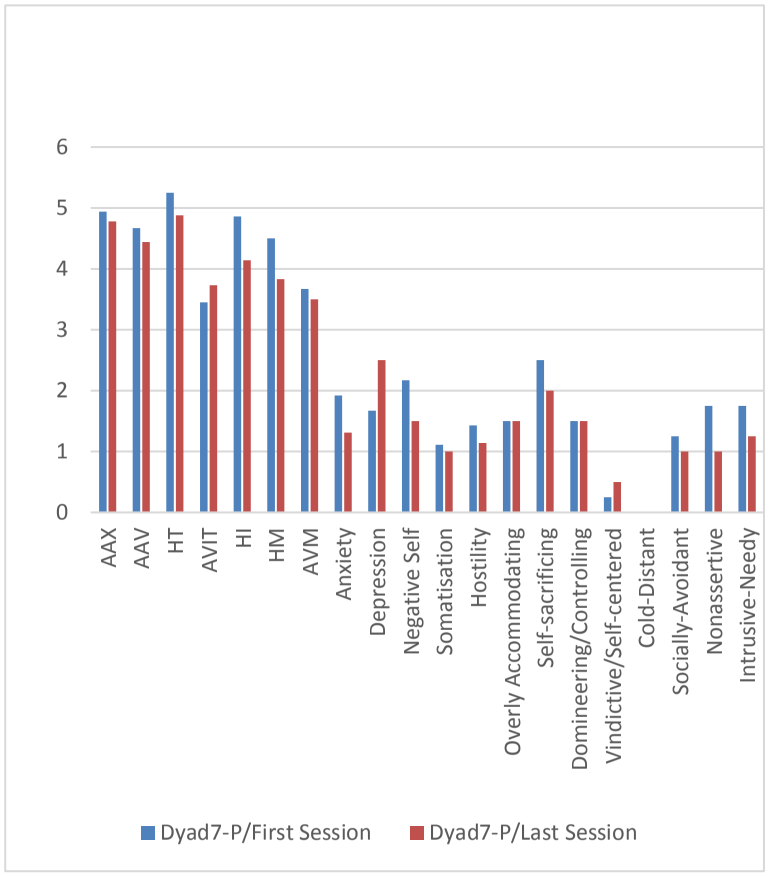

Figure 73 Patient outcomes for Dyad 7

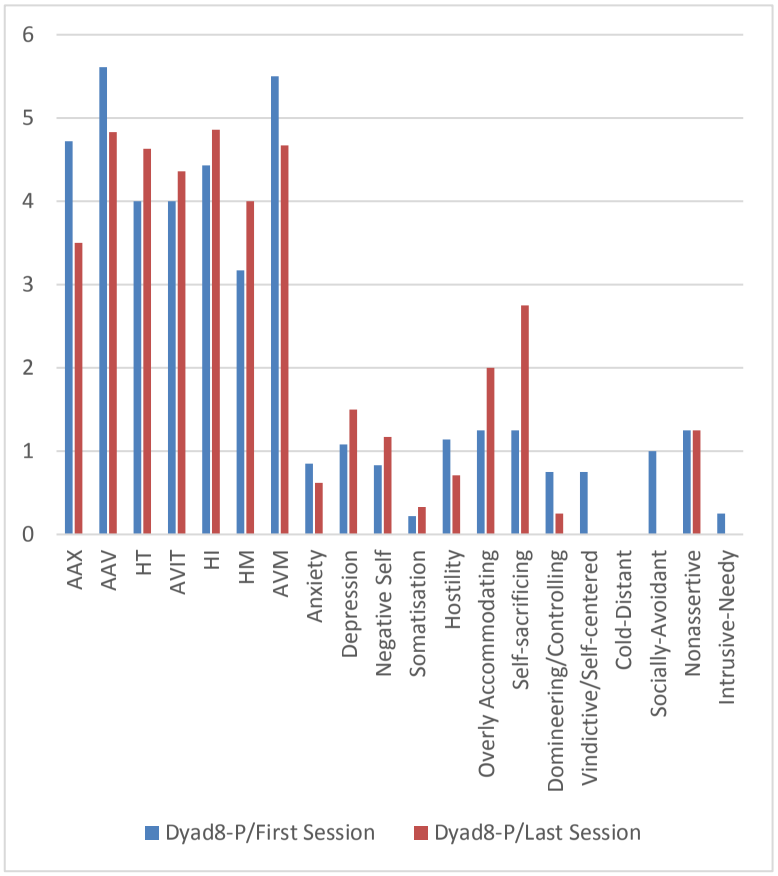

Figure 73 Patient outcomes for Dyad 8

CHAPTER 4

DISCUSSIONS

The findings of the present dissertation will be discussed in this section as depicted in the following diagram. Firstly, as illustrated in Diagram in Figure 74, it was expected that the fit between the individual characteristics within each dyad (i.e., corresponds to the "a" in the Diagram) would be related to the micro outcomes of the psychotherapy (particularly therapeutic alliance in the beginning sessions). Secondly, it was hypothesized that the self-regulation dynamics obtained from the microanalysis of nonverbal behaviors in the coordinated interaction units would be formed by individual characteristics of a patient and a therapist independent from the interaction between them (i.e., corresponds to the "b" in the Diagram). Thirdly, it was expected that the principles of mother-infant nonverbal interactions before language development underlying the infant's future secure attachment would be valid in the emergence of implicit relational processes between a therapist and an adult patient. Therefore, the interactive regulation dynamics which resulted from the interactions between the self-regulation systems of each patient and therapist (i.e., corresponds to the "c" in the Diagram) will be discussed in light of the findings of the study.

4.1.Discussion for Results of Sample 1

4.1.1.Discussion of the Results for Distributions of Individual Characteristics in Sample 1

Congruent with the two-person psychology perspective of contemporary psychoanalysis, a recent review showed that the therapist's subjective characteristics (e.g., interpersonal functioning, reflective and introspective

capacities, and personalities) are one of the influencing factors of the outcomes of the therapy (Lingiardi, Muzi, Tanzilli, & Carone, 2018). Consequently, the present study investigated not only the patients' but also the therapists' subjective features (i.e., attachment, selfobject needs, and temperaments). Incidentally, the match between the characteristics of a patient and a therapist was evaluated to the extent of its facilitating or obstructing role in the development of rapport, regarding the hypothesis of the goodness of fit between mother-infant features to development of secure attachment of the infant (Mangelsdorf, Gunnar, Kestenbaum, Lang, & Andreas, 1990).

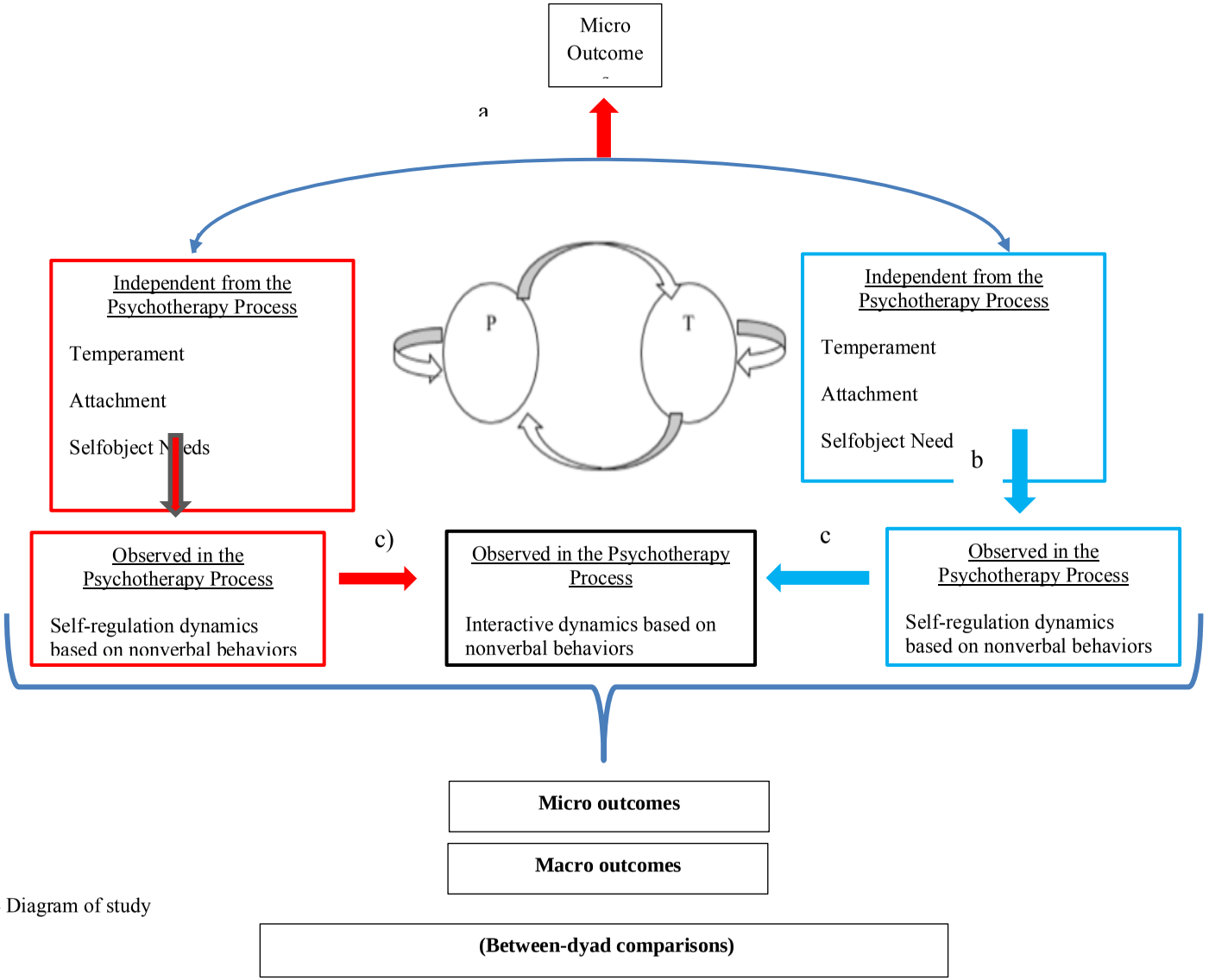

Figure 74 Diagram of study

Firstly, time one assessment of individual characteristics showing that higher needs for twinship selfobject experiences were high in both patients and therapists might be related to the developmental stage of the participants, which was young middle adulthood. Raising a family or founding a place for oneself in the society are developmental tasks in this era (17-45 years old; Levinson, 1986). These tasks may be considered as being congruent with twinship selfobject needs defined as "being human among other human beings" (Togashi & Kottler, 2015). Moreover, it may be speculated that elevated twinship needs of the therapists might have motivated them to join this study as a voluntary psychotherapist to help the researcher who is a doctoral student having similar academic needs and goals to them.

Secondly, the finding showing the co-occurrence of higher scores on depression, negative self-image and anxiety, and three problematic styles in relationships (i.e., self-sacrificing, overly accommodating, and nonassertive) is needed to be discussed, whether patients' styles in relationships make them vulnerable to develop particular symptoms. Congruent with this claim, findings of the reliability and validity study of the Inventory of Interpersonal Problems Circumplex Scales revealed that there were significant positive correlations with these problematic styles and psychological symptoms (Akyunus & Gençöz, 2016). Additionally, patients of Sample 1 in the present study had higher values of symptoms (e.g., 2.3 for depression) than the sample of the original study (m = 1.66).

Lastly, according to the quality of the fit between a therapist and a patient based on their characteristics, attachment anxiety and avoidance, hunger for idealization as a type of selfobject needs, and effortful control as a type of temperament were more varied in the sample in comparison to the other characteristics. In other words, many of the dyads almost perfectly fit each other on many of selfobject needs and temperament features. This finding indicates the discriminative functions of the attachment characteristics, hunger for idealization, and effortful control while comparing the dyads with each other in further interpretations to see differences in their nonverbal behaviors embodied to interactive exchanges. In addition to this, it

was expected that the fit between a therapist's and a patient's individual features would increase likeness, which facilitates better therapeutic alliance particularly in the first session. As expected, the results showed that the more the fit within the dyads based on attachment patterns, the higher the scores on all dimensions of therapeutic alliance in the first session, and also the less discrepancy between the ratings of therapists and patients. Also, the patients and the therapists of Dyad 5 and Dyad 6, who were markedly different from each other based on attachment characteristics in comparison to the other dyads, evaluated psychotherapy process more divergently from each other. Dyad 4's patient and therapist were too different from each other in terms of their effortful control temperament feature; therefore, they rated the task dimension of the therapeutic alliance in the first session as being lowest in comparison to other dyads. Parallel with these findings, the patients of Dyad 4 and Dyad 5 were the patients who had problems to accommodating psychotherapy framework in terms of timing. Moreover, the patient of Dyad 5 was the patient who shared her thought about quitting psychotherapy in the middle of the therapy process (but, she did not). In the current literature, the influence of the match of between therapist-patient based on sex, socioeconomic status, ethnicity, cultural background, values, believes, cognitive structures, anaclitic/introjective personality configurations and personality types on the early therapeutic relationship, the therapy process, and the outcomes have been studied (e.g., Cabral & Smith, 2011; Coleman, 2006; Ibaraki & Hall, 2014; Reis & Brown, 1999, Taber et al., 2011). The present study is the first study testing the influence of the fit between selfobject needs and temperaments of therapist-patient on the therapeutic process, particularly in the beginning phase. Also, there have been studies supporting the impact of both the convergent and the complementary attachment pattern within therapy dyad on good psychotherapy outcomes (e.g., Bruck et al., 2006; Farber & Metzger, 2009; Petrowski et al., 2011; Wiseman & Tishby, 2014). The present study focused on the convergent similarities between therapists andpatients, since it was believed that the amount of the similarities would increase likeness within a/the dyad, and evoke the implicit relational

learnings of each partner via “I know you” feelings. Still, complementary matching should also be tested in future studies.

4.1.2.Discussion of Results for Motion Energy Analysis

Previous studies showing the positive relationship between nonverbal head synchrony and better psychotherapy outcomes were one of the pioneering ideas behind the present study. However, unlike previous studies using same methodology (i.e., motion energy analysis of head movements of interacting partners in the psychotherapy), this study included only the positive correlations between partners’ head movements across one-minute time interval. The reason for choosing only positive correlations was that the present study aimed to explore the implicit processes underlying nonverbal exchanges between a therapist and a patient in a similar way to the studies observing mother-infant interactions during *play*. It may not be wrong to say that there should be higher levels of the movements during playing. Thus, *coordinated interaction units* were defined as having at least a moderate level of positive head synchrony between partners. This basic difference with earlier studies should be kept in mind while interpreting the findings of this study.

In the present study, motion energy analysis of 97 sessions of 6 psychotherapy dyads revealed 250 coordinated interaction units in the first fifteen minutes of each session. Each dyad had almost at least one coordinated interaction unit in each session. The numbers of the sessions in which there was not any moderate level of positive head synchrony were too limited. This finding supported the idea that therapists and patients become synchronized nonverbally (Ramseyer & Tschacher, 2011; Ramseyer & Tschacher, 2014).

The relationship between head synchrony between partners and psychotherapy outcomes will only be speculated in the framework of promising patterns since the results did not yield any changes in attachments, symptoms, selfobject needs, and problematic relationships of the patients. Significant changes were found only as decreases in hunger for idealization (in two patients) and avoidance of twinship and idealization needs (in one patient). Post-treatment results revealing increases in

negative self as a type of symptoms of many patients was compatible with increases in their attachment anxieties (including negative self-perceptions). These negative outcomes of therapy processes may be due to the limited session count (max: 17th session) which had to be restricted based on university academic year. The number of the sessions was lower than the numbers of sessions in earlier studies about nonverbal head synchrony (e.g., Ramseyer & Tschacher, 2014; Ramseyer & Tschacher, 2011). Two meta-analyses testing the influence of therapy dosage to therapy effectiveness found that 75% of patients benefited from at least 26 sessions (Howard, Kenneth, Kopta, Mark, Krause, Merton, Orlinsky, & David, 1986), and 85% of dysfunctional patients had gains from at least 21 sessions (Harnett, Donovan, & Lambert, 2010). Still, the nonexistence of dropouts in this study may show that all patients perceived the process as beneficial to them. Besides, the fact that many patients in Sample 1 had improvements on socially-avoidant and nonassertive styles in relationships may be considered as a sign of increases in their self-confidence. In conclusion, it will be hard to make exact comparisons between nonverbal synchrony research and this study in terms of macro outcomes. The following is a summary of the possible patterns with an explanatory perspective mostly based on microanalyses of the selected synchronized interactions.

Firstly, the results for dyads who had higher nonverbal synchrony values than the mean of Sample 1 showed that, as opposed to the expectations, better synchrony was not consistently related with better therapy outcomes. However, as congruent with the findings coming from microanalysis of nonverbal exchanges, the relationship between nonverbal synchrony and outcomes indicates important relational dynamics. Dyad 2 had the highest nonverbal synchrony value in Sample 1, and the patient was following her therapist based on time lags in many of the interaction units. Based on the observations coming from the microanalysis of their coordinated interaction units, these increased correlations in head movements were mostly outcomes of the interactive dysregulations (e.g., high-pitched laughs with disorganized body movements), the discordance of the therapist (e.g., standing up to take somethings) or rapid changes in speech turn-takes between them. Congruent with these interactive dynamics, all symptoms of, half of the problematic

interpersonal styles, and attachment anxiety of the patient of Dyad 2 increased at the end of the therapy. Moreover, Dyad 3 had higher nonverbal synchrony than the mean of the sample with lower amounts of time delays which approached to have exact head synchrony. According to the results of microanalysis of interaction units, Dyad 3 had the second lowest mutuality value in the sample due to the therapist's avoidance of eye contact. As a result, the patient was following the therapist based on time lags. In other words, the therapist's avoidance was dominating the interaction between them. The patient of Dyad 3 was one of the patients who was good at eye contact and motivated to imitate and behaviorally adjust to her therapist. Thus, it can be concluded that the increased head synchrony between them may be resulting from the efforts of the patient. In terms of macro outcomes, while Dyad 3's patient's attachment insecurity, anxiety, and hostility increased at the end of the therapy, many of her problematic styles in relationships decreased. In comparison to the Dyad 2, the reason why Dyad 2's patient gained more from the therapy may be due to having almost exact synchrony rather than delayed synchrony. Dyad 5 was the other dyad who had higher nonverbal synchrony than the mean of the sample; however, at the end of the therapy process, there was not any improvement in patient's symptoms, there were even increases in anxiety, negative self, and hostility. She was the patient who had a limited number of changes in problematic styles in relationships, as well. Although her attachment security increased at the end of the therapy, this increase may not be an informative finding because of her good pre-treatment attachment security. Similarly to the therapists of Dyad 2 and Dyad 3, the therapist of Dyad 5 had a difficulty in making eye contact with her patient. In addition to this, the patient of Dyad 5, similar to the patients of Dyad 3 and Dyad 6, had predictable and constant eye contacts. Parallel to this, therapist's avoidance dominated the coordinated interaction units according to the ways of the time lags. These findings for three dyads make it possible to say that the amount of increase of positive head synchrony, which was higher than the sample's mean, may also be one of the signs of ruptures in psychotherapy processes. This result reminds the suggestions of Delaherche, Chetouani, Mahdhaoui, Saint-Georges,

Viaux, and Cohen (2002) on the importance making content analyses of synchronized movements generated from motion energy analysis.

Secondly, Dyad 1, Dyad 4, and Dyad 6 had similar nonverbal synchrony means with each other which were lower than the mean of the sample. One of the common features of Dyad 1 and Dyad 4 was the ways of time lags showing the therapist following the patient. Consistently, Dyad 1's patient had the lowest gaze on behavior. Therefore, the patient's avoidance was dominating the coordinated interaction units. The patient of Dyad 1 had decreases in many of her symptoms, attachment avoidance, and three of the problematic interpersonal styles. The patient of Dyad 1 benefited more from the therapy process than those of Dyads 2, 3, and 5 and this may be related to the therapist's accommodation to her patient, rather than patient's efforts to accommodate herself to her therapist. Still, her results were not significant as mentioned before, because the patient's higher needs for self-regulation were mostly limited to the development of the interactive regulation dynamics. Dyad 4's patient was the only patient whose all symptoms got better at the end of the therapy. This finding may be parallel with the findings of Dyad 1 based on the time lags showing the therapist was following the patient. However, the patient's attachment security and most of the problematic styles in relations got worse at the end of the process. This partial improvement in the patient may be associated with the delayed nonverbal synchrony between them rather than exact synchrony. The reasons for delays in therapist's responses to her patient may be associated with the therapist's judgmental and unresponsive countertransference reactions observed through the microanalysis of interactive dynamics, particularly in the last two phases of the therapy. Dyad 6 had a unique time lag feature showing an equal amount of the therapist's and the patient's dominance in the coordinated interaction units. This finding may be compatible with the chase and dodge and approach avoidance dilemma between them which were observed during almost all phases of the therapy. Most of the symptoms and problematic styles in relationships of Dyad 6's patient got better, while her attachment anxiety increased at the end of the therapy process. Taking into consideration the findings of the microanalysis of

interactive regulations, these findings were inconclusive, because it was clear that their relationship included a large number of dysregulations.

In conclusion, the results of the relationship between motion energy findings and macro outcomes of therapy sessions particularly based on time lags open a new perspective to understand empathy conceptualization of Kohut through nonverbal synchrony. Tschacher and Pfammater (2017) pointed out that nonverbal synchrony was one of the ways of studying perspective-taking empirically. For this reason, the rationale behind nonverbal synchrony studies is that it is impossible to understand the mind without taking into consideration its embedding, the body. For instance, when we observe someone, we automatically employ his or her mentalizing or Theory of Mind as presented in one of the recent famous scientific explorations proving embodied cognition via mirror neuron system in our brain (Rizzolatti & Craighero, 2004). The results of present study, particularly in terms of delayed and exact synchrony and ways of the delays, made a contribution to empathy literature by supporting Kohut (1971, 1977) 's idea on the empathy as a tool to taking perspective of the patient by standing near to the patient's experience rather than predefined theoretical assumptions. Similarly, it is claimed that head movements reflect mental imagery (McClave, 2000). Consequently, it may be said that synchronizing head movements may help the listener to entrance to the partner's experience. It may be concluded that when the sessions were dominated by the head movement changes of the patient (i.e., time lags on the behalf of the patient) or yielded exact synchrony rather than delayed one, the therapy outcomes would be better.

4.1.3.Discussion of the Results For Latent Pattern Contents Representing Interactive Regulation Dynamics

This study's findings of latent pattern content analyses made it possible to conceptualize nonverbal exchanges between an adult patient and a therapist implying three principles of mother-infant interaction before language development, which were a) ongoing regulations, b) disruptions and repairs, and c) heightened affective moments. Specifically, there were interactive contingency

patterns embodied in nonverbal communication modalities (i.e., eye gaze, facial emotional expressiveness, affirmative gestures, looking at the camera behavior, self-regulatory behaviors, and talk-silence turns) that may be classified as ongoing regulations principle of mother-infant relationship. They were a) interactive regulation (i.e., *interactive positive emotion regulation which yields closeness*, *interactive regulation in which the patient is active*, *interactive regulation based on negative emotion*, *interactive regulation based on behavioral mimicry*, *attunement*, and *reflectiveness*) and b) interactive dysregulation (i.e., *interactive disorganization*, *emotional reciprocity based on negative emotion*, *interactive dysregulation*, *chase and dodge*, *approach-avoidance dilemma*, and *still face*). Moreover, as a particular extension of the ongoing regulations principle (Beebe & Lachmann, 2014; Lachmann & Beebe, 1996), seven types of the ruptures in the psychotherapy process were found in this study which were *ruptures due to withdrawal*, *discordance*, *rejection*, *judgmental*, *giving up to repair a rupture*, *unresponsiveness rather than being reflective*, and *avoiding positivity and closeness*, and two forms of repair behaviors; *attempting to repair partner's rupture* and *keeping own rupture as an optimal frustration*.

In the current literature, the number of studies testing validity of the bipolar model of self and the interactive regulation underlying development of attachment characteristics of infants (Beebe & Lachman, 1998; Beebe et al., 2000; Beebe & Lachman, 2002) in adult face to face therapy is limited. Therefore, the present study's findings for interactive regulation dynamics based on nonverbal behaviors will be discussed in comparison to the results of a pioneering study exploring improvements in adult patients' attachment security as a result of psychotherapy process via nonverbal attunement within partners (Havas, Svartberg, & Ulvenes, 2015). Two concepts were investigated in their study. They were a) therapist's openness and regard for the patient's ongoing subjective experiences which were examined through listening features of the therapist and b) the therapist's abilities to match those experiences in terms of type of affect, intensity, and timing via the vocal quality of her speech. They evaluated the facilitating (i.e., attunement) and hindering (i.e., malattunement) influences of the therapists' nonverbal

responsiveness on the patients' self-exploration. They argued that while attentive, interested, and compassionate listening facilitates the self-exploration of the patient, an increased frequency of interruption of speech hinders the patient's self-exploration. This study's findings on latent pattern contents, namely interactive regulation based on mutual positive and negative emotion, or behavioral mimicry and attunement (affective or bodily) may be considered as outcomes of self-exploration facilitating attunement between the therapist and the patient. However, unlike Havas, Svartberg, and Ulvenes,2015), in this study not only the therapist's attunement was taken into consideration but also the patient's active effort or influence on the process was evaluated. Therefore, a separate category was defined, namely *interactive regulation in which the patient is active to regulate*. Also, particularly in *attunement* and *behavioral mimicry,* patterns include patients' responsiveness. These interactive dynamics, in which the patient's responsiveness was observed, was compatible with the mother-infant literature comprising of child's component in emotional availability in relationship including responsiveness and involvement of the child. Nonetheless, similar to Havas, Svartberg, and Ulvenes''s (2015) perspective, reflectiveness was one of the categories that was found in this study to be more related to therapist's (rather than patient) nonverbal openness, which facilitated the patient's self-exploration. Finally, the present study's findings representing *interactive disintegration* corresponds to nonverbal dynamics hindering self-exploration of patients. Especially, *interactive dysregulation*, *interactive disorganization*, and *emotional reciprocity based on negative emotion* may be similar to malattunement between partners as defined in Havas, Svartberg, and Ulvenes, (2015).

Apart from adult therapy findings, the results of the present study may be compatible with existing/current mother-infant literature. Firstly, in this study, it may be said that nonverbal exchanges provided in interactive dysregulation category and different forms of rupture mostly resulted from restricted mentalizing in partners (Bateman & Fonagy, 2012). Particularly, interactive dysregulation dynamics were outcomes of limited interest and curiosity (i.e., *being unresponsive*, *ruptures due to withdrawal,* and *still face*). Restricted perception on opacity of

minds as a type of reflective functioning (i.e., mentalization) may be associated with *being judgmental* which is/can be observed through nonverbal behaviors. Secondly, several types of ruptures like *discordance*, *rejection*, *giving up to repair rupture,* and *avoiding positivity and closeness* may resemble the intrusiveness, inappropriate responses and or being unable to prompt a response as different forms of limited maternal sensitivity (Ainsworth, Bell, & Stayton, 1974), which cause disruptions in the patient's sense of agency. These types of ruptures also contrast with emotional availability of the parent in dyadic attunement (which includes sensitivity, structuring, nonintrusiveness, nonhostility; Biringen & Easterbrooks, 2012). Thirdly, *behavioral mimicry* and *attunement* (based on bodily responses) may correspond to maternal nonverbal attunement defined by having three dimensions i.e., joint attention, bodily coherence, and ability to mirror the child nonverbally (Vende-Kotova, 2016; Vende & Čukurs, 2011). Lastly, to the researcher's knowledge, in this study, some forms of mother-infant interactive dynamics like *still face* (Tronick, Als, Adamson, Wise, & Brazelton, 1974) and *chase and dodge* (e.g., Bebee & Lachman, 2002) interactions were conceptualized firstly in adult psychotherapy via different combinations of nonverbal expressions.

4.1.4.Discussion of the Results for Interactive Regulation Dynamics Based on the Quantitative Data

Apart from the content analysis of the interactive dynamics based on nonverbal behaviors, durations of mutual eye contact between partners with emotional expressions on the faces of each coordinated interaction unit were categorized into seven dimensions, namely *mutuality* (i.e., total mutual eye contact duration), *mutual eye contact with mutual ambivalent emotional expressions on the face*, *mutual eye contact with mutual neutral faces*, *mutual eye contact with mutual negative emotion on the face* (i.e., negativity), *mutual eye contact with mutual positive emotion on the face* (i.e., positivity), *mutual eye contact with unmatched emotion on the faces of partners*, and *duration of detachment/separateness* (i.e., not mutual eye contact). The number of studies on the microanalysis of nonverbal dynamics are limited. However, based on Tickle-Degnen and Gavett (2003)'s summaries and definitions, there were three dimensions of nonverbal domains that have been studied in the

current literature. They were a) *attentiveness,* b) *positivity-negativity*, and c) *coordination*. Thus, in our study, three dimensions were added to the definitions like *mutuality* (so *detachment/separateness)*, *positivity*, and *negativity*. The coordination domain of Tickle-Degnen and Gavett (2003) corresponds to the coordinated interaction units (i.e., nonverbal synchrony) in this study. The attentiveness domain in their conceptualization was quantified based on the coder's ratings on a scale of one to eight, whereas in our study it was calculated based on the actual duration of eye gaze behavior in each partner in a one-minute interaction. Therefore, it may be claimed that the present study provides an objective assessment of attention in micro-level. In the present study, positivity and negativity quantifications were restricted only to the interactions in which there were mutual focusing between partners. The reason behind this decision was that mutual focusing plays a crucial role in the development of intersubjective consciousness within a dyad (as defined by Stern 2004), since two people are mutually experiencing the same moment and co-creating intersubjective consciousness either in a positive or negative form in relatively intense interactions (e.g., psychotherapy). Furthermore, the present study's categorization of *mutual eye contact with unmatched and ambivalent emotions on the faces of partners* made it possible to detect moments including either the therapist's countertransference reactions (e.g., ruptures) or reflectiveness in a given interaction. Furthermore, *mutual eye contact with mutual neutral faces* category defined in this study may make it possible to detect moments in which both a therapist and a patient needed self-regulation via reducing their facial exchanges. As a conclusion, Degnen and Gazevett (2003)'s category of positivity-negativity was enriched through adding three new categorizations in this study.

4.1.5.Attachment and Dyadic Coordination Based on the Bipolar Model of The Self and Interactive Regulation

One of the featured results found in latent pattern content analysis was that the secure therapist-preoccupied patient dyad had more variate interactive dynamics in the first phase of the therapy. This finding may be related to the facilitating function of secure attachment of the therapist which allows the interchangeability between

self and interactive regulation, thus allowing different types of interactive regulations to emerge. owever, as seen in the dyad with preoccupied therapist-fearful patient, increased levels of self-regulation (i.e., limited eye gaze behavior of the patient due to attachment avoidance, and lack of responsiveness and expressiveness of the therapist due to attachment anxiety) restricted the development of interactive regulation dynamics in many of the dyads of our study. This finding may be compatible with the findings of Feniger-Schaal, Hart, Lotan, Koren-Karie, and Noy (2018). They found that the participants with secure attachment had a more explanatory mirroring game than those with insecure attachment; this allowed them to make a rich use of their body parts and movement planes and to experience more affective sharing.

Another important finding of this study was that there were limited numbers and types of heightened affective moments in Sample 1's therapy processes, which was congruent with nonsignificant macro outcomes of the therapies. It was claimed by Bebee and Lachman (1998) and Boston Change Process Study Group (1998a, 1998b, 1998c, 1999, 2002, 2007, 2012) that heightened affective moments and moments of meetings have powerful impacts on the changes in implicit relational learnings of patients. The reason why Sample 1's dyads had limited heightened affective moments may be due to the increased needs for self-regulations which restricted the number of interactive regulations, or over-preoccupation in interactive regulation which diminished self-exploration (as seen in the interview type sessions of Dyad 6). However, it is possible that the subjective aspect of experiencing heightened affective moments makes it difficult to be objectively observed by an outsider (i.e., the coder).

In terms of the associations between interactive contingency processes observed in therapy dyads and therapeutic alliance evaluations of therapy partner, the findings of this study revealed inconclusive results. This might be due to a limitation in the methodology of the study which was analyzing coordinated interaction units comprising only positively synchronized head movements. It is possible that there would be different interactive dynamics in negatively correlated movements, which

were not analyzed in this study, associated with the partner's evaluations of the therapeutic alliances across sessions.

In terms of alliance ruptures, the findings of this study will be compared with the formulations of Safran and Muran (2000), two of the most productive researchers empirically studying therapeutic alliance. Firstly, there was a congruence between observed nonverbal behaviors in our study and their classification of the withdrawal and control (confrontation) ruptures based on both physical behaviors (e.g., averting gaze, self-regulatory behaviors, interruptions or talks over therapist, and stiffness in body; Samstag, Muran, & Safran, 2003; Eubanks, Muran, & Safran, 2015). The intensity and the timing of the ruptures were emphasized by Safran and Muran (2000) and contemporary psychoanalysis works/literature/studies (Kohut, 1971; Beebe & Lachmann, 2014; Lachmann & Beebe, 1996). Apart from timing and intensity, in the present study, if the ruptures included a reciprocity within a given dyad, they were classified as interactive dysregulation.

In light of the information above, the attachment features observed through nonverbal behaviors in self and the interactive regulation dynamics will be discussed together.

4.1.6.Observing Dyadic Coordination Based On Self-Regulation

As depicted in Diagram 1, findings regarding the influence of individual characteristics of participants on their self-regulatory systems observed via nonverbal behaviors (corresponds to "b" in the diagram) and nonverbal communication modalities embodied in interactive regulations within dyads (corresponds to "c" in the diagram) will be discussed in the following under the headings of nonverbal manifestations of self-regulatory dynamics, temperament features, attachment types, and therapeutic process.

4.1.6.1.Nonverbal Manifestations of Self-Regulatory Dynamics

The results coming from both qualitative (as presented in Appendicies) and quantitative analyses will be integrated for five self-regulation domains (i.e., focusing, self-regulatory behaviors, displacement of selfobject needs, affirmativeness, and facial emotional expressiveness) below. Facial emotional

expressiveness showed meaningful combinations with other domains; therefore, it will be discussed together with each domain. As for the review of the current literature, due to lack of studies based on nonverbal behaviors of both an adult therapist patient and an adult patient at the micro level, there is limited opportunity for checking the validity of the findings through comparing previous studies. In addition to this, in the current literature, many of the studies focused on nonverbal dimensions that were isolated from each other rather than reporting them with a holistic perspective. For this reason, the interpretation of combinations of different communication modalities was also limited. In order to compensate for these limitations, the findings were organized in a way that the foundation of a broader framework of two-person psychology showing the co-creation of any exchange observed within a therapy dyad was transformed to make it congruent with mother-infant self and interactive regulation dynamics.

4.1.6.1.1.Focus

Besides the frequency of eye gaze, findings coming from content analyses provided valuable information about eye gaze. There were findings showing the importance of the morphology of nonverbal behaviors rather than frequencies. For instance, both Dyad 2's patient and Dyad 1's therapist's gaze on levels increased during the process; however, their block gaze aversion durations increased with different patterns from earlier phases. Also, as seen in Dyad 4's patient, block off duration increased at the same phase when the predictability of her therapist's focusing pattern was disrupted. This finding may be a clue to how each partner's self-regulation system influences the other's. The results also showed that there was a common eye gaze behavior of therapists and patients. Gaze aversion during their own speech was one of the common nonverbal behaviors of all therapists. Sometimes they used it as a self-regulation mechanism to down-regulate the emotions arising from their entrance to the patient's world via talking. Another common form of gaze aversion of the therapists was cutting eye contact after seeing the patient avert their gaze during their own intervention. This finding may show the therapist's understanding of the patient's need for self-regulation; however, they generally did not end their

speech in accordance with the patient's needs. This common behavior of the therapists may have resulted from their limited professional experiences. In addition to this, sometimes gaze aversion of the therapist disrupted the patient's being reliably seen experience. On the one hand, some therapists were sensitive to repair their withdrawal rupture by quickly answering the patient's eye contact wish (like Dyad 1's therapist who had preoccupied attachment). On the other hand, there were therapists who were not positively responding to the patient's eye contact wish (like Dyad 6's and Dyad 5's therapists who had fearful attachments). In terms of common features in the eye gaze of patients, results showed that many of them were good at making eye contact while listening to their therapist. This finding may be congruent with their more secure attachments to the therapist as compared to their attachment to partners. Moreover, all patients' gaze aversion behavior before answering to the therapist's intervention may indicate a need for thinking or down-regulating arousal due to expressing their inner world to the therapist. Also, the fact that the gaze aversion behavior was common in therapists and patients at the beginning of speech is compatible with Kendon (1976)'s suggestion that the gaze aversion is associated with thought organization. Apart from the commonality between patients, Dyad 3's and Dyad 4's patients had unique behaviors like gaze aversion which exists even after their therapist's gaze aversion, thus allowing their therapist to go her own regulation. This behavior may be associated with their need of twinship selfobject needs.

4.1.6.1.2.Self-Regulatory Behaviors

Observations of self-regulatory behaviors (i.e., eating lips, face and hair touch) revealed that the participants used these behaviors in moments of unmatched emotion with their partner or dysregulated eye gaze pattern, as a type of behavioral mimicry, while talking (i.e., after, before or during), while experiencing a positive emotion with/without their partner, looking at the camera, and applying combinations of behaviors when the valence of the emotion increased. Other types are listening to an avoidant partner who had a negative emotion on her face, trying to solve a communication problem, after gaze aversion of the partner, being

reflected by a confused face or fast rhythmic head nods, before expressing a moderately negative emotion on own face,, and while waiting for a response from the partner. Last types are while looking at the therapist's notes, in moments of silence or detachment, before coming to mutual eye contact after her own long avoidance, after being overwhelmed due to the partner's needs for approval reflected with facial expressions, before expressing a sarcastic smile on her own face, and in moments of partner's discordant behavior. Complying with the rupture literature (Eubanks, Muran, & Safran, (2015)self-regulatory behaviors applied in moments of interactive disorganization (e.g., discordant body posture with self touch, shaking legs or constantly eating lips while listening) came after countertransference reactions of the therapists.

The findings also showed that a longer duration of self-regulatory behavior use facilitated the eye contact of the therapists while listening by helping them to maintain their attention. However, there were occasional (i.e., short duration) self-regulatory behaviors that were mostly related to the regulation of increased arousal. For instance, Dyad 4's therapist mostly had limited needs for using these behaviors; however, when she used them, the duration of her lip touching or eating was long. This therapist had secure attachment; thus it can be concluded that she was using these behaviors to increase her focus on the partner. Similarly, the self-regulatory behaviors of the preoccupied therapist of Dyad 2 increased in accordance with the increase in her focusing. This finding was also consistent with the current literature (see the study with adolescents; Ito-Jager, Howard, Purvis, & Corss, 2017)

Observations also showed that the three forms of self-regulation, which are self-touch, gaze off, and dampening facial exchanges (as found in mother-infant studies; Bebee & Lachman, 2002), were substituted by each other. For instance, the therapists did not need to engage in self-regulatory touches when they were too neutral based on their facial expressiveness.

4.1.6.1.3.Displacement of Selfobject Needs

Displacement of selfobject needs domain was conceptualized first in this study. There were not any comparable findings in the current literature. Thus, the findings

of the study will be discussed in the framework of the current study. The findings showing the therapists' selfobject displacements revealed that they looked at the camera at the beginning, during or at the end of their own speech, after patient's gaze averted while listening to the therapist, while being unable to take the speech turn from partner, after mutual positive emotions resulting from the patient's positive feedback for psychotherapy, after hearing the patient's difficulty to understand their question, and while listening to the patient's evaluation of the therapy. The patients' selfobject needs displacements were observed after experiencing a rupture in their reliably seen experiences, while listening the therapist's intervention, at the end of therapist's intervention, in the reunion sequences containing mutual positive emotions (particularly observed in fearful type patients), during their own long avoidance, after being unable to create emotional changes in the therapist, after being overstimulated by the therapist after getting compliments about her outlook, when focusing pattern of the therapist became disorganized, after getting a mirrored response from the therapist, and being reflected with unmatched emotion.

Self-reported and observed selfobject needs of many of the therapists and the patients were congruent with each other. For instance, the therapist of Dyad 1, who had higher amounts of all selfobject needs than the therapists' sample's mean, looked at the camera more than all the therapists. Dyad 3's therapist generally did not look at the camera which was compatible with the defensive attitudes towards his/her/the selfobject needs. Similarly, Dyad 4's therapist had limited numbers of camera looking, which was congruent with her defensiveness to the selfobject needs. Additionally, she had a unique gaze aversion behavior compared to the rest of the therapists. She purposely averted her gaze to reject the patient's needs for approval, which may be congruent with her defensive attitudes towards selfobject needs. Dyad 5's patient, who had lower amounts of camera looking behavior, expressed anxiety on her face while giving the floor to the therapist which was congruent with her defensive attitudes towards mirroring needs. As opposed to her, Dyad 2's patient, who looked at the camera at least once in each sequence across all phases of the therapy, had higher than average mirroring needs. Nonetheless, for

some participants, there were incongruent findings on observed and reported selfobject needs. For example, Dyad 2's therapist had limited numbers of displacements of selfobject needs, as opposed to her higher degrees of reported selfobject needs in comparison to other therapists. This incongruence between the reported and observed selfobject needs may be due to the psychometric properties of the scale; particularly, it may be related with the fact that avoiding twinship and idealization were loadon to the same factor in the original study (Banai, Mikulincer, & Shaver, 2005).

4.1.6.1.4.Affirmativeness

In the results for head nods and vocal prompts, there were common functions of affirmativeness of the therapist like a) communicative (i.e., take the speech), b) relational (i.e., to encourage mutual focus, so expanding mutuality), c) keeping rupture as an optimal frustration (e.g, gaze avert to take notes), d) emotional sensitivity and attentiveness as a response to patient's patient's emphasized body shifts or emotional changes on her face, e) need for approval (i.e., during her speech), f) expressing her emotional understanding in response to the patient's emotion on face, and g) mentalization (i.e., internal processing in the moment of silence or when the patient is in a separate mood). Also, it was seen that a predictable and increased amount of eye gaze was associated with an increased amount of nodding, whereas a disorganized and limited eye contact was related to limited head nods. The functions of the affirmativeness became varied in accordance with the forms of eye gaze. A constant and predictable eye gaze was associated with more affectively charged head nods, like providing emotional understanding or attunement as a response to the change in the partner's movements or emotions. However, limited and less predictable eye contact was mostly seen together with other functions of head nods like keeping rupture as an optimal frustration or facilitating communication turn take. Moreover, occasionally increased emotional expressiveness of the therapist increased her affirmativeness, which may be a sign of affect attunement between partners with or without predictable eye gaze. Therefore, it can be concluded that head nods may represent deep listening and implicit empathy. Nonetheless, the form of the head nods was

curial. For instance, compared to other therapists in terms of orientation of the body, the therapist of Dyad 6 (who had fearful attachment) made very big head nods that increased her motion energy values; however, she did not create any impression of empathy or emotional understanding. In addition to this, therapy sessions of Dyad 6 resembled an interview session including lots of communicative head nods. The therapist of Dyad 5 (who had fearful type attachment, as well) used head nods for communication and keeping rupture as an optimal frustration similar to Dyad 5's therapist. It may be speculated that these functions of affirmative gestures of these therapists may be related to their tendency to express themselves via bodily movements rather than emotional expressions. This claim may be comparable with their attachment insecurities in which deactivation of attachment system is restricted to their emotional disclosure.

The findings about affirmative gestures of the patients showed several functions of these behaviors like a) regulating interactive disorganization resulting from speech overlap, b) meeting the therapist's need for approval, c) internal processing (mentalizing) in the moment of silence, and d) keeping rupture as an optimal frustration. In addition to this, while an increased amount of frequency and speed of affirmativeness was resembling their social anxiety while listening to the therapist intervention, as therapy progressed, a decrease in both the frequency and the speed of the head nods may be a sign of increased self-confidence. They started to use head nods to take speech or even to regulate their therapists. This finding may be compatible with the result of this study showing post-treatment improvements in the assertiveness of Sample 1.

The findings of this study may be disccused in the light of two trends in studies on head nods which are linguistic (McClave, 2000) and affective functions (Cowie et al., 2010). First of all, it is known that head movements basically function to regulate interaction and facilitate discourse (see McClave, 2000), and are related to the semantic or interactive characteristics of speech. For instance, "*emotional sensitivity and attentiveness as a response to patient's emphasized body shifts or emotional changes on her face*" function of head nods in this study may correspond to the relationship between the increase in head nods and the increase in verbal

amplitude. Therefore, it can be said that the therapist was mirroring the patient's increased emotional arousal by mimicking it via head nods. Duncan (1972)'s argument on the regulative function of head nods in turn-take patterns of speech may be similar with communicative *function* in this study. Llewellyn (1968) found that the listener's head nods were mostly present before making a comment or as a response to speaker's direct question. Rest of the function was defined as "counting signals of attention". In this study, "*keeping her own rupture as an optimal frustration*" can be considered as a signal sending to the partner about maintenance of her attention. McClave, (2000) also stated that up and down nods, defined as *need for approval* and *expressing her emotional understanding in response to the patient's emotion on face,* were associated with affirmation. McClave also defined interactive functions of head movements as it was defined in this study. "Back channeling requests" are thought as interactive functions of head movements (McClave, 2000), as they also are in this study. McClave (2000) emphasized that head nods were internally motivated; listeners spontaneously responded to the feedback request of the speaker, which may be related to *emotional sensitivity and attentiveness as a response to patient's emphasized body shifts or emotional changes on her face, relational*, *expressing her emotional understanding in response to the patient's emotion on face*, and *mentalizing* functions of head nods. In terms of affective aspect of head nods, particularly in emotionally colored interactions, "arousal", "valence", "at ease", "antagonism", "solidarity" "agreeing", and "understanding" were classified as different forms of head nods (Cowie et al., 2010). The solidarity may correspond to *expressing her emotional understanding in response to the patient's emotion on face,* whereas "arousal" and "valence" may be related to *emotional sensitivity and attentiveness as a response to patient's patient's emphasized body shifts or emotional changes on her face*. Furthermore, "at ease" corresponding to *relational,* "solidarity", and "understanding" may be similar to *relational*, *need for approval*, and *expressing her emotional understanding in response to the patient's emotion on face,* and "antagonism" may be linked to *keeping rupture as an optimal frustration* function of head nods defined in this study.

4.1.7.Observing Attachment Styles through Nonverbal Behaviors

The findings of the present study were evaluated according to Banai, Mikulincer, Shaver's (2005) insight on the resemblance between defensive attachment strategies (i.e., hyper activating and deactivating strategies) and approaching or avoding selfobject needs, since there is a lack of empirical studies on selfobject needs in current literature apart from case reports. Moreover, there were limited studies in which an adult therapist's and adult patient's nonverbal behaviors were analyzed at the micro analytic level as in this study. As a result, the findings of observational studies with children or in different context rather than psychotherapy on nonverbal manifestations of attachment behaviors will be used to discuss the validity of the findings of the present study. However, it is still difficult to compare all findings of this study with current literature, since, as it was stated by Feniger-Schaal, Hart, Lotan, Koren-Karie, and Noy (2018), "while the majority of approaches to the assessment of attachment in childhood depended heavily on observation of behavior that takes into account non-verbal information, studies of attachment in adulthood focused mainly on verbal account, interviews, and selfreport". On the other hand, Schachner, Shaver, and Mikulincer (2005) claimed that it is the same underlying process in both verbal and nonverbal manifestations of expressiveness and sensitivity. It is not wrong to say that the findings of the current study are mostly compatible with the current literature. Different attachment types (i.e., secure, preoccupied, dismissive, and fearful avoidant based on Bartholomew, 1990) were found to be related with nonverbal involvement and expressiveness (Guerro, 1996; Guerro & Burgoon, 1996). For instance, trust/reciprocity, gaze, facial pleasantness, vocal pleasantness, general interest, and attentiveness were higher in preoccupied and secure types, whereas vocal anxiety or low fluency were higher in dismissive and fearful avoidant types (Guerro, 1996). It was also found that women with higher attachment avoidance may have lower willingness to look at their infant's face (e.g., Jia et al., 2017). However, increased amount of eye contact is related to attachment security and higher levels of oxytocin, which facilitates the development of bonding (Prinsen, Brams, & Alaerts, 2018). In terms of facial emotional expressiveness based on different attachment

styles, many of the studies focused on recognition of and reactions/responses to the exposed facial expressions rather than individual's own expressiveness [except for some studies on such as attachment-related electrophysiological differences (Ma et al., 2017), facial mimicry differences in terms of different attachment styles (Sonnby-Borgström, 2016), differences on mirroring of partner's body during play (Feniger-Schaal, Hart, Lotan, Koren-Karie, & Noy, 2018**),** and studies on adolesecent expressiveness (Parrigon, Kerns, Abtahi, & Koehn, 2015). However, Shaver and Mikulincer (2007) claimed that adults with secure attachment are more self-aware about their emotional expressiveness, and not rigid while expressing emotions. To sum up, the findings of the present study which were considered as being compatible with and resembling the nonverbal manifestations of insecure and secure attachment patterns were collected together under the relevant headings. All of these findings should be observed in further studies.

As a summary of quantitative results, it was found that dyads who had preoccupied therapists had higher values on both the therapist's and the patient's focus, the therapist's facial expressiveness, the patient's self-regulatory behaviors, and the patient's displacement of selfobject needs in comparison to the dyad who had a dismissive therapist. Moreover, dyads who had preoccupied therapists had higher levels of patient's avoidance and displacement of selfobject needs, and lower levels of therapist's affirmativeness compared to dyads who had fearful therapists. The dyad with a dismissive therapist had lower levels of both the therapist's and the patient's focusing, the therapist's self-regulatory behaviors, facial emotional expressiveness, and affirmativeness than dyads with fearful therapists. In addition to this, the dyad with the secure therapist had higher values of therapist focus and facial expressiveness, but lower values of affirmativeness than dyads with fearful therapists. Also, secure therapists had higher values on therapist's focusing and facial emotional expressiveness, and patient's self-regulatory behaviors patient than dismissive therapists. Dyads with secure therapists only had higher levels of patient focus than dyads with preoccupied therapists.

In terms of preoccupied type of attachment, findings of the study revealed that the preoccupied therapist of Dyad 1 was mostly stable in her facial emotional expressiveness; however, there was a limited amount of expressiveness compared to other therapists, which may be related to her need for self-regulation by reducing her facial changes. Also, her eye gaze mean (which was already better than many of the therapists) increased as the therapy progressed; however, the form of focusing pattern, including different types of withdrawals, changed across sessions. Meaning that, as their relationship progressed, her relational anxiety might have increased. The response of the preoccupied therapist of Dyad 2 to the activation of attachment system via variate forms of facial expressiveness including reflectiveness, containment, mirroring of sadness while patient crying, and down-regulation of negative effect with neutral expression on face while asking questions may result from the patient's excessive need to be soothed. The preoccupied patient of Dyad 4 expressed lots of playful mimics during the process to activate attachment system of the therapist via mutual enjoyment. She was sympathetically imitating the therapist's facial expression, accompanying the therapist's attempt to increase positive emotions, and increasing the amount of positive emotion by herself. One of the common reactions of preoccupied therapists was their gaze aversion during patient's crying as a way of deactivating their attachment systems. The facial emotional expressiveness and the need for self-regulatory behaviors of the preoccupied patient of Dyad 4 and the preoccupied therapist of Dyad 1 increased during the process. Another common finding was related to warmth and closeness of the therapists. Dyad 1's preoccupied therapist mostly controlled the duration and valence of mutual enjoyment by accompanying a lower valence than the patient, or after a delay. The preoccupied therapist of Dyad 2 was the most expressive therapist in the sample; however, she was only stable while expressing negative emotions in the entire sequence. Although, they were the couple who experienced highly increased amounts of mutual positive emotions, particularly in the final session, the predictability of therapist's accompanying the patient's positive emotion increase was disrupted. The therapists who had insecure attachments (i.e., preoccupied and fearful) had a form of warmth behavior in the sessions, in which the therapists gave

“surprised” face responses to the patient’s narratives. However, for some therapists, the mimic suggesting surprise did not always contain mirroring or an emotional understanding. Besides surprised face responses, there was smiling without a caring impression while listening, even when it did not match the patient’s emotion. Compared to the dismissive therapists (other type of insecure attachment), the preoccupied therapists focused more on the therapist and the patient, the facial expressiveness of the therapist, the self-regulation of the patient, and the selfobject displacement of the therapist.

The fearful therapist of Dyad 5’s usage of hyper-activating and deactivating attachment strategies together might have caused the unpredictable and disrupted pattern of her focusing. Also, her emotional reactions were predictable but unmatched with the patient’s emotion most of the time. The fearful patient of Dyad 1, during the therapy process, had unstable facial emotional expressiveness, which included changes from positive to negative or unstable valence of positive or negative emotion. She also had ambivalent and undifferentiated emotions on her face. She had a noticeable difficulty to eye gaze, it was only possible for her to make eye contact while listening by applying self-touch. Similarly, the fearful therapist of Dyad 5, from the fourth session, needed rapid gaze aversions while listening (a unique behavior compared to the rest of the therapist sample) and became unstable unless she was touching her face or eating her lips. The fearful patient of Dyad 1 was the most emotionally expressive one among patients. Fearful patients had the highest self-regulatory behaviors. The fearful patient of Dyad 2 had one of the highest values on the lack of focusing**.** The fearful therapist of Dyad 6’s block gaze off duration increased throughout the therapy. From the beginning to the end of the therapy, her focus pattern was unpredictable with limited interest in the patient's inner world (e.g., going for self-regulation after question when already in self-regulation stance). The fearful patient of Dyad 1, who had the lowest eye gaze values in the Sample 1, looked at her therapist when the therapist was not looking at her. She insisted on repairing the rupture in her reliably seen experiences during all phases of the therapy. This finding is also compatible with her attachment anxiety. That may show her both hyper-activating and deactivating attachment

strategies. She also controlled the duration of mutual positivity in the reunion moments. The fearful patient of Dyad 2, who was the most insecure patient in Sample 1, increased the amount of camera looking behavior, which sometimes caused difficulties in predicting the underlying meaning of the behavior. This may be a sign of her general insecurity in relationships and dominant shamefulness. The fearful patients of Dyad 1 and Dyad 2 expressed sudden positive or negative emotion spikes following or in the middle of the opposite emotion; positive emotions were mostly interactive or defensive. They were the patients who cried in the sessions. They also used self-regulatory behavior to down-regulate positive emotion. The fearful therapist of Dyad 6's different timings of mutual positive emotion led the patient to engage in self-regulatory behaviors. Also, positive emotion in interactive regulation would have made it easier for her to be in the interactive realm. The fearful therapist of Dyad 5 focused more than one of the preoccupied and dismissive (may be related to being with a secure patient) therapists. The fearful therapist of Dyad 6 focused more than preoccupied, dismissive and secure therapists. The fearful therapist-secure patient (Dyad 5) had higher mutual neutrality than the preoccupied therapist-fearful patient (Dyad 2). They had even lower unmatched emotion than other fearful therapist-secure patient (Dyad 5). Meaning that even when the dyads have the same attachment patterns, there may be differences in their nonverbal expressions.

The dismissive therapist of Dyad 3 had the lowest eye gaze scores with unstable gaze off/on pattern during the process. There was not any sequence in which the therapist made eye contact during the entire speech of the patient. Sometimes she closed her upper body while taking notes, which made impossible for her partner to see her therapist's face. Still, her focusing on the patient was better than the fearful therapist. In terms of warmth and closeness, she controlled the duration of the mutual positive emotion. However, her emotional expressiveness increased during the process. Her nonsignificant differences on self-regulatory behaviors compared to others may be related to her increased amount of gaze aversion instead of using these behaviors to regulate herself. The dismissive patient had higher eye contact than the fearful patients and surprisingly than the secure patient. This

finding may be related to her increased effortful control, which helped her to maintain her focus by neutralizing her facial exchanges while listening keeping eye contact. In addition to this, the secure patient's lower eye contact resulted from her therapist's avoidance, which will be discussed in the following. Heterogeneity in focusing and emotional expressiveness, displacement of selfobject needs, and her need for self-regulatory behaviors of dismissive patient increased during the process. She had ambivalent expressions (strained smile, I am innocent, or happy-sad) on her face from the early beginning of the therapy and this persisted across sessions. However, it was difficult for the coder to understand the underlying meaning of these expressions. She limitedly used self-regulatory behaviors like her dismissive therapist.

Findings revealed that dyad with the preoccupied therapist and the fearful patient had lower levels of mutuality than the dyad with the secure therapist and the preoccupied patient, the fearful therapist and the secure patient, and the fearful therapist and the secure patient. This finding shows the importance of at least one of the partners' attachment security into development of mutuality. The preoccupied therapist-fearful patient dyad (Dyad 1) had lower mutual ambivalence and unmatched emotions on their faces than the secure therapist-preoccupied patient dyad. However, the preoccupied therapist-fearful patient dyad (Dyad 1) had more unmatched emotions on their face during mutual eye contact than the fearful therapist-secure patient dyad (Dyad 5). These two findings may show the importance of therapist's attachment security (rather than at least one partner's security). The secure therapist-preoccupied patient dyad had higher values of mutuality, mutual ambivalence and unmatched emotions on their faces in comparison to all dyads independent from therapists' attachment types.

There were unique nonverbal patterns and expressions of secure type participants in Sample 1. Firstly, the secure therapist of Dyad 4 was good at eye contact while both listening and talking, had mentalizing type head nods, expressed variate mimics while interpreting (e.g., "I do not know" which created an expression that she was not exposing something to the therapist, ambivalent emotions comprising caring expressions, slight positive emotions increasing the patient's positive

emotions, reflecting, mirroring, and containing). However, the secure therapist's focusing was not significantly more than other therapists, which may be related to her attachment to the patient that was more anxious than her attachment to the/his/her romantic partner. The secure therapist was emotionally more expressive than one of the preoccupied and one of the fearful patients. The patient of Dyad 5 was also good at regulating her arousal stemming from mutual eye contact on the basis of predictable and increased amount of eye gaze as suitable with her attachment security. She was also predictable in emotional expressiveness and affirmativeness. Moreover, the patient of Dyad 6 was one of the patients who used head nods to regulate her therapist from whom she had more attachment security. As opposed to the expectations, her eye gaze mean was too limited and worse than the dismissive, preoccupied, and fearful patients. It may not be wrong to say that her therapist's fearful attachment and avoidant style limited the patient's focusing. Also, the heterogeneity of her emotional expressiveness across phases may have resulted from the same reason. Congruently, her eye gaze increased and stabilized in accordance with the increase and stabilization of the therapist's focusing. In terms of warmth and closeness, she expressed playful mimics during her speech and mostly participated in her therapist's positive emotions. However, she mostly had defensive positive emotions, particularly when answering the therapist's questions. Similar to the fearful and dismissive patients of Dyad 1 and Dyad 3, she had sudden positive and negative spikes during her speech. These two findings may be incongruent with her attachment security, as well. The secure patient of Dyad 5 expressed predictable and stable slight negative emotions across all phases of therapy, which is compatible with expressiveness in secure attachment. Her positive emotional expression was limited during the therapy process. When she expressed positive emotions, she used it for interactive purposes (e.g., accompany to therapist affection, when going back to mutual focus after her long avoidance, to invite avoidant therapist to relation, or sarcastic). This finding may show the impact of therapist's fearful attachment on her as seen in Dyad 6 who had same attachment dynamics.

4.1.8.Nonverbal Manifestations of Effortful Control as A Type of Temperament Feature

As provided in the beginning of the discussion section, dissimilarity within therapy dyads was varied in effortful control as a type of temperament. Consequently, distinguishing features in participants' nonverbal behaviors will be discussed only for this characteristic. Participants who had higher effortful control (or close to the mean of therapists' sample in Dyad 1's therapist, Dyad 4's therapist, and Dyad 3's patient) had predictable and constant eye gaze. Dyad 2's therapist who had lower effortful control than the mean of the sample had a predictable and disorganized eye gaze pattern in which rhythm of the change from gaze on to gaze aversion was too fast. Dyad 5's therapist who had a lower effortful control had a disrupted pattern in mutual focusing. These findings may be considered as compatible with the basic idea that effortful control is responsible from attention regulation (Rothbart & Bates, 2006). Besides attention differences, the observations of the present study showed that participants differed from each other based on the association between the level of self-reported effortful control abilities and facial emotional expressiveness, and self-regulatory behaviors. Participants who had low effortful control had unstable emotional expressiveness (patients of Dyad 2, Dyad 3, and Dyad 6) and lots of discordant behaviors (i.e., joking about sex or standing up by cutting mutual eye contact for varying reasons in Dyad 2's therapist). They also needed more self-regulatory behaviors (e.g., patients of Dyad 4 and Dyad 6, and Dyad's 5 therapist). On the contrary, participants who had higher effortful control had more stable emotional expressiveness (e.g., Dyad 3's patient). These findings may be thought as compatible with the role of effortful control in inhibition or activation, particularly, the former finding showing the relationship between low effortful control and increased expressiveness (a study with the children; Kieras, Tobin, & Graziano, 2005).

It can be concluded that the stability of the nonverbal behaviors may be related to effortful control temperament. Nonetheless, there were findings showing contradictory or negative effects of higher effortful control. Firstly, Dyad's 4's

therapist's predictable emotional expressiveness was too rigid and over predictable. Her rigidity was also seen in her gaze aversion response with a shocked face response to her patient's unexpected movement (e.g., taking the water from her bag) while listening to her. Secondly, although Dyad 6's therapist's effortful control was higher than average, her gaze predictability was low, since she might have been using it to regulate her system rather than preserving the sake of interactive regulation. Moreover, the findings for the Dyad 2, whose both therapist and patient had the worst scores on effortful control, engaged in lots of interactive disorganizations. Their therapeutic alliance evaluations also included lots of fractions and absences during the process. This finding is also compatible with the basic definition of temperamental effortful control; however, due to lack of studies on the match of a therapist and a patient, the observations should be tested in further studies.

4.1.9.Nonverbal Observations regarding Therapeutic Process

Observations showing the therapists note-taking behaviors had a rhythmic pattern (e.g., Dyad 2, one second off, one second on or limited duration and Dyad 1 not more than three seconds mostly) revealed a conclusion that note-taking behavior of the therapists was not only functioning as a reminder of important materials, but also helping the therapist to regulate herself. In comparing this finding to the current literature, it can be said that taking notes should be conceptualized as object-focused kinesthetic behavior of the therapists (Freedman & Hoffman, 1967). Object-focused hand movement by taking notes is considered as a way of organizing the thought process integrated with the speech (Freedman & Hoffman, 1967). However, there were also studies showing limited effectiveness of taking notes to organize clinicians' thoughts. It can be argued that it prevents intense listening (see comprehensive summary in Lo, 2013). Moreover, Freud (1912) advised the analyst not to take notes, since a higher effort to remember the details would disrupt the objective position of the analysis. In addition to this, in this study, taking notes caused withdrawal ruptures in the patients' reliably seen experiences, since taking notes brought about gaze aversion for many therapists. That is to say, taking notes not only

disrupted the therapists' intense listening but also created breakdowns in the establishment of intense intersubjective dynamics.

Another common observation in many of the dyads was about the changes in the patterns of nonverbal behaviors from late middle phase of the therapy. Gaze on duration of patients of Dyad 1, Dyad 4, and Dyad 5 while listening got worse across sessions from the beginning of the late middle phase of the therapy (Dyad 4 and Dyad 5). The third phase of the therapy of Dyad 1 included richness in terms of mirroring of negative emotion, affect attunement in the moment of patient's crying, and containment. There was a pattern change in focusing in the therapist of Dyad 2 in the third phase. Dyad 3's therapist's focusing got worse, emotional expressiveness got limited, affirmative gestures decreased, and displacement of selfobject needs increased. Particularly, Dyad 3's therapist's facial expressiveness was evaluated as countertransference reactions which were mostly related to her unmet expectations while listening to the patient's answer to her question or responding to the patient with a confused face or theatrically imitating the patient. Also, Dyad 3's patient's stable emotional expressiveness became disorganized particularly in moments of silence and her need of self-regulatory behaviors increased particularly in reunion moments. In Dyad 4, there was a pattern change in therapist's focusing including new behaviors like gaze aversion at the end of her speech, sometimes gazing on in moments of silence, and leaving from the mutual focus. Also, there were some countertransference reactions, for instance, she expressed stable moderate negative emotions on her face while listening to the patient who had ambivalent emotional expressions. Whereas she expressed slight positive emotion when the patient had a slightly negative emotion on her face, she did not participate in the patient's positive emotion. Dyad 5's therapist's focusing pattern's stability was also disrupted from the third phase. Furthermore, unlike her general pattern, Dyad 5's patient did not apply any vocal prompts while listening to the therapist. Dyad 6's therapist's focusing pattern changed in a good way, like not avoiding her patient after asking a question, and there was not any camera looking behavior. Dyad 6's patient's attempts to repair the rupture in her reliably seen experience

finished. These findings may be compatible with the findings in literature pointing out that the patients gain from at least 21 sessions. It can be speculated that changes in therapeutic stages should be observed trough nonverbal behaviors, which is congruent with Tickle-Denson conceptualization of different functions of nonverbal behaviors existing in different phases of the therapy process. Furthermore, in terms of the stages of short-term psychotherapies, commitment, process, change, and termination (Rivera, 1992) phases were defined. Current study's finding is compatible with the *change* stage which is expected to include new patterns of the patient's behavior. In addition to this, being more congruent with present study's theoretical background and the total numbers of the sessions conducted, Sweet (2013) proposed four stages of brief dynamic psychotherapy based on the re-capitulation of infantile developmental stages. Sweet (2013) defined *base* (1-4 sessions), *holding* (5-8 sessions), *uncertainty and initiation* (9-12 sessions), and *ending* (13-16 sessions) regardless of the theoretical orientation of psychotherapy treatment. Although the range of the sessions in this study in a given stage were different from Sweet's categorization, it may not be wrong to say that observations showing that pattern changes observed in the third phase of current study are compatible with the *uncertainty and initiation* stage. In this stage, patients are expected to engage in new verbal and nonverbal behaviors like young infant's faltering steps (Sweet, 2013).

Lastly, based on the observation of nonverbal behaviors, it may also be concluded that there may be change in patterns of both the patient and the therapist either in a good or bad way in the termination phase. Changes in a good way were like the emergence of caring emotional expressions on therapist's face representing reflectiveness (preoccupied Dyad 1, dismissive Dyad 3, fearful Dyad 5 and Dyad 6) and the increase in affirmative gestures (fearful Dyad 5). There were changes in bad ways like increases in gaze off, the increase in camera looking in the fearful therapist of Dyad 5, the disruption in predictability of eye gaze and unreadable emotions on the face of dismissive patient of Dyad 3. These findings may be related to the attachment context and its manifestations on

nonverbal behaviors. The responses to the separation are expected to alter ongoing patterns of the behaviors in a good or bad way due to the attachment evoking system of both partners. This interpretation is congruent with the original attachment studies that tested the babies' attachment securities to their mothers based on the observations during separation and reunion interactions (Ainsworth, Bell, & Slayton, 1974).

4.1.10. Discussion of The Results for The Micro Outcomes of Therapy Processes

One of the interesting findings of this study was the difference in the attachment patterns of both the patients and the therapists as regards the context of the relationship. It was found that patients, independent from attachment securities with their romantic partners, securely attached to their therapist (based on their self-report declarations in 5^{th} or 6^{th} sessions of the therapy). These findings may be compatible with Sweet (2013)'s *commitment* and *holding* environment stages of the psychotherapy. Nonetheless, almost all therapists dismissively attached to their patients based on their self-report declarations (one therapist's skoce was close to dismissive), independent from their attachment securities with romantic partners. This finding may be evaluated as congruent with nonsignificant macro outcomes of therapy process; since therapists did not feel secure themselves in therapy relationship, self and interactive regulation dynamics might have been disrupted. This finding was also congruent with the results of latent pattern content analysis, which revealed lots of interactive disorganization dynamics and ruptures. Only one therapist who had preoccupied attachment to her romantic partner reported secure attachment to her patient. However, the results of both micro and macro outcomes of the therapy for this dyad (Dyad 2) were not congruent with the therapist's declaration of secure bonding to her patient. Findings on the therapists' avoidant attachment to their patients are also needed for further investigations.

Another interesting finding of the micro outcomes of the therapies was that there was a pattern in the evaluations of therapeutic alliance showing that whoever had lower levels of insecure bonding to her therapy partner compared to her partner's insecurity level evaluated the therapy process better. Although they had similar

trends (i.e., decreasing or increasing during process), the amplitude of the goodness of alliance differed on behalf of the more securely attached partner. These findings seem to be related to the importance of the attachment between the therapist and the patient over other factors in the effectiveness of the therapy (which can be defined as common factors including empathy, warmth, and therapeutic relationship in Lambert & Barley, 2001).

4.2.Discussion for Sample 2

In this part of the discussion section, the findings of Sample 2, in which the therapist was aware of the study's purpose, will be presented. Many of the findings are compatible with the findings obtained from Sample 1, therefore, the literature supports or contradictions will not be provided to avoid repetitions.

4.2.1.Discussion of the Results for the Distributions of Individual Characteristics in Sample 2

Results of the distribution of the individual characteristics (i.e., temperament, attachment, and selfobject needs) of the sample of Study 2 were similar to those of the sample of Study 1. Specifically, there were increased amounts of twinship selfobject needs for the patients and the therapists, which support the claim on increase needs to closeness in young adult developmental stage. Moreover, in terms of temperament features, the patients in Study 2 had similar inborn tendencies like being sensitive to low-intensity perceptual stimulations and had (other) tendencies to experience fear, frustration, discomfort, and sadness. In addition to this, the patients of the two samples were similar to each other in terms of dominant symptoms and problems in interpersonal relationships, which may support the idea that the problematic roles in interpersonal relationships (self-sacrificing, over-accommodation, and nonassertiveness) may be underlying psychological symptoms. Unlike Sample 1, the match between the therapist and the patients in Sample 2 did not have lots of full fits except for many of the temperament features (higher extraversion for therapist of Dyad 7, and higher negative affectivity for the patient of Dyad 8). Moreover, the therapist and the patient of Dyad 7 had more in common in their individual features than patient. Another difference between the

two sample's patients was that the patients of Study 2 had earlier psychotherapy experiences and medical treatment for their psychological problems (except for the patient of Dyad 4). Lastly, both of the patients in Study 2 had fearful attachment, while their therapist had secure attachment. Limited match between the therapist and the patients in terms of individual characteristics may show itself in the patients' evaluations of the therapeutic alliance at the beginning, particularly with the lower ratings of the second patient.

4.2.2.Discussion of Results For Motion Energy Analysis

In Study 2, motion energy analysis of 34 sessions of two psychotherapy dyads revealed 111 coordinated interaction units in the first 15 minutes of each session. Almost every dyad had at least one coordinated interaction unit in each session. Similar to Study 2, the number of the sessions in which there was not any moderate level of positive head synchrony was too limited. This finding supported the idea that the therapists and the patients become synchronized nonverbally (Tschacher & Pfammater, 2017). The relationship between head synchrony between partners and psychotherapy outcomes will only be speculated in the framework of promising patterns since the limited sample size prevents the application of any significance test between the mean differences between pre- and post-therapy processes.

In comparison to Sample 1, attachment securities of the patients of Dyad 7 and Dyad 8 increased at the end of the therapy. In terms of nonverbal synchrony values, although the therapist was leading the sessions based on the ways of time lags in Dyad 7, and the patient was leading the sessions in Dyad 8, lower levels of the mean of the time lags approached the nonverbal coordination between the therapist and patients to exact synchrony rather than delayed synchrony. This finding may be evaluated as a support to our claim on the experience-near stance of the therapist while interacting, which may be interpreted by looking at the time lag features of synchronized moments. The mean of the lag values was lower than many of the dyads in Sample 1, which may be the reason why Sample 2's patients' attachment securities improved rather than Sample 1's patients. One of the unique interactive regulation dynamics observed in Sample 2 was that the therapist's head and body

was following the shifts in the patients' body movements. The therapist was automatically mirroring the movements of the patients at the micro levels. This result may be associated with the therapist's prior insight about the importance of nonverbal exchanges between her patients apart from verbal exchanges. In addition to this, compared to Sample 1, in terms of interactive regulation dynamics, the dyads in Sample 2 had higher mutuality (mutual eye contact) values than almost all the dyads in Sample 1. Even the lowest mutuality value obtained from Sample 2 was higher than the highest value of mutual focus observed in all the dyads in Sample 1. Therefore, it may be concluded that the increased amount of mutuality increased their bodily resonance and coordination. Consequently, as opposed to the first sample's moderate positively nonverbal synchrony values including interactive dysregulation and a higher speed of speech turn takes, Sample 2's nonverbal synchronized moments generated from motion energy analysis mostly involved behavioral mimicry/mirroring, and concordance of affective changes expressed on both partners' faces in accordance with each other at any given moment. These observations may be the reason why the patients of Sample 2 gained attachment security (compared to beginning) at the end of the therapy process, since as proposed by Stern (2004), they might have had more chance to develop intersubjective consciousness, which has the power to change implicit relational learnings.

As similar to Sample 1's results, both of the patients improved in terms of assertiveness and self-confidence in social relationship as types of interpersonal styles. However, the patient of Dyad 7 had improvements on many of her problems, in comparison to the patient of Dyad 8. This result may be associated with more stable trends in micro outcomes of the process reported by Dyad 7 which had better fit between the therapist and the patient in terms of individual characteristics. Also, the therapist reported less attachment anxiety to the first patient compared to the second one. However, the amount of change in Dyad 8's patient, particularly in attachment security, was more salient than the patient of Dyad 7. This finding may be thought as parallel with the increasing trend in Dyad 8's patient's evaluation of the therapeutic alliance. Furthermore, the sessions with Dyad 8's patient, which

began with this study still continues after three years. Dyad 8's patient securely attached to her therapist, while Dyad 7's patient attached to the same therapist anxiously. This finding may be considered as a support to the uniqueness of each therapy relationship, even when the therapy is conducted by the same therapist as proposed by the contemporary psychoanalysis literature. Concurrently, the results of the study based on the nonverbal manifestations of individual characteristics which are formed by/through self-regulation and interactive regulation which resulted from the interaction between two separate self-regulation systems will be presented in the following.

4.2.3.Discussion of the Results for Latent Pattern Contents Representing Interactive Regulation Based on Content and Quantitative Analyses

Many of the interactive regulation patterns observed in the first sample were coded in the second sample. However, the second sample had more interactive regulation with bodily mimicry/mirroring, more responsiveness of the therapist which corresponded to her attitude towards the bodily and affectively attunement. One of the featured interactive dynamics between them was emanating from the therapist's usage of head nods, head shifts, and head follows to the patient's bodily and emotionally changes. As mentioned before, they had an increased amount of mutuality based on mutual eye contact. In addition to this, as seen in the secure therapist result in Sample 1, the first phase of therapy included lots of interactive dynamics. Heightened affective moments based on cathartic experiences on negative emotion was uniquely observed in this sample.

In terms of the similarities and the differences between dyads in Sample 2, results revealed that there were more interactive regulation dynamics in Dyad 8 compared to Dyad 7. The finding is congruent with the finding showing the therapist's more secure attachment to her first patient compared to the second one. It was also observed that there was an avoidance from positivity and closeness of Dyad 8's patient the final phase in which there was a decrease in patient's eye gaze and mutual positivity between them. The finding showing Dyad 7's patient's lower levels of eye gaze with the therapist is congruent with her more insecure attachment

to the therapist compared to Dyad 8's patient who had fearful attachment like Dyad 7's patient but was less insecurely attached to same therapist. This result may indicate that even the same attachment types of the patients may manifest themselves with differently patterned nonverbal behaviors. Effortful control as a temperament feature may be an answer to this difference between the patients who had the same attachment type. Dyad 7's patient's lower levels of effortful control temperament than Dyad 8's patient might have restricted the level of her eye gaze amount. This inference on the effortful control characteristic and its nonverbal manifestation is congruent with the findings coming from Sample 1. When the results were evaluated based on the similarities and the differences in secure attachment therapist's nonverbal behaviors with two different patients who had fearful attachment characteristics, it was found that therapist needed more self-regulatory behaviors and caused more speech overlaps (i.e., interactive disorganization) in interaction with Dyad's 7's patient in comparison to the Dyad 8's patient. It may be caused by the therapist's implicit anxiety while interacting with Dyad 7's patient, which led her to interrupt the interaction, or by the patient's lower levels of effortful control which increased the therapist's need for self-regulation. The therapist was mostly good at eye contact with her two patients, while both listening and talking, which was congruent with her secure attachment. However, as found in Sample 1, there were changes in a bad way in her eye gaze pattern in the final phases of the therapy. In addition to this, similar to Sample 1, in the third phase, the therapist's need for self-regulation increased, camera looking behavior emerged in the final phase in the sessions of Dyad 7. Also, the therapist's emotional expressiveness, self-regulatory behaviors, and affirmativeness decreased in the third phase. These findings support the interpretation made for Sample 1, which was that something happens in the third phase.

4.2.4.Nonverbal Manifestations of Self- and Interactive Regulatory Dynamics

The nonverbal manifestations of different communication modalities, effortful control as a temperament feature, and attachment characteristics are provided for Sample 2 below.

4.2.4.1.Focus

Similar to many of the Sample 1's patients, the patients in Sample 2 were good at eye contact while listening to the therapist, too. There were common gaze aversion behaviors of Dyad 7 and Dyad 8's patients which happened at the beginning of their own speech, while crying (however, the duration of gaze avert was lower than Sample 1's patients who cried and had fearful type of attachment) and in moments of mutual positivity.

4.2.4.2.Selfobject Displacement

There were common forms of selfobject displacement behavior of Sample 2's patients which were similar to the behaviors observed in Sample 1 like at the end of their own speech, at moments of fast rhythmic changes in gaze on/aversion, in sequences containing/including unstable emotional expressions, at the end of the therapist's speech, in moments of mutual positive emotion, and while listening to the therapist's speech. Also, the therapist, similar to the other therapists, looked at the camera at the end of her own speech. This finding may be considered as a sign of the symbolic meaning of the camera which is related to the fact that the therapist was also the researcher. Still, she looked at the camera in the final phase in which the pattern of her eye gaze behavior was also disrupted.

4.2.4.3.Affirmativeness

Common functions of affirmative gestures were valid for the patients and the therapist in Sample 2. The patient in Sample 2 employed these behaviors a) to regulate their therapist, b) to keep their own rupture as an optimal frustration, c) for communication/communicative purposes (i.e., taking the speech), d) to representing attentiveness and sensitivity (i.e., in response to the therapist's emphasized body movements), e) to express need for approval, and f) to meet the therapist's need for approval. One of the important differences (particularly for Dyad 7's patient) from Sample 1 was about the high functional forms of head nods (i.e., representing attentiveness and sensitivity being a response to the therapist's emphasized body movements) implying connections and empathy seen in patients

from the very beginning of the therapy, which may have resulted from higher levels of mutual gaze between them.

Functions of affirmative gestures used by the therapist were a) relational (inviting/encouraging the patient to make mutual eye contact), b) keeping her own rupture as an optimal frustration, c) need for approval, d) emotional sensitivity and attentiveness as a response to patient's emphasized body shifts or emotional changes on her face, and e) communicative to take the speech. Similar to her patients, attentive and sensitive forms of head nods in response to implicit emotions, which were transformed through body, were observed from the beginning of the therapy, which supported the claim about a possible facilitating role of mutual eye contact in implicit empathy or connection.

4.2.4.4.Self-Regulatory

There were common forms of self-regulatory behavior usage of patients of Sample 2 similar to patients of Sample 1, which were more than once at the same time to regulate herself while talking, waiting for a response from the therapist, imitating the therapist, in moments of displacement of selfobject needs after the therapist's speech, in moments of avoidance from mutual positivity, before crying , before coming to a mutual eye contact after her own longer avoidance, and after getting a surprised face response from the therapist. The therapist used these behaviors constantly while listening to the patient when the patient had a negative emotion on her face, to imitate the patient's self-regulatory behavior, during/at the end of her own speech, and in times of mutual positivity in reunion sequences. There was a congruence between the increase of the patient's (or the therapist's own) facial emotional expressiveness and the increase in the therapist's and the patient's self-regulatory behavior in the third phase. The results for the therapist showed that occasional self-regulatory behaviors predict over-arousal emotions, whereas constant application of these behaviors improve the therapist's attention while listening, as seen in other secure attachment therapists in Sample 1.

However, similar to her gaze aversion behavior, she touched her face mostly in moments of negative emotions like angry emotional expressions on the patient's

face. Also, similar to her gaze aversion in mutual positive emotion, she applied self-regulatory behaviors at the beginning sequences in which they experienced mutual positivity. The findings also revealed that the positive emotions required more conscious attention which forced partners to being engaged in interactive regulation more than while listening to the patient with a negative emotional expression who mostly engaged in her own regulation and her own associations or narrative.

4.2.4.5.Effortful Control

The results for Sample 2 showed that there were body shifts in the patient of Dyad 7 during increased valence of positive emotion. Also, she was emotionally unstable during the sessions. These two findings are congruent with her lower levels of effortful control temperament compared to the patient of Dyad 8 who had higher levels of effortful control and was emotionally stable across sessions. The therapist who had good values on effortful control needed self-regulatory behaviors while listening patient who had defensive positive emotion or ambivalent emotions on her face or was emotionally unstable, which shows the impact of the patient on the therapist by leading her to use self-regulatory behaviors.

4.2.4.6.Attachment

As mentioned before, both patients in Sample 2 had fearful attachment types. The result showing differences between two fearful patients with the same therapist revealed that the first patient used self-regulation system (fast rhythmic eye contact) to manage interactive regulation, while the second patient increased effort in interactive regulation (good at turn take sequence eye gaze). Common facial emotional expressions of the fearful patients in Sample 2 were listening with negative emotions on their faces, ambivalent expressions which began from the early beginning of the therapy, and increased positive emotions including body shifts. The fearful patient of Dyad 7 had also and emotional instability due to negative and positive spikes (like fearful patients of Sample 1). Fearful patients in Sample 2 were more stable while expressing entirely negative emotions as seen in fearful patients in sample 1.

Fearful patients' attempts to increase positive emotion and accompanying the therapist's positive emotion in the sequences might be the possible reasons behind the decrease in their attachment insecurities at the end of the therapy process. In other words, they were willing to develop relationship. Parallel with this claim, as opposed to the limited emotional disclosure expected from fearful attachment people, Dyad 7's patient expressed negative emotions including crying from the early middle phase of the therapy through the end, and Dyad 8's patient also cried in the late middle phase of the therapy. Also, there was reciprocity of playfulness between the therapist and both of the patients. Additionally, fearful patient of Dyad 8winked while talking and obvious expressions while listening to the therapist like the "bravo" mimic or gestures to approve therapist's intervention. Lastly, the fearful patient's increased eye contact in the sequence in which there were lots of turn takes may show the efforts to build a connection and not allow the patient to go for her own self-regulatory system form the therapist in Dyad 8. Parallel with this finding, the patient made eye gaze in moments of positive emotion, which shows her attempt to develop intimacy. This finding is congruent with her more secure attachment to the therapist compared to the other partner.

When the results were evaluated based on the nonverbal expressions of the secure therapist who conducted sessions with two different patients who had fearful attachments, it was found that, in terms of warmth and closeness of the therapist, she had playful mimics while interacting, curious listening, and unmatched emotion comprising of reflectiveness. She generally participated in the many of the patient's positive emotions (sometimes even more positive than the patients), and. Moreover, similar to the secure therapist in Sample 1, she expressed anxious emotions on her face at the end of her own speech. One of the frequent mimics of the therapist was the "I understood you" mimic as a form of supporting the patient which may be related to her increased levels in twinship selfobject needs. The common behaviors while talking as seen in the therapist of sample 1 was punctuation, slightly positive emotion, surprised expression while listening, and containing defensive positive emotion of the patient while being stable. Also, different from the other therapists, increasing and decreasing accordance with the patient's emotion was observed

more in Sample 2's therapist on the basis of facial emotional expressions. One of findings which may be thought as congruent with her slightly higher attachment anxiety feature compared to her attachment avoidance was that she applied gaze aversion before a change in the patients' emotions from negative to the positive (the patients were sometimes angry or terrified). In addition to this, one of the unique gaze aversion behaviors for this therapist was that she averted her gaze when the patient did so. Thus, she mostly did not create a withdrawal rupture. This sensitivity (of hers) may be related to her attachment security; however, it is also possible that she is also sensitive to any disruption because of her attachment anxiety. In other words, she might be preoccupied with the interactive regulation more than self-regulation.

CHAPTER 5

CONCLUSIONS

The present study basically aimed to support the claims on the analogy of the mother-infant interaction with an adult therapist and an adult patient interaction in terms of nonverbal exchanges between interacting partners. This dissertation is one of the pioneering studies testing the implicit procedural aspects of adult face-to-face therapy based on the observations made through video recordings of sessions in the framework of bipolar model of self- and interactive regulation dyadic systems defined by Beebe and Lachman (1996). Therefore, the findings of this study made an important contribution to the psychotherapy process research in which there is a growing interest in the mechanisms of nonverbal, unconscious aspects of countertransference-transference dynamics. The present study provided valuable information about nonverbal dynamics between interacting partners whose head movements synchronized, which is considered as the art of psychotherapy in Schore (2003), mutual synchrony), and one of the important common factor of effective psychotherapy (e.g., implicit processes emphasized in Rosenzweig, 1936)

The findings of the present study may be useful if used in clinical psychology training which is also recommended by the APA Presidential Task Force on Evidence-Based Practice (2006) stating that "Central to clinical expertise is interpersonal skill, which is manifested in forming a therapeutic relationship, encoding and decoding verbal and nonverbal responses, creating realistic but positive expectations, and responding empathically to the patient's explicit and implicit experiences and concerns" (p. 277). The present study's observational findings made an important contribution in defining nonverbal manifestations of temperament, attachment, and selfobject needs embodied in self- and interactive regulation dynamics observed through different communication modalities like eye

gaze, facial emotional expressiveness, self-regulatory touches, looking at the camera as a symbolic expression of displacement of selfobject needs, head nods, vocal prompts, and pattern of turn takes. Therefore, further studies may deepen these findings in a broader concept of a very recent scientific perspective on procedural dynamics in interactions, which is right brain to right brain hypothesis as an underlying dynamic responsible for implicit dynamics in intersubjectivity (Decety & Chaminade, 2003), attachment, synchrony, and resonance (Schore, 2003). Recently, it is claimed that there is a shift in the psychotherapy practice from talking cure to the communication cure. Congruently, one of the contributions of this study may be moving the current literature one step further by providing empirical evidence obtained from the video recordings, which enabled us to understand different nonverbal dynamics which were not analyzed in the pioneering study in this area (i.e., the study was based on voice recordings; Havas, Svartberg, & Ulvenes, 2015) .

Another prominent feature of this dissertation was about its perspective towards the therapeutic relationship while analyzing the dynamics within a therapy dyad. Both in therapeutic alliance rupture studies in Safran and Muran (2000)or Eubanks, Muran, & Safran, (2015)) and dyadic communication study in Havas, Svartberg, & Ulvenes, (2015), researchers perceived the therapist and the patient as separate systems and tried to understand the dynamics between these systems. However, in the current study, rather than focusing on only one part of the relationship, reciprocity and mutuality in interactive dynamics were observed and analyzed in accordance with the perspective of mother-infant studies (see studies of Beebe and Lachman).

Another contribution of this study was combining two ways of studying nonverbal synchrony in psychotherapy, which were motion energy analysis as a computerized method and content analysis as a human coder method (i.e., a clinical psychologist). Therefore, one of the drawbacks of motion energy analysis, which was the ignorance of the content of the analyzed units, was compensated in this study by applying content analysis. As a result, the importance of the ways of time lags and the magnitude of the nonverbal synchrony were explored in the context of the

empathy definition of psychoanalytic self psychology. Furthermore, by the help of computerized assessment of nonverbal synchrony via a medium (an instrument) made it possible to assess nonverbal dynamics in adult psychotherapy (i.e., moderate level of positive head synchrony) similar to mother-infant play. Consequently, this study contributed to psychotherapy process literature, providing an additional open source code to analyze motion energy as being committed to the original idea of Ramseyer and Tsachher (2011, 2018). However, the code still needs to be improved, which requires collaborative works with other disciplines.

5.1.Limitations and Suggestions for Further Studies

One of the important limitations of this dissertation was the need for excessive labour in conducting the study and analyzing data. There were 300 one-minute interaction units which were analyzed by the researcher that was restricted to broaden the interpretations of the findings. Additionally, similar to the earlier research, only the first fifteen minutes of the sessions were analyzed to find out head synchrony; therefore, further studies are needed to analyze whole sessions which will give more information about the interactive dynamics between the partners of the psychotherapy. Furthermore, the present study only focused on the interaction units in which there were moderate levels of positive synchrony, which is a fact that may encourage further studies to analyze negatively coordinated sequences, as well. Lastly, while conducting content analyses, different criteria were used specific to each therapy dyad in order to control for the complexity of data. The last limitation in the analysis of the study was about omitting pseudosynchrony analysis. In this study, the researcher watched each coordinated interaction unit to evaluate whether a synchrony existed or not, rather than performing quantative analysis of pseudosynchrony based on the data generated as in original studies (e.g., Ramseyer et al., 2011, 2014). The sequences mostly yielded real synchronized movements. However, some of the sequences included non-clear data due to the entrance of one of the partner's body part to her partner's camera shot. These sequences were not analyzed in content analysis. These limitations related to the assessment of nonverbal head synchrony in this study should also be improved in further studies.

In terms of the sample of the study, one of the limitations was the therapists' having different theoretical backgrounds which made each psychotherapy dyad pursue different approaches in sessions. However, in Havas, Svartberg, & Ulvenes, 2015'sstudy, affect attunement based on nonverbal behaviors were also tested via a theory free instrument which focused on the responsiveness of the therapist independent from the techniques used in the sessions. Moreover, the patients' different psychopathologies limited the generalization of the findings of the study. Therefore, further studies should include specific types of psychopathologies.

In terms of the effectiveness of the therapy processes in this study, macro outcomes at the end of the psychotherapies did not yield significant changes in patients, which limited the understanding of the role of the coordinated/attuned relationship in adult relationship based on nonverbal exchanges underlying secure attachment dynamics (as seen in mother infant relationship; Beebe & Lachman et al. 1996. This limitation was partially compensated with the findings of Sample 2, in which the patients' particular attachment securities increased at the end of the therapy processes. Nonetheless, the second sample's psychotherapies were conducted by the researcher who was aware of the study purposes. Although the results of the inter-rater reliability of the manifest content analyses yielded similar findings for both Sample 1 and Sample 2, still further studies should be conducted with more therapists who are unaware of the study purposes in order to control the subjectivity of the observations. It should also be noted that the interrater reliability values were low on facial emotion expressions of the patients and the lip eating behavior of the therapists. Therefore, further studies should be improved upon manifest coding, particularly on these nonverbal communication modalities.

Finally, the present study's focus on psychoanalytic self psychology, particularly in terms of defining "displacement of selfobject needs" as a new concept in nonverbal manifestation by camera looking behavior, which has never been defined in previous studies, may be considered as being a contribution to current literature. On the other hand, it may be said that it was hard to interpret the results of self-reported selfobject needs. This difficulty may be related to the psychometric properties of the scale. Therefore, further studies exploring empirical supports of

the foundations of psychoanalytic self psychology should be aware of these inconclusive aspects of the results.

5.2.Clinical Implications of The Findings

Many of the findings of the present study have clinical implications besides contributing to the research area in general. First of all, based on the motion energy analysis results of the current study, the synchronization of the nonverbal behaviors of the patients and the therapists may show the quality of the emotional exchange between them. However, increased coordination may also be related to the frequent rupture-repair exchanges rather than behavioral or emotional attunement. Thus, it it is important to point out that "therapists should proceed according to the speed of the patients in terms of not only verbal and explicit tasks but also nonverbal procedural signals coming from the patients. As a result, the therapists should develop abilities to encode both their own and the patients' nonverbal expressions.

Some of the crucial abilities of the therapists which have roles in the development of secure bonding within a therapy dyad, such as empathy, reflective functioning, and sensitivity, manifest themselves in the nonverbal communication channel. As a result, this study may provide a perspective to the therapists in order to conceptualize the influence of their nonverbal behaviors on the patients' implicit processes. This study showed that the countertransference reactions of the therapists reflect themselves on therapeutic exchange at micro level expressions like sudden changes in patterns of eye contact, increase of self-regulatory behaviors, or facial expressiveness. Therefore, it may be suggested that psychotherapy supervision should include analyses of the video recordings of the sessions in order to increase the awareness of the therapists on their countertransference reactions which would not yet be verbalized by them.

The findings of the present study may be considered as showing how the therapists' unique nonverbal patterns resulting from their individual differences based on temperament, attachment, and selfobject needs influence the self-regulation dynamics of the patients. Thus, the therapists should gain insight into their individual characteristics and their nonverbal expressions.

This study also showed that the therapeutic stages should be observed through changes in the patterns of nonverbal behaviors. Therefore, the therapists should observe their patients' nonverbal behaviors in order to track the prognosis of the psychological treatment besides focusing on either patients' verbal declarations or self-reported assessments.

It may not be wrong to say that the most promising nonverbal communication modality may be focusing according to which other nonverbal communication modalities are changed. For instance, the higher the amount and the predictability of the eye contact, the higher the amount of intense listening observed via bodily attunement (e.g., functional head nods) and affect attunement (e.g., changing facial emotional expressiveness accordingly to the patient). However, in this study, one of the tasks of the therapists which disrupted their nonverbal behavioral patterns was taking notes. It can be speculated that taking notes may keep the therapist on the conscious, explicit, and verbal rather than the unconscious, implicit, and procedural level. In other words, the therapeutic exchanges within them emerged in left brain to left brain, which may reduce the changes in patients' implicit relational learning. Moreover, the effect of mutual focusing on expanding intersubjectivity, the therapists should encourage their patients to make eye contact. On the one hand, they should first understand the dynamics and patterns underlying their patients' gaze aversion based on the patients' developmental histories, then they should figure out the ways of changing the patients' willingness to make eye contact. On the other hand, these observations may also be used to detect any ruptures in therapeutic bonding. Moreover, the stability and the valence of the patients' facial emotional expressiveness should be observed and analyzed by the therapists in order to deepen their understanding of the patients' emotional world in implicit level in which particularly affectively-laden experiences are embodied. Similarly, self-regulatory behaviors of both the patients and the therapist provide important cues to figure out emotionally overwhelming experiences. It may be said that these observations would increase the therapists' access to their intuitional knowledge about the patients, and automatically regulate the behaviors of the therapists in

accordance with the patients' movements (i.e., behavioral mimicry/synchrony/attunement), and so their affect.

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APPENDICIES

APPENDİX A. APPROVAL OF METU HUMAN SUBJECTS ETHICS COMMITTEE

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
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Sayı: 28620836-[illegible] 399

09 AĞUSTOS 2017

Konu: Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Doç. Dr. Özlem BOZO ;

Danışmanlığını yaptığınız Burçin YILDIRIM'ın "***Yüzyüze Yetişkin Terapilerinde Sözel Olmayan, Bilinçdışı ve Örtük İletişim Öğelerinin İncelenmesi***" başlıklı araştırması İnsan Araştırmaları Etik Kurulu tarafından uygun görülerek gerekli onay **2016-SOS-140** protokol numarası ile **09.08.2017 – 30.12.2018** tarihleri arasında geçerli olmak üzere verilmiştir.

Bilgilerinize saygılarımla sunarım.

Prof. Dr. Ş. Halil TURAN
Başkan V

Prof. Dr. Ayhan SOL
Üye

Prof. Dr. Ayhan Gürbüz DEMİR
Üye

Doç. Dr. Yaşar KONDAKÇI
Üye

Doç. Dr. Zana ÇITAK
Üye

Yrd. Doç. Dr. Pınar KAYGAN
Üye

Yrd. Doç. Dr. Emre SELÇUK
Üye

APPENDIX B. INFORMED CONSENT (PATIENT FORM)

Araştırmaya Gönülü Katılım Formu

Bu araştırma, Psikoloji Bölümü öğretim elemanlarından Uzm. Psk. Burçin Cihan-Yıldırım tarafından Doç. Dr. Özlem Bozo danışmanlığında yürütülen bir doktora tez çalışmasıdır. Bu form sizi araştırma koşulları hakkında bilgilendirmek için hazırlanmıştır.

Çalışmanın Amacı Nedir? Araştırmanın amacı terapi ilişkisinin incelenmesidir. Araştırmaya katılmayı kabul ederseniz, sizden beklenen, araştırmanın anket formalarını doldurmanız ve seansların video ve ses kaydına alınmasına izin vermenizdir.

Bize Nasıl Yardımcı Olmanızı İsteyeceğiz? Çalışma sırasında sizden beklenenler terapi görüşmelerinden beklentileriniz ne ise onları aynen korumanızdır. Normal terapi seanslarınızdan tek farkı seansların kayda alınacak olmasıdır. Sizden bir diğer beklentimiz ise araştırma anketlerini doldurmanızdır.

Sizden Topladığımız Bilgileri Nasıl Kullanacağız? Araştırmaya katılımınız tamamen gönüllülük temelinde olmalıdır. Ankette, sizden kimlik veya kurum belirleyici hiçbir bilgi istenmemektedir. Cevaplarınız tamamıyla gizli tutulacak, sadece araştırmacılar tarafından değerlendirilecektir. Sizden elde edilecek bilgiler toplu halde değerlendirilecek ve bilimsel yayımlarda kullanılacaktır. Sağladığınız veriler gönüllü katılım formlarında toplanan kimlik bilgileri ile eşleştirilmeyecektir. Kayıtların korunması da araştırmacıların sorumluluğundadır.

Katılımınızla ilgili bilmeniz gerekenler: Çalışmamız günlük hayatta karşılaşılması muhtemel olağan risklerin ötesinde bir risk içermemektedir. Katılım sırasında sorulardan ya da herhangi başka bir nedenden ötürü kendinizi rahatsız hissederseniz çalışmadan istediğiniz zaman ayrılabilirsiniz. Böyle bir durumda çalışmayı uygulayan kişiye, çalışmadan çıkmak istediğinizi söylemek yeterli olacaktır. Çalışma ile terapi sürecinin gidişatı arasında bir bağlantı yoktur. Terapi süreci terapistiniz ile kararlaştıracağınız bir konudur. Çalışma sonunda, bu araştırmayla ilgili sorularınız cevaplanacaktır.

Araştırmayla ilgili daha fazla bilgi almak isterseniz: Bu çalışmaya katıldığınız için şimdiden teşekkür ederiz. Araştırma hakkında daha fazla bilgi almak için Psikoloji Bölümü öğretim üyelerinden Araş. Gör. Burçin Cihan (E-posta: burcincihan@gmail.com) ile iletişim kurabilirsiniz.

Yukarıdaki bilgileri okudum ve bu çalışmaya tamamen gönüllü olarak katılıyorum.

(Formu doldurup imzaladıktan sonra uygulayıcıya geri veriniz).

İsim Soyisim Tarih İmza

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APPENDIX C. INFORMED CONSENT (THERAPIST FORM)

Araştırmaya Gönülü Katılım Formu

Bu araştırma, Psikoloji Bölümü öğretim elemanlarından Uzm. Psk. Burçin Cihan-Yıldırım tarafından Doç. Dr. Özlem Bozo danışmanlığında yürütülen bir doktora tez çalışmasıdır. Bu form sizi araştırma koşulları hakkında bilgilendirmek için hazırlanmıştır.

Çalışmanın Amacı Nedir? Araştırmanın amacı terapi ilişkisinin incelenmesidir. Araştırmaya katılmayı kabul ederseniz, sizden beklenen, araştırmanın anket formalarını doldurmanız ve seansların video ve ses kaydına alınmasına izin vermenizdir.

Bize Nasıl Yardımcı Olmanızı İsteyeceğiz? Çalışma sırasında sizden beklenenler terapi görüşmelerinden beklentileriniz ne ise onları aynen korumanızdır. Normal terapi seanslarınızdan tek farkı seansların kayda alınacak olmasıdır. Sizden bir diğer beklentimiz ise araştırma anketlerini doldurmanızdır.

Sizden Topladığımız Bilgileri Nasıl Kullanacağız? Araştırmaya katılımınız tamamen gönüllülük temelinde olmalıdır. Ankette, sizden kimlik veya kurum belirleyici hiçbir bilgi istenmemektedir. Cevaplarınız tamamıyla gizli tutulacak, sadece araştırmacılar tarafından değerlendirilecektir. Sizden elde edilecek bilgiler toplu halde değerlendirilecek ve bilimsel yayımlarda kullanılacaktır. Sağladığınız veriler gönüllü katılım formlarında toplanan kimlik bilgileri ile eşleştirilmeyecektir. Kayıtların korunması da araştırmacıların sorumluluğundadır.

Katılımınızla ilgili bilmeniz gerekenler: Çalışmamız günlük hayatta karşılaşılması muhtemel olağan risklerin ötesinde bir risk içermemektedir. Katılım sırasında sorulardan ya da herhangi başka bir nedenden ötürü kendinizi rahatsız hissederseniz çalışmadan istediğiniz zaman ayrılabilirsiniz. Böyle bir durumda çalışmayı uygulayan kişiye, çalışmadan çıkmak istediğinizi söylemek yeterli olacaktır. Çalışma ile terapi sürecinin gidişatı arasında bir bağlantı yoktur. Terapi süreci danışanınız ile kararlaştıracağınız bir konudur. Çalışma sonunda, bu araştırmayla ilgili sorularınız cevaplanacaktır.

Araştırmayla ilgili daha fazla bilgi almak isterseniz: Bu çalışmaya katıldığınız için şimdiden teşekkür ederiz. Araştırma hakkında daha fazla bilgi almak için Psikoloji Bölümü öğretim üyelerinden Araş. Gör. Burçin Cihan (E-posta: burcincihan@gmail.com) ile iletişim kurabilirsiniz.

Yukarıdaki bilgileri okudum ve bu çalışmaya tamamen gönüllü olarak katılıyorum.

(Formu doldurup imzaladıktan sonra uygulayıcıya geri veriniz).

İsim Soyisim Tarih İmza

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APPENDIX D. SAMPLE ITEMS FROM INTERPERSONAL PROBLEMS SCALE

Kişilerarası Problemler Envanteri Döngüsel Ölçekleri Kısa Formu					
	Hiç değil 0	1	2	3	Tamamen 4
1. Başkalarına "hayır" demek zordur.	0	1	2	3	4
2. Gruplara katılmak zordur.	0	1	2	3	4
3. Bir şeyleri kendime saklamak zordur.	0	1	2	3	4
4. Birine beni rahatsız etmemesini söylemek zordur.	0	1	2	3	4
5. Kendimi yeni insanlara tanıtmak zordur.					
6. İnsanları ortaya çıkan problemlerle yüzleştirmek zordur.	0	1	2	3	4
7. Başkalarına kendimi rahatlıkla ifade etmek zordur.	0	1	2	3	4
8. Başkalarına kızgınlığımı belli etmek zordur.	0	1	2	3	4
9. Başkalarıyla sosyalleşmek zordur.	0	1	2	3	4
10. İnsanlara sıcaklık/ şeykat göstermek zordur.	0	1	2	3	4

APPENDIX E. SAMPLE ITEMS FROM SHORT SYMPTOM INVENTORY

KSE

Aşağıda insanların bazen yaşadıkları belirtiler ve yakınmaların bir listesi verilmiştir.Listedeki her maddeyi lütfen dikkatle okuyun.Daha sonra o belirtinin sizi bugün dahil, **son bir haftadır** ne kadar rahatsız ettiğini yandaki kutulardan uygun olananın içini [X] işaretleyerek gösterin.Her belirti için sadece bir yeri işaretlemeye ve hiçbir maddeyi atlamamaya özen gösterin.Fikir değiştirirseniz ilk yanıtınızın üstünü karalayın.

	Hiç	Biraz	Orta Derecede	Oldukça fazla	Ciddi derecede
1. İçinizdeki sinirlilik ve titreme hali	☐	☐	☐	☐	☐
2. Baygınlık, baş dönmesi	☐	☐	☐	☐	☐
3. Bir başka kişinin sizin düşüncelerinizi kontrol edebileceği inancı	☐	☐	☐	☐	☐
4. Başınıza gelen sıkıntılardan dolayı başkalarının suçlu olduğu düşüncesi	☐	☐	☐	☐	☐
5. Olayları hatırlamada güçlük	☐	☐	☐	☐	☐
6. Çok kolayca kızıp öfkelenme	☐	☐	☐	☐	☐
7. Göğüs (kalp) bölgesinde ağrılar.	☐	☐	☐	☐	☐
8. Meydanlık (açık) alanlardan korkma duygusu	☐	☐	☐	☐	☐
9. Yaşamınıza son verme düşünceleri	☐	☐	☐	☐	☐
10. İnsanların çoğuna güvenilmeyeceği düşüncesi	☐	☐	☐	☐	☐

APPENDIX F. SAMPLE ITEMS FROM THERAPEUTIC ALLIANCE SCALE

Terapötik İttifak Ölçeği (Hasta-Terapist Formu Birlikte)							
1. Terapistimin/danışanımın yanında kendimi rahat hissediyorum	Hiçbir zaman	Çok Seyrek	Seyrek	Bazen	Sık sık	Çok sık	Her zaman
2. Terapistim/danışanım ve ben birbirimizi anlıyoruz	0	1	2	3	4	5	6
3. Terapistimin/danışanımın bana yakın hissettiğine inanıyorum	0	1	2	3	4	5	6
4. Terapistimin/danışanımın iyiliğimi gerçekten düşündüğüne inanıyorum	0	1	2	3	4	5	6
5. Terapistim/danışanım ve ben birbirimize saygı duyuyoruz	0	1	2	3	4	5	6
6. Terapistimin/danışanımın bana gösterdiği duygularda tatmin olarak dürüst olmadığını hissediyorum						5	6
7. Terapistimin/danışanıma (bana) yardım edebileceğine/edebileceğime inanıyorum	0	1	2	3	4	5	6
8. Terapistimin/danışanımın beni takdir ettiğini hissediyorum	0	1	2	3	4	5	6
9. Terapistim/danışanım ve ben birbirimize güveniyoruz	0	1	2	3	4	5	6
10. Terapistimle/danışanımla olan ilişkim benim için çok önemli	0	1	2	3	4	5	6

APPENDIX G. SAMPLE ITEMS FROM ADULT TEMPAREMENT QUESTIONNNAIRE

	Son derece yanlış	Oldukça yanlış	Biraz yanlış	Ne doğru ne yanlış	Biraz doğru	Oldukça doğru	Son derece doğru	Söz konusu değil
1. Kolayca korkuya kapılırım.	1	2	3	4	5	6	7	X
2. Randevularıma sıklıkla geç kalırım.	1	2	3	4	5	6	7	X
3. Küçük hadiseler benim son derece mutlu olmama sebep olur.	1	2	3	4	5	6	7	X
4. Çoğu zaman sonuçlandıramadığım planlar yaparım.	1	2	3	4	5	6	7	X
5. Zar zor farkedilebilen görsel detaylar nadiren dikkatimi çeker.	1	2	3	4	5	6	7	X
6. Aşırı yüksek bir yerden aşağıya bakmak beni tedirgin hissettirir.	1	2	3	4	5	6	7	X
7. Müzik dinlerken duygusal tınıların (tonların) sıklıkla farkındayımdır.	1	2	3	4	5	6	7	X
8. İnsanlarla etkileşime girmeyi gerektiren bir işten hoşlanmam.	1	2	3	4	5	6	7	X
9. Almak istediğim ürünün mağazanın stoğunda kalmamasını çok sinir bozucu buluyorum.	1	2	3	4	5	6	7	X

APPENDIX H. DEMOGRAPHIC FORM (PATIENT FORM)

Demografik ve Mesleki Bilgi Formu-Danışan	
İsminizin ilk iki harfi	
Soyisminizin ilk iki harfi	
Yaşınız	
Cinsiyetiniz	
Medeni durumunuz	Bekar Evli Dul Boşanmış
Çocuğunuz var mı?	Evet (sayı, yaş ve cinsiyet belirtiniz)_____ Hayır_____
Eğitim durumunuz	Okur-yazar_____ Ortaokul_____ Yüksekokul_____ İlkokul (5 sene) _____ Lise_____ Üniversite ve üzeri_____
Mesleğiniz	
Evine giren toplam aylık geliriniz	0-999 TL_____ 2000-2999 TL_____ 4000-4999 TL_____ 1000-1999 TL____ 3000-3999 TL_____ 5000 ve üzeri_____
Sizce ekonomik sınıfınız hangisidir?	Alt Orta Üst
Siz büyürken evinizde Türkçe dışında konuşulan bir dil var mıydı?	Arapça_____ İngilizce_____ Kürtçe_____ Ermenice_____ Almanca_____ Diğer_____
Dini inancınız var mı?	Evet (belirtiniz) _____

	Hayır_____
Daha önce psikoterapi deneyiminiz oldu mu?	Evet (Ne kadar sürdüğünü ve terapistinizin teorik yönelimini belirtiniz) _____ Hayır_____
Daha önce psikiyatrik tedavi aldınız mı ?	Evet _____ İlaç Tedavisi (ilaçlarınızı belirtiniz) _____ Psikiyatrik muayene ilaçsız_____ Psikiyatri hastanesinde yatış (gün ve yıl belirtiniz) _____ Hayır_____
Ailenizde psikiyatrik tanı almış bir yakınınız var mı?	Evet (yakınlık derecenizi ve tanısını belirtiniz) _____ Hayır_____
Tanı almış fiziksel hastalığınız var mı?	Evet (belirtiniz) _____ Hayır_____
Vücudunuzda herhangi bir bölgede yeti yitiminiz var mı? (örn., işitme kaybı, yüz felci gibi)	Evet (belirtiniz) _____ Hayır_____

APPENDIX I. DEMOGRAPHIC FORM (THERAPIST FORM)

Demografik ve Mesleki Bilgi Formu-Terapist	
İsminizin ilk iki harfi	
Soyisminizin ilk iki harfi	
Yaşınız	
Cinsiyetiniz	
Medeni durumunuz	Bekar Evli Dul Boşanmış
Çocuğunuz var mı?	Evet (sayı, yaş ve cinsiyet belirtiniz)_____ Hayır_____
Eğitim durumunuz	Okur-yazar_____ Ortaokul_____ Yüksekokul_____ İlkokul (5 sene) _____ Lise_____ Üniversite ve üzeri_____
Evine giren toplam aylık geliriniz	0-999 TL_____ 2000-2999 TL_____ 4000-4999 TL_____ 1000-1999 TL____ 3000-3999 TL_____ 5000 ve üzeri_____
Sizce ekonomik sınıfınız hangisidir?	Alt Orta Üst
Siz büyürken evinizde Türkçe dışında konuşulan bir dil var mıydı?	Arapça_____ İngilizce_____ Kürtçe_____ Ermenice_____ Almanca_____ Diğer_____
Dini inancınız var mı?	Evet (belirtiniz) _____

	Hayır_____
Daha önce psikoterapi deneyiminiz oldu mu?	Evet (Ne kadar sürdüğünü ve terapistinizin teorik yönelimini belirtiniz) _____ Hayır_____
Daha önce psikiyatrik tedavi aldınız mı ?	Evet _____ İlaç Tedavisi (ilaçlarınızı belirtiniz) _____ Psikiyatrik muayene ilaçsız_____ Psikiyatri hastanesinde yatış (gün ve yıl belirtiniz) _____ Hayır_____
Ailenizde psikiyatrik tanı almış bir yakınınız var mı?	Evet (yakınlık derecenizi ve tanısını belirtiniz) _____ Hayır_____
Tanı almış fiziksel hastalığınız var mı?	Evet (belirtiniz) _____ Hayır_____
Vücudunuzda herhangi bir bölgede yeti yitiminiz var mı? (örn., işitme kaybı, yüz felci gibi)	Evet (belirtiniz) _____ Hayır_____
Ne kadar süredir psikoterapi hizmeti veriyorsunuz?	_____ Yıl Seans Sayısı _____
Psikoterapi ekollerinden hangisinde kendinizi tanımlarsınız? (Bilişsel Davranışçı Terapi Yönelimli, Psikodinamik Yönelimli)	
Aldığınız terapi eğitimleri nedir?	

Eğitiminiz (yüksek lisans, doktora) kapsamında mı psikoterapi yapıyorsunuz?	Evet ____ Eğitiminiz bittikten sonra terapi yapmaya devam etmeyi düşünüyor musunuz? Evet ____ Hayır____ Hayır____
Devam eden terapi seanslarınız için süpervizyon alıyor musunuz?	Evet _____ Hayır _____
Sizi psikoterapist olmaya motive eden sebeplerden kısaca bahseder misiniz?	
Terapi hizmeti vermekte zorlanacağınız bir hasta grubu olduğunu düşünüyor musunuz? Sebebi ile kısaca belirtiniz.	
Terapi hizmeti vermeyi hiçbir zaman düşünmeyeceğiniz bir hasta grubu var mı? Sebebi ile kısaca belirtiniz.	
Terapi hizmeti verirken kendinizi en rahat hissettiğiniz hasta grubu hangisidir? Sebebi ile kısaca belirtiniz. (Eğer daha yeni terapi vermeye başladıysanız ihtimal olarak yazınız)	

APPENDIX J. SAMPLE ITEMS FROM SELFOBJECT NEEDS INVENTORY

1.	Başarılarım yeterince takdir edilmediğinde incinirim.	1	2	3	4	5	6	7
2.	Benimle aynı durumdaki insanların çevresinde olmak benim için önemlidir.	1	2	3	4	5	6	7
3.	Bir problemim olduğunda deneyimli insanlardan bile öneri almak benim için zordur.	1	2	3	4	5	6	7
4.	Başarılı insanlarla ilişki kurmak benim de başarılı hissetmemi sağlar.	1	2	3	4	5	6	7
5.	Diğer insanların övgülerine ihtiyacım yoktur.	1	2	3	4	5	6	7
6.	Benimle benzer problemleri olan insanlarla bir arada olmak istemem.	1	2	3	4	5	6	7
7.	Yaptığım iş takdir edilmediğinde hayal kırıklığına uğrarım.	1	2	3	4	5	6	7
8.	Değerlerimi, fikirlerimi ve aktivitelerimi paylaşacağım insanlar ararım.	1	2	3	4	5	6	7
9.	Saygı duyduğum insanların bile yönlendirmelerini kabul etmeyi zor bulurum.	1	2	3	4	5	6	7
10.	Ünlü insanlara özenirim.	1	2	3	4	5	6	7

APPENDIX K. SAMPLE ITEMS FROM EXPERIENCE IN CLOSE RELATIONSHIP

1----------2----------3----------4----------5----------6----------7
Hiç katılmıyorum — Kararsızım/ fikrim yok — Tamamen katılıyorum

1. Birlikte olduğum kişinin sevgisini kaybetmekten korkarım.	1	2	3	4	5	6	7
2. Gerçekte ne hissettiğimi birlikte olduğum kişiye göstermemeyi tercih ederim.	1	2	3	4	5	6	7
3. Sıklıkla, birlikte olduğum kişinin artık benimle olmak istemeyeceği korkusuna kapılırım.	1	2	3	4	5	6	7
4. Özel duygu ve düşüncelerimi birlikte olduğum kişiyle paylaşmak konusunda kendimi rahat hissederim.	1	2	3	4	5	6	7
5. Sıklıkla, birlikte olduğum kişinin beni gerçekten sevmediği kaygısına kapılırım.	1	2	3	4	5	6	7
6. Romantik ilişkide olduğum kişilere güvenip inanmak konusunda kendimi rahat bırakmakta zorlanırım.	1	2	3	4	5	6	7
7. Romantik ilişkide olduğum kişilerin beni, benim onları önemsediğim kadar önemsemeyeceklerinden endişe duyarım.	1	2	3	4	5	6	7
8. Romantik ilişkide olduğum kişilere yakın olma konusunda çok rahatımdır.	1	2	3	4	5	6	7
9. Sıklıkla, birlikte olduğum kişinin bana duyduğu hislerin benim ona duyduğum hisler kadar güçlü olmasını isterim.	1	2	3	4	5	6	7
10. Romantik ilişkide olduğum kişilere açılma konusunda kendimi rahat hissetmem.	1	2	3	4	5	6	7

APPENDIX L. SAMPLE FROM MATLAB CODES FOR MOTION ENERGY ANALYSIS

```
clear; close all;
stTime=dlmread('st_ygmen.txt');
for t=15:15;
   foldername=fullfile('C:\Users\hurci\Desktop\burcin_matlab', sprintf('DOSYAISMI%d', t));
   filenameTXT=fullfile(foldername, sprintf('dDOSYAISMI%d.txt', t));
   filenameCorr=fullfile(foldername, sprintf('DOSYAISMI%d.txt', t));
   filenameCorr_th=fullfile(foldername, sprintf('DOSYAISMI%d_zero.txt', t));
   fileID = fopen(filenameTXT,'r');
   %smoothing window length
   smoothingWindow=20; %frames (8 frames = .4 sec - makale)
   %threshold value
   thrVal=0; %%threshold value is in sigma units
   %total duration of analysis in minutes
   minDur=15;
   %threshold bul
   thrBreak=1;
   %cross correlation parameters
   %cross correlation duration in seconds
   ccDur=60;
   %cross correlation maximum lag in seconds
   ccLag=5;
   extraT=2*ccLag;
   %initial time in seconds
   tInit=stTime(t)+2+(5-ccLag);
   header=textscan(fileID,'%12s',4);
   colmnInfo=header{1,1};
                          --THIS PART INTENTIONALLY LEFT BLANK—
      timeVar(i)=seconds((i-1)/10+tInit);  %time in seconds
      timeVarMin(i)=timeVar(i)/60+(tInit/60);
      frameVar(i)=i-1+tInit*10;
      frameVar2(i)=i-1;              %frame number in 10 FPS
      for k=1:4;
         for j=1:3;
            data10FPS(k,i)=+double((data30FPS{1,k}(frameVar(i)*3)+j-2)/3);
         end
      end
   end
   timeVar.Format='mm:ss';
   %smoothing
   for i=1:4;
      data10FPS_smt(i,:)=smooth(data10FPS(i,:),smoothingWindow);
      pd(i)=fitdist(data10FPS_smt(i,:).','GeneralizedExtremeValue');
      data10FPS_smt(i,:)=(data10FPS_smt(i,:)-pd(i).mu)/pd(i).sigma;
      data10FPS(i,:)=(data10FPS(i,:)-pd(i).mu)/pd(i).sigma;
      data10FPS_smt_zero(i,:)=data10FPS_smt(i,:);
      BW = imbinarize(data10FPS_smt(i,:),thrVal);
      data10FPS_smt_th(i,:)=BW.*(data10FPS_smt(i,:)  );%-thrAB(i));  %with otsu threshold
   end
   ccPts=floor(minDur*60/ccDur);
   ccValues=zeros(1,ccPts);
  for g=1:2;
      if (g==1);
         data10FPS_cc=data10FPS_smt_zero;
```

```
      else
         data10FPS_cc=data10FPS_smt_th;
      end
      for i=1:ccPts;
         initF=(i-1)*ccDur*10+1+ccLag*10;
         finalF=i*ccDur*10+ccLag*10;
         for j=1:(2*(ccLag*10)+1);
            initFS=initF+(j-(ccLag*10)-1);
            finalFS=finalF+(j-(ccLag*10)-1);
[corrcoff1,lags,bounds]=crosscorr(data10FPS_cc(1,initF:finalF),data10FPS_cc(2,initFS:finalFS),1
);
            if (g==1);
               xcfHead(i,j)=corrcoff1(2);
            else
               xcfHead_th(i,j)=corrcoff1(2);
            end
[corrcoff1,lags,bounds]=crosscorr(data10FPS_cc(4,initF:finalF),data10FPS_cc(3,initFS:finalFS),1
);
            if (g==1);
               xcfBody(i,j)=corrcoff1(2);
            else
               xcfBody_th(i,j)=corrcoff1(2);
            end
 end
            if (g==1);
            [correlationC_head(i),corrInd(i)]=max(abs(xcfHead(i,:)));
            correlationC_head(i)=xcfHead(i,corrInd(i));
            correlationT_head(i)=(corrInd(i)-(ccLag*10)-1)/10;
            [correlationC_body(i),corrInd(i)]=max(abs(xcfBody(i,:)));
            correlationC_body(i)=xcfBody(i,corrInd(i));
            correlationT_body(i)=(corrInd(i)-(ccLag*10)-1)/10;
         else
                              --THIS PART INTENTIONALLY LEFT BLANK—
         end
      end
      if (g==1);
         dataCorr=horzcat(correlationC_head', correlationT_head',
correlationC_body',correlationT_body');
         dlmwrite(filenameCorr,dataCorr,'\t');
      else
         dataCorr_th=horzcat(correlationC_head_th', correlationT_head_th',
correlationC_body_th',correlationT_body_th');
         dlmwrite(filenameCorr_th,dataCorr_th,'\t');
      end
   end
   for i=1:4;
      fig(i)=figure('NumberTitle','off');
      pl(i,1)=plot(timeVar((1+ccLag*10):(totFrames/3-
2*ccLag*10)),data10FPS(i,((1+ccLag*10):(totFrames/3-2*ccLag*10))));
      hold on;
      pl(i,2)=plot(timeVar((1+ccLag*10):(totFrames/3-
2*ccLag*10)),data10FPS_smt_zero(i,((1+ccLag*10):(totFrames/3-2*ccLag*10))));
      hold on;
      pl(i,3)=plot(timeVar((1+ccLag*10):(totFrames/3-
2*ccLag*10)),data10FPS_smt_th(i,((1+ccLag*10):(totFrames/3-2*ccLag*10))));
      pl(i,1).DisplayName='Raw Data';
```

```
        pl(i,2).DisplayName='Smoothed Data';
        pl(i,3).DisplayName='Smoothed with Thresholding';
        legend('show');
    end
    fig(1).Name='Time Series of Therapist''s Head';
    fig(2).Name='Time Series of Patient''s Head';
    fig(3).Name='Time Series of Therapist''s Body';
    fig(4).Name='Time Series of Patient''s Body';
    fclose('all');
    k=1;
    for j=1:4;
        for i=1:ccPts;
            ccTVar(3*i-2)=timeVar(1)+seconds((i-1)*ccDur+ccLag);
            ccTVar(3*i-1)=timeVar(1)+seconds((i-1)*ccDur+ccLag)+seconds(ccDur);
            ccTVar(3*i)=NaN;
            for j=1:4;
                dataCorrL((3*i-2),j)=dataCorr(i,j);
                dataCorrL((3*i-1),j)=dataCorr(i,j);
                dataCorrL((3*i),j)=NaN;
                dataCorrL_th((3*i-2),j)=dataCorr_th(i,j);
                dataCorrL_th((3*i-1),j)=dataCorr_th(i,j);
                dataCorrL_th((3*i),j)=NaN;
            end
            k=k*(-1);
        end
    end
    ccTVar.Format='mm:ss';
    fc_z_h=figure('NumberTitle','off');
    fc_z_h.Name='coeff head no threshold'; %1
    fc_z_b=figure('NumberTitle','off');
    fc_z_b.Name='coeff body no threshold'; %3
    fc_t_h=figure('NumberTitle','off');
    fc_t_h.Name='coeff head threshold'; %5
    fc_t_b=figure('NumberTitle','off');
    fc_t_b.Name='coeff body threshold'; %7
    MarkerStr='.';
    MarkerSz=2;
    LineStr='-';
    %%1
    figure (fc_z_h);
    ax1=axes(fc_z_h,'Position',[0.05 0.5725 0.90 0.3525]);
    yyaxis right;
pc1=plot(timeVar,data10FPS_smt_zero(1,:),timeVar,data10FPS_smt_zero(2,:),'DurationTickForm
at','mm:ss','Marker',MarkerStr,'MarkerSize',MarkerSz,'LineStyle',LineStr);
    pc1(1).Color=[0 0.45 0.74];
    pc1(2).Color=[0.85 0.33 0.1];
    hold on;
    yyaxis left;
    pc2=plot(ccTVar,dataCorrL(:,1),'Marker','o','Color','red');
    ax=gca;
    ax.XTick = (ccDur/(86400))*(0:1:30)+(seconds(ccTVar(1))/(86400));ax.XTick =
(ccDur/(86400))*(0:1:30)+(seconds(ccTVar(1))/(86400));
    ax.XTickLabelRotation=45;
    grid on;
    ay=gca;
    ay.YTick = (-1:0.2:1);
```

```
    grid on;
    %%2
    ax2=axes(fc_z_h,'Position',[0.05 0.11 0.90 0.3525]);
    yyaxis right;
pc1=plot(timeVar,data10FPS_smt_zero(1,:),timeVar,data10FPS_smt_zero(2,:),'DurationTickForm
at','mm:ss','Marker',MarkerStr,'MarkerSize',MarkerSz,'LineStyle',LineStr);
    pc1(1).Color=[0 0.45 0.74];
    pc1(2).Color=[0.85 0.33 0.1];
    hold on;
    yyaxis left;
    pc2=plot(ccTVar,dataCorrL(:,2),'Marker','o','Color','red');
    ax=gca;
    ax.XTick = (ccDur/(86400))*(0:1:30)+(seconds(ccTVar(1))/(86400));ax.XTick =
(ccDur/(86400))*(0:1:30)+(seconds(ccTVar(1))/(86400));
    ax.XTickLabelRotation=45;
    grid on;
    ay=gca;
    ay.YTick = (-10:1:10);
    grid on;
    %%3
    figure (fc_z_b);
    ax1=axes(fc_z_b,'Position',[0.05 0.5725 0.90 0.3525]);
    yyaxis right;
pc1=plot(timeVar,data10FPS_smt_zero(3,:),timeVar,data10FPS_smt_zero(4,:),'DurationTickForm
at','mm:ss','Marker',MarkerStr,'MarkerSize',MarkerSz,'LineStyle',LineStr);
    pc1(1).Color=[0 0.45 0.74];
    pc1(2).Color=[0.85 0.33 0.1];
    hold on;
    yyaxis left;
    pc2=plot(ccTVar,dataCorrL(:,3),'Marker','o','Color','red');
    ax=gca;
    ax.XTick = (ccDur/(86400))*(0:1:30)+(seconds(ccTVar(1))/(86400));ax.XTick =
(ccDur/(86400))*(0:1:30)+(seconds(ccTVar(1))/(86400));
    ax.XTickLabelRotation=45;
    grid on;
    ay=gca;
    ay.YTick = (-1:0.2:1);
    grid on;
    %%4
    ax2=axes(fc_z_b,'Position',[0.05 0.11 0.90 0.3525]);
    yyaxis right;
pc1=plot(timeVar,data10FPS_smt_zero(3,:),timeVar,data10FPS_smt_zero(4,:),'DurationTickForm
at','mm:ss','Marker',MarkerStr,'MarkerSize',MarkerSz,'LineStyle',LineStr);
    pc1(1).Color=[0 0.45 0.74];
    pc1(2).Color=[0.85 0.33 0.1];
    hold on;
    yyaxis left;
    pc2=plot(ccTVar,dataCorrL(:,4),'Marker','o','Color','red');
    ax=gca;
    ax.XTick = (ccDur/(86400))*(0:1:30)+(seconds(ccTVar(1))/(86400));ax.XTick =
(ccDur/(86400))*(0:1:30)+(seconds(ccTVar(1))/(86400));
    ax.XTickLabelRotation=45;
    grid on;
    ay=gca;
    ay.YTick = (-10:1:10);
    grid on;
```

```
    %%5
    figure (fc_t_h);
    ax1=axes(fc_t_h,'Position',[0.05 0.5725 0.90 0.3525]);
    yyaxis right;
pc1=plot(timeVar,data10FPS_smt_th(1,:),timeVar,data10FPS_smt_th(2,:),'DurationTickFormat','
mm:ss','Marker',MarkerStr,'MarkerSize',MarkerSz,'LineStyle',LineStr);
    pc1(1).Color=[0 0.45 0.74];
    pc1(2).Color=[0.85 0.33 0.1];
    hold on;
    yyaxis left;
    pc2=plot(ccTVar,dataCorrL_th(:,1),'Marker','o','Color','red');
    ax=gca;
    ax.XTick = (ccDur/(86400))*(0:1:30)+(seconds(ccTVar(1))/(86400));ax.XTick =
(ccDur/(86400))*(0:1:30)+(seconds(ccTVar(1))/(86400));
    ax.XTickLabelRotation=45;
    grid on;
    ay=gca;
    ay.YTick = (-1:0.2:1);
    grid on;
    %%6
    ax2=axes(fc_t_h,'Position',[0.05 0.11 0.90 0.3525]);
    yyaxis right;
pc1=plot(timeVar,data10FPS_smt_th(1,:),timeVar,data10FPS_smt_th(2,:),'DurationTickFormat','
mm:ss','Marker',MarkerStr,'MarkerSize',MarkerSz,'LineStyle',LineStr);
    pc1(1).Color=[0 0.45 0.74];
    pc1(2).Color=[0.85 0.33 0.1];
    hold on;
    yyaxis left;
    pc2=plot(ccTVar,dataCorrL_th(:,2),'Marker','o','Color','red');
    ax=gca;
    ax.XTick = (ccDur/(86400))*(0:1:30)+(seconds(ccTVar(1))/(86400));ax.XTick =
(ccDur/(86400))*(0:1:30)+(seconds(ccTVar(1))/(86400));
    ax.XTickLabelRotation=45;
    grid on;
    ay=gca;
    ay.YTick = (-10:1:10);
    grid on;
    %%7
    figure (fc_t_b);
    ax1=axes(fc_t_b,'Position',[0.05 0.5725 0.90 0.3525]);
    yyaxis right;
pc1=plot(timeVar,data10FPS_smt_th(3,:),timeVar,data10FPS_smt_th(4,:),'DurationTickFormat','
mm:ss','Marker',MarkerStr,'MarkerSize',MarkerSz,'LineStyle',LineStr);
    pc1(1).Color=[0 0.45 0.74];
    pc1(2).Color=[0.85 0.33 0.1];
    hold on;
    yyaxis left;
    pc2=plot(ccTVar,dataCorrL_th(:,3),'Marker','o','Color','red');
    ax=gca;
    ax.XTick = (ccDur/(86400))*(0:1:30)+(seconds(ccTVar(1))/(86400));ax.XTick =
(ccDur/(86400))*(0:1:30)+(seconds(ccTVar(1))/(86400));
    ax.XTickLabelRotation=45;
    grid on;
    ay=gca;
    ay.YTick = (-1:0.2:1);
    grid on
```

```
    %%8
    ax2=axes(fc_t_b,'Position',[0.05 0.11 0.90 0.3525]);
    yyaxis right;
pc1=plot(timeVar,data10FPS_smt_th(3,:),timeVar,data10FPS_smt_th(4,:),'DurationTickFormat','
mm:ss','Marker',MarkerStr,'MarkerSize',MarkerSz,'LineStyle',LineStr);
    pc1(1).Color=[0 0.45 0.74];
    pc1(2).Color=[0.85 0.33 0.1];
    hold on;
    yyaxis left;
    pc2=plot(ccTVar,dataCorrL_th(:,4),'Marker','o','Color','red');
    ax=gca;
    ax.XTick = (ccDur/(86400))*(0:1:30)+(seconds(ccTVar(1))/(86400));ax.XTick =
(ccDur/(86400))*(0:1:30)+(seconds(ccTVar(1))/(86400));
    ax.XTickLabelRotation=45;
    grid on;
    ay=gca;
    ay.YTick = (-10:1:10);
    grid on;
    end
```

APPENDIX M. SAMPLES FROM RESULTS OF SELF REGULATION DYNAMICS

Results for Latent Pattern Content Analysis Representing Self Regulation Characteristics of Patient and Therapist of Dyad1 based on Nonverbal Behaviors

		Beginning (1-2-3)	**Earlier Middle (4-5-6-7-8)**	**Late Middle (9-10-11-12-13-14)**	**Final (15-16-17)**
Focusing	Therapist	Listening with eye contact, when goes to notes comes again with patient's eye contact Gaze off sometimes cause ruptures Gaze on her speech Not more than three seconds gaze off	Listening with eye contact Gaze off beginning of speech Gaze off sometimes cause ruptures Block off 6 Gaze on her speech distrupted	Listening with eye contact Gaze off beginning of speech Gaze off while talking to look camera Gaze off while talking after patient's gaze off Gaze off sometimes cause ruptures Block off 5 seconds Increase in gaze off duration across sessions Unpredictable in answering patient's eye contact wish	Listening with eye contact Gaze off beginning of speech Cutting eye contact while talking to look camera Gaze off sometimes cause ruptures Block off 4 seconds Talking with fast rthmic gaze on/off pattern when the patient also listen with same patter Unpredictable in answering patient's eye contact wish
	Patient	Listening with gaze on Not more than three seconds duration gaze on while talking Block off maxiumum 7 seconds	Listening with gaze on Not more than three seconds duration gaze on while talking Block off maxiumum 11 seconds At the 8 session (5.23) as opposed to patient's repeated pattern, she cut eye contact frequently while listening She made gaze on when therapist not looking her	Mostly listening with gaze on Her pattern disrupted with including block gaze off and fast rthmic gaze on / off changes while listening Not more than mostly one second duration gaze on while talking Block off maxiumum 28 seconds	Mostly, listening with gaze on Disrupted pattern contained with including block gaze off and fast rthmic gaze on / off changes while listening Not more than mostly two and half second duration gaze on while talking Block off maxiumum 21 seconds

Displacement of selfobject needs	Therapist	In the sequence patient's frequently looked camera, as well. Beginning of her speech	After mutual slight positive while listening Frequently in the beginning sequence of session during shared high and moderate positive emotion Middle of her speech after patient "fast ritmik" avoidance while talking with slight positive emotion	While talking with avoidant patient After unable to taking speech Looking avoidant patient with unmatched emotion Listening with mutual positive emotion	Before/end talk While talking with avoidant patient In detach moment with mutual positive emotion (sometimes frequently) During talking with fast rtyhmic gaze on off changes
	Patient	After increasing therapist positive emotion	In the moment her long avoidance After rapid gaze off at the beginning sequence After therapist's gaze off during mutual focus While listening therapist	In the moment her long avoidance Before therapist's talk After mutual focus Frequently after therapist's gaze off	None
Affirmative	Therapist	to encourage eye contact to invite patient to mutual eye before her speech	to encourage eye contact before her speech After patient's gaze off to invite patient to mutual eye Increased amount of nodding when she was in dominantly neutral in the sequence During / before her gaze off	To encourage eye contact to invite patient to mutual eye Nodding after mutual eye During / before her gaze off End to of her speech	To encourage eye contact to invite patient to mutual eye During her gaze off End to of her speech In detach moment
	Patient	Constantly while listening therapist	Reasonable amounts while listening with shared positive emotion Still, sometimes constantly while listening therapist	Not always while listening Frequent nodding to take speech	Reasonable amount while listening During gaze off Frequent in shared positive emotion at the beginning sequence

					Mirroring of therapist
Facial Emotional Expressiveness	Therapist	Dominantly neutral Accompanying patient's positive emotion (limited 10 seconds) Emotionally expressiveness increased at third session Unmatched; slight positive to the patient who were stable slight negative. Slight positive while talking Joining patient 's positive two seconds delay	Dominantly neutral Slight positive while talking Accompanying patient's positive emotion before taking speech "suprised" face when patient came eye contact Accompanying patient positive emotion at the beginning sequence but lower valance than patient "Bıkkın" emotion after patient's long avoidance with moderate negative or slight negative emotion Unmatched; slight positive or moderate positive to the patient who were stable slight or moderate negative. Stable slight positive when patient unstable	Stable moderate or slight negative emotion while patient was crying, valance decrease with the patient Neutral while talking in which patient entirely high or moderate negative Unmatched; when patient stable slight negative with gaze off, therapist slight positive and "surprised" face Punctuation while talking "suprised" face when patient came eye contact Unmatched emotion with the patient end of her own speech Slight of moderate positive while talking when patient listening with fast rthmic change in her gaze on/off behaviors Shared positive emotion but lower than patient Gaze off with bıkkın face Accompany patient's positive emotion Stable slight positive when patient unstable with undifferentiated, positive and negative Slight positive emotion while	Shared positive emotion patient lower than patient Punctuation, "and I do not know" while talking Slight of moderate positive while talking when patient listening with fast rthmic change in her gaze on/off behaviors Stable slight positive when patient was unstable with positive and negative, even patient emotion not readable Unmatched when patient stable slight negative therapist slight positive "suprised" face when patient came eye contact Shared slight negative Both positive and negative emotion while listening high or moderate positive patient Caring emotion at the termination session

				finishing her own speech	
	Patient	Unstable with interactive positive Accompany therapist's positive emotion İncreased therapist positive emotion	Stable slight negative with interactive positive Unstable positive and negative blocks Stable moderate or high positive at the beginning sequence including spike negative moderate Unstable positive and negative blocks including positive and negative spikes Ambivalent emotions	Mostly unstable Stable moderate negative including high negative crying Stable slight negative including moderate negative or slight positive Moderate negative while listening then became neutral Unstable includes undifferentiated emotion Ambivalent unstable	After high and moderate positive emotion, then became slight negative while listening therapist, and then became unstable Unstable includes positive negative and ambivalent blocks Unstable includes positive and negative spikes Relatively stable positive emotion without eye contact Unstable includes undifferentiated
Self Regulatory Behavior	Therapist	None	When patient was in moderate or high positive emotion with dysregulated eye contact between them, While listening in the sequence her attention was good) After shared positive	When patient made eye contact after long avoidance while crying After looking camera while talking During/ End of her speech After mutual positive During emotionally unmatched with the patient Mirroring patient's behavior After detach moment	After looking camera while talking Eating lips after During emotionally unmatched with the patient Mirroring patient's behavior End of her speech After mutual positive Before taking speech With bıkkın face

	Patient	While listening therapist with eye contact	While listening therapist with eye contact which continued during beginning of her own speech during shared positive emotion after looking camera while talking in avoidant mood before interactive positive emotion with eye contact while gaze on after avoidant mood during increased positive emotion	***	While listening therapist with eye contact which continued during beginning of her own speech Constant face touch with positive emotion, then slight negative while listening patient While listening even it was impossible to read her face, because she was covering her face with her hand During positive emotion During mutual eye after her long avoidance

Results for Latent Pattern Content Analysis Representing Self Regulation Characteristics of Patient and Therapist of Dyad2 based on Nonverbal Behaviors

		Beginning (1-2-3)	**Earlier Middle (4-5-6-7-8)**	**Late Middle (9-10-11-12)**	**Final (13-14-15)**
Focusing	Therapist	Frequent gaze off while listening, even cannot listen more than seven seconds without cutting eye contact A rthym in her gaze on / off pattern made it predictable but still disorganized	Frequent gaze off while listening, even cannot listen more than seven seconds without cutting eye contact Gaze on while talking A rthym in her gaze on / off pattern made it predictable but still disorganized	Half of the phase stable gaze on while listening, half of the phase unstable gaze on Gaze off start or during talk A rthym in her gaze on / off pattern made it predictable but still disorganized	Stable gaze on while listening Gaze off while talking
	Patient	Freqeunt gaze off while talking even cannot look therapist's face more	Freqeunt gaze off while talking even cannot look therapist's face more than five seconds	Gaze on while listenining, Gaze off while talking s till not higher than five seconds	Gaze on while listenining, Gaze off while talking s till not higher than six seconds

		than four seconds Gaze on while listening Gaze off in sad moments	Gaze on while listening		
Displacement of selfobject needs	Therapist	None	While making a joke about the vacation.	Making a joke about the patient's sexuality	None
	Patient	In all sequence she frequently engaged After failed to build mutual eye contact	In all sequence she frequently engaged After getting a compliment from the therapist about her outlook After failed to build mutual eye contact After getting a question After relatively long detach moment After not getting emotionive change in therapist with her own playfulness	In all sequence she frequently engaged Almost same times with previous phase	In all sequence she frequently engaged Except 14th (9:51 sequence) Almost same times with previous phase
Affirmative	Therapist	in the times of solving communication problem During gaze off While going gaze off End of her speech In the times of patient negative emotion	During gaze off Before asking question While going gaze off While talking Nodding and hıhı voice while going to notes In the times of patient negative emotion	Mirroring in the times of speech overlaps To encourage patient's mutual eye while talking Before speaking	Increased nodding Rapidly before speaking To encourage mutual eye Invite patient to mutual eye
	Patient	Mirroring of therapist	While listening with eye contact End of therapist's speech Mirroring of the therapist	Frequent while listening in the times of speech overlap End therapist's speech	While listening with eye contact Before going gaze off After therapist gaze off while talking Before taking the speech

Facial Emotional Expressiveness	Therapist	Listening stably slight negative emotion Positive emotion while trying to solve communication problem result from her Influencing patient emotion with "sad happy; hay allah" face Sad, tension or neutral at the times when the patient had defensive positive emotion Sad face while patient jerkily crying Asking with neutral face while the patient moderate or high negative "Yandan gülme" while asking question, like acrimonious	Increased patient positive emotion with making jokes at the moments mutual very elevated positive emotion Mirroring negative emotion of crying patient Unmatched and unstable positive emotion Slight negative expression to patient's defensive smile. However, therapist emotional expression like "unpleasantness" rather than sadness or caring Stable slight negative when the patient unstable includes neutral, defensive smiles, anxious expressions. Yandan gülme while talking	Stability of the expressiveness is changed across sessions: Entirely moderate or slight negative emotion, she mostly stable. However, before and after positive emotion she was instable. Increasing positive emotion very much, laughing with body shakes and very high speech voice. Slight negative expression to patient's defensive smile. However, therapist emotional expression like "unpleasantness" rather than sadness or caring Stable slight negative when the patient unstable includes neutral, defensive smiles, anxious expressions. Yandan gülme while talking	Listening with "çatık kaş" like unpleased independent from the topic of the sequence Unique "göz belertme" behavior which was horrifying Stability of the expressiveness is changed across sessions: mostly stable in entirely moderate or slight negative emotion, whereas while talking expressed lots of different emotional messages. Unpredictable in accompanying patient's efforts to increase her positive emotion Yandan gülme while talking
	Patient	Negative or neutral expressions follows slight positive Slight positive expressions follows anxious or sad expression Playfulness while talking Accompany positive emotion increased by the therapist	Mostly unstable Defensive positive emotion crying jerkily Mostly emotionally expressive but unstable Accompanying therapist's positive emotion; kahkaha atma Positive emotion after neutral or negative expressions	Mostly unstable Positive emotion after neutral or negative expressions Katıla katıla gülme Increase in her neutral face	Mostly unstable Positive emotion after neutral or negative expressions Attempt to increase therapist's positive emotion Limited defensive smiles

		Mirror the therapist “hay allah” mimic Defensive moderate or high positive emotions Consistent moderate, high, and extreme sadness (crying jerkily)			
Self Regulatory Behavior	Therapist	while talking while listening with eye contact after her speech, after unmatched emotion	Before/during/end talking While listenning with eye contact	Diğeri ile aynııı neden??	After turning her phone off Listening with eye contact in
	Patient	wipe away tear While listening with eye contact Before looking camera In the middle of long gaze off period Hiding her mouth while laughing	After getting compliment form therapist about her outlook While listening with eye contact At the beginning of session with positive emotion Covering her face while crying and wipe away tear After crying	While listening with eye contact While listening with very high mutual positive emotion Mirroring of therapist’s behavior While finishing very high mutual positive emotion Talking with positive emotion	While listening with eye contact While talking with unpleased face While listening with anxious face Mirroring of therapist’s behavior During high mutual positive While talking with too closed body posture

Results for Latent Pattern Content Analysis Representing Self Regulation Characteristics of Patient and Therapist of DYAD3 based on Nonverbal Behaviors

	Beginning (1-2-3)	**Earlier Middle (4-5-6-7-8)**	**Late Middle (9-10-11-12-13)**	**Final (14-15-16)**

Focusing	Therapist	Inconsistent eye contact pattern: mostly avoidant both while talking and listening Rapid gaze on /off changes in silence Gaze off start talk	Inconsistent unstable gaze on while talking and listening Mostly, she was avoidant Gaze off start talk Cannot maintain gaze on entire sequence while listening patient (she even in close posture) Unpredictable gaze on /off in silence Sometimes very limited gaze on (e.g., 2 seconds in entire sequence) Gaze off in close posture while listening crying patient	Gaze off start talk Gaze off while speaking Gaze off in the moment of silence Inconsistent on/off pattern while listening	Gaze off while speaking Gaze off while speaking Inconsistent on/off pattern while listening Gaze off in the moment of silence Predictable, stable, regulated gaze on/off pattern at the termination session
	Patient	=< 4 seconds block gaze off while talking Gaze on while listening Gaze off while reading study material (so, it is exceptionally long) Gaze off with therapist gaze off Gaze off while saying “I do not know” or “okey” Gaze off while talking (except speech overlap or trying solve a communication problem because of therapist) Gaze off in the moment of silence Gaze on while talking even this talking follows breaking silence from herself	=< 5 seconds block gaze off while talking Gaze on while listening Longer duration of gaze off duration after silent moments Gaze off in the moment of silence	=< 5 seconds block gaze off while talking Gaze on while listening mostly Gaze on or off in the	=< 5 seconds block gaze off while talking Gaze on while listening Gaze on in the moment of silence Gaze on or off while breaking silent moment Gaze off start talk Increased duration of gaze off at the termination session unlike her pattern

		Gaze off while start talking			
Displacement of selfobject needs	Therapist	In the moment of silence	None	11th 8.24 look camera Eating lips and face touch while talking and webcam look (11th; 7.34 sequence)	15th (15:40 second look camera) 16th (6.34) is unique in terms therapist limited eye contact while listening and rapid on/off pattern for four seconds while listening & 6.48 therapist look camera 16 (6.34) almost neutral face and limited eye contact (need for self regulation); paint in negative emotion & 6.48 therapist look camera
	Patient	In the sequence in which therapist also looked While listening with eye contact	While talking After failed to make eye contact with therapist After mutual eye contact After short silence moment After longer period of her gaze off	After longer period of her gaze off After mutual eye contact	After longer period of her gaze off After mutual eye contact
Affirmative	Therapist	Nodding end of patient short answer and beginning of her own talk Nodding while listening but nodding with "hıhı" voice while going to note take and so gaze away "Hıhı" voice while not looking and note taking in close	While going gaze off Consistently while listening with neutral expression While talking Mirroring of patient During gaze off Relatively consistently with gaze on when patient in negative emotion With positive emotion in the	Before her speech Without look while listening In the moment of silence With gaze on when patient in negative emotion While going gaze off During gaze off While talking Before going to silence	While talking Before going to silence In the moment of silence With gaze on when patient in negative emotion while going gaze off During gaze off Rapid with gaze on while listening in a caring emotion at termination session

		posture while listening and in the moment of silence Frequent nodding with gaze on in the sequence in which patient entirely sad expression but eating lips	beginning sequence In the moment of silence Increased number in the sequence to solve communication problem		
	Patient	While listening with gaze on Mirroring of the therapist Increased frequency across sessions To encourage therapist gaze on	To encourage therapist gaze on Mirroring of the therapist Before answering	To encourage therapist gaze on During gaze off Listening therapist who is in slight positive and "göz kırpan" but not looking Rapid while listening therapist who had emotional expressions Mirroring of the therapist	To encourage therapist gaze on Mirroring of the therapist Before going to silence
Facial Emotional Expressiveness	Therapist	Neutral at the beginning of the first session Breaking air smile of therapist while expressing her confusion "Yandan gülme" of the therapist while talking express her anxiety and tension At the second session therapist join the patient positive emotion	Neutral (4th) Punctuation and yandan gülme, and slight positive emotion while talking Mirroring and increasing positive emotion of the patient Mirroring of patient negative emotion Unmatched negative emotion with defensive positive emotion Both sad and happy expression to the patient's defensive	Slight positive to accompany patient's emotion while speaking when patient tried to help therapist Winking, "I do not know", theatrical imitation of the patient, punctuation, or yandan gülme while talking Waiting tension mouth with slight positive when patient in moderate negative emotion while answering her question Controlling positive emotion	Punctuation, I do not know,, difficulty mimic expressing her confusion to speak, slight positive while speaking Mirroring patient negative emotion Accompanying patient "tension" expression Uniquely positive emotion dominate the sequence, even includes caring face in the termination phase

		Increasingly, at the third session therapist joined the patient negative emotion and mirroring	positive emotion Controlling positive emotion, at the beginning sequence	mirroring in the beginning of the session Slight positive emotion while talking which is unmatched with patient moderate negative emotion Confused emotion with positive and negative while interpreting breaking the air and difficult to express her ideas openly	
	Patient	Almost neutral Both positive and negative emotion at the same time expressed very beginning of the therapy and continued all sessions Tense &/ anxious smile "I am innocent; sad and happy face" while talking	Slight positive after neutral or negative expression while talking Ambivalent expressions	Unbalanced emotional expression in the moment of silence: slight positive or tension positive in the moments of silence whereas negative emotion seen before and after silence Less expressive while listening neither positive nor negative except accompanying therapist emotion Slight positive after neutral or negative expression while talking Ambivalent expressions	Neutral while listening except accompanying therapist emotion Tension mouth in the moment of silence Unbalanced emotion in the moment of silence as happy sad, unbalance because before and after silence there were stable negative emotion while she was talking Ambivalent expressions Slight positive after neutral or negative expression while talking One of the sequences of termination session unique due to difficulty to read patient pattern

Self Regulatory Behavior	Therapist	Touching her hair while talking Eating her lips in the moment of silence Face touch in the silence Face touch while listening Face and hair touch while talking Biting lips while listening	While talking with or without eye contact While listening with or without eye contact In the moment of silence Duration of behaviors decreased across sessions	While talking with or without eye contact While listening with or without eye contact Fake cough while speaking In the moments of silence Beginning of the sequence, reunion & at the moment of mutual positive While looking camera	While talking with or without eye contact While listening with eye contact End of her speech
	Patient	Limited numbers In entirely moderate and high negative emotion Increased amount at the first session compared to others	In the moment of silence In positive mood with speech overlap "Burun silme" after crying While speaking with turns neutral to negative emotion While listening after a silent period While speaking even after silent moment &/ prior to sadness &/ positive emotion	While listening with eye contact While talking In the moment of silence Mirroring of therapist "I do not know" mimic with biting lips Beginning period of the speech with increased numbers compared to previous	While listening with eye contact While listening after a short silence Increased number in termination phase

Results for Latent Pattern Content Analysis Representing Self Regulation Characteristics of Patient and Therapist of Dyad4 based on Nonverbal Behaviors

	Beginning (1-2-3)	**Earlier Middle (4-5-6-7-8)**	**Late Middle (9-10-11-12-13-14)**	**Final (15-16-17)**

Focusing	Therapist	Cutting mutual eye contact her own speech, four seconds duration block off Gaze off in silence Block off after patient's unexpected behavior (i.e., taking water) Gaze off beginning of her own speech Block gaze off while talking in the sequence there was silent moments Gaze off while talking which comes after patient's gaze off	Cutting mutual eye contact beginning of her own speech Cutting mutual eye contact her own speech with block off during four seconds Cutting eye contact at the moment of silence Checking camera by standing up after long detach moment Block gaze off while talking in the sequence there was silent moments Increase in predictability of block off durations	Gaze off beginning/ finishing of her speech Block off while listening starting with rupture even nine seconds Unpredictability of gaze on or off in silence Disruption in predictability of gaze on/off during her speech Became detach with the patient with longer duration block off Contacting eye contact; however not going notes, she looked irrelevant places	Gaze off beginning/ finishing of her speech Unpredictability of gaze on or off in silence Unpredictable in the sequences in which there were detachments and silent moments
	Patient	Gaze on while listening Gaze off in the moment of silence Gaze off after therapist's gaze off Gaze off while talking 8 seconds block off most	Gaze on while listening Gaze off in the moment of silence Gaze off after therapist's gaze off Continue to look when therapist not looking while talking as opposed to her general pattern Gaze off duration 13 seconds block off	Gaze on while listening Gaze off after therapist's gaze off Gaze off beginning of her speech Gaze off in the moment of silence Not more than five (one six second in 13) seconds talking with eye contact block on Block off 22 seconds	Gaze on while listening Gaze off after therapist's gaze off Gaze off beginning of her speech Gaze off in the moment of silence Block off 14 seconds duration At least three times 14 seconds block gaze on while talking
Displacement of selfobject needs	Therapist	During her speech when she already applied lots of gaze off After patient's emphasize on the impact of camera on herself	Before going to camera to fix it After inviting mutual eye contact which came after the patient's relatively long avoidance	None	None

	Patient	After, the therapist's speech and so beginning of her speech in the moment of silence while talking about the influence of camera on her	When she was already avoidant while listening	While listening therapist by cutting eye contact, After not getting a response from the therapist to her playful mimics	After not getting a response from the therapist to her playful mimics Disruption in her pattern like during block gaze off while listening During talking with fast rthymic gaze on/off pattern with ambivalent emotion
Affirmative	Therapist	During / before / after her speech Frequently while taking the speech Before going her notes In silence	During / before her speech Frequently while taking the speech Vhile fixing to the camera Before going her notes To encourage mutual eye	During / before her speech Frequently while taking the speech To encourage mutual eye During her speech with gaze off Limiting in the sequence in which she needed frequent self regulation touches	During / before / after her speech Frequently while taking the speech To encourage mutual eye Any, in the sequence in which her eye contact was very good, but unmatched emotion with the patient Any, in the sequence in which her attention was unpredictable Before silence Before going notes While patient was not looking While accompanying the patient's positive emotion
	Patient	Mirroring during the therapist's talk To encourage mutual eye During her or the therapist's gaze off Fast rtyhmic before her speech In the moment of silence	Mirroring during the therapist's talk During her or the therapist's gaze off		

		Limited in the sequence there was lots of silence moments			
Facial Emotional Expressiveness	Therapist	Positive and both positive and negative emotion while talking and sometimes “I do not know” face Increased the patient’s positive emotion while talking Slight and stable negative emotion at the beginning sequence of the session Positive emotion at the beginning sequence, with curious expression Yandan gülme while talking Anxious and happy face while finishing her speech Frequent, both positive and negative emotion, particularly her intervention	Mostly slight negative or neutral, be positive to accompany the patient positive emotion Yamuk ağız, ambivalent, slight positive, “I do not know” mimic while talking Unmatched with the patient during the patient’s defensive positive emotion	Lower valance of the positive emotion during mutual positivity Ambivalent anxious, slight negative, while talking Unmatched emotion with patient Reflect both moderate negative and moderate positive to patient’s high positive Accompanied the patient’s positive emotion Stable moderate negative while listening to the ambivalent patient, but expressed moderate positive while talking Stable slight negative while listening to the patient who expressed unstable positive emotions Repeated “hay allah” face before starting talk Unmatched moderate positive with the patient who listens moderate negative Sad-caring emotion while talking Slight positive when the patient was slight negative, however not accompany the	Unstable, slight negative or positive while talking, unmatched while listening and neutral Slight positive while talking Unmatched with stable slight negative while listening to the high positive patient Sad-happy while talking, “Hay allah” mimic before taking speech Yandan gülme while listening and müstehzi in the sequences her attention dysregulated Mirroring the patient’s ambivalent emotion

				patient's high positive Increased positive emotion as response the patient high positive with eye contact Stable moderate emotion when the patient was in unstable Mirroring sad face of the patient	
	Patient	Mostly unstable Neutral but anxious with eating lips while listening with eye contact Accompany the therapist's positive emotion Accompany to the therapist's shift from positive to negative with ambivalent emotion (tension & anxious-smile) Unstable with ambivalent "ben masumum, affet beni" Increased positive emotion while talking then became ambivalent	Mostly unstable with ambivalent expressions (e.g., playful and anxious) Sometimes stable slight or moderate negative while listening Stable slight in silent moment Unstable positive while not looking during talking Attempt to increase positive emotion	Mostly unstable with ambivalent expressions (e.g., playful and anxious) Stable positive at the beginning sequence Stable ambivalent then became high positive Neutral durations higher compared to others in which she had increased numbers of block gaze off Stable slight negative while listening Listening with ambivalent expression Tensioned smile Stable moderate negative while listening therapist, then became high positive during her speech	Mostly unstable with ambivalent expressions (e.g., playful, anxious, guilty, and confused) Attempt to increase positive emotion Anxious while listening therapist, then became high positive during her speech
Self Regulatory Behavior	Therapist	Talking after long avoidance During her speech with gaze off Before her speech	During her speech with gaze off Before her speech after silence moment Listening to the avoidant patient	Talking after long avoidance Before and after her short speech After detach moment During unmatched emotion	After mutual positive emotion While listening with unmatched emotion While talking before silent moment While listening with müsthezi

			Mirroring the patient's behavior	Listening ambivalent playful expressions of the patient During ambivalent expressions With gaze off	In the detach moment before she expressed yandan gülme
	Patient	While listening with eye contact After her speech While talking with eye contact but the therapist had unmatched emotion While listening avoidant therapist While talking with gaze off and after ambivalent emotion While listening with eye contact after her playfulness	While listening avoidant therapist Beginning of her speech Listening with gaze on and moderate negative During her speech with gaze off After therapist's intervention Increased amount in the sequence she was mostly gaze off and frequently looked to the camera	While listening with eye contact Beginning of her speech After shared positivity Talking with eye contact after her avoidant period After not getting a response from her playfulness In the moments of silence While listening avoidant therapist After therapist's intervention With playful expression When she was avoidant Putting cream on her lips at the beginning of the sequence	While listening with eye contact Talking with gaze off After eye contact with the therapist who had unmatched emotion Mirroring therapist's behavior During mutual positivity

Results for Latent Pattern Content Analysis Representing Self Regulation Characteristics of Patient and Therapist of Dyad5 based on Nonverbal Behaviors

		Beginning (1-2-3)	**Earlier Middle (4-5-6-7-8)**	**Late Middle (9-10-11-12)**	**Final (13-14-15-16)**
Focusing	Therapist	=< 5 seconds gaze off both listening and talking not cut eye contact while listening gaze off before her speech	=< 3 seconds block gaze off (except 5th;4.25; 6 seconds) gaze off before her speech Disruption in predictability of the rthym of gaze on/off	gaze off before her speech Stability got worse across sessions, block gaze off duration increased, and avoidance from mutual focus were increased	Gaze off start talking Gaze off while listening by cutting mutual focusing before block off

			after 4th that got worse across the phase (includes unexpected gaze off during mutual focus) Gaze off in silence Rapid gaze off while talking before block gaze off while listening with or without camera looking	Unpredictable i n silence	
	Patient	=< 5seconds block gaze off in first (which increased across sessions) Gaze on while listening Gaze off before answer	=< 5sec.; up to 22 sec. Block gaze off Gaze on while listening Gaze off in silence Gaze off increased across times	Up to 13sec. Gaze off block Gaze on while listening Gaze off in	=< 8sec.; up to 13 seconds in termination Gaze on while listening Gaze off in silence
Displacement of selfobject needs	Therapis t	None	While talking by cutting mutual focus &/ before gaze off While listening after eating lip and with unmatched emotion with the patient whose gaze off At the moment of silence with unmatched emotion with patient whose gaze off	After patient asked what was the question	Only termination session when patient was avoidant and evaluating therapy process
	Patient	In detach mood, before looking to the therapist After therapist's speech and before answer	While talking by cutting mutual focus simultaneous with therapist surprised face,	None	Only in termination session in which she made very limited eye contact & when therapist made fast rthmic

			Whereas she was anxious, therapist was slight positive		gaze on/off eye contact
Affirmative	Therapist	In all sequences To encourage eye contact To take speech To make rupture as an optimal frustration (goes with nodding or nodding or hıhı voice while not looking) Nodding with almost with hıhı voice in which she asked question and eat lips	Limited not more than two While listening with gaze off While note taking with gaze off Before taking speech Before going note taking Affirmative mirroring expressions while talking As response to patient's increased negative affect without look (once)	During mutual focusing In detach moment and/ patient separate After ruptures Before going to notes More frequent after silent moments	To support eye contact Before start talk, so to take speech In the moment of rupture, before going to notes In detach moment While talking Increased at the termination session
	Patient	Always while listening to therapist	Constantly while listening therapist's relatively long speech Limited while listening therapist's relatively short speech & when more need to self regulatory behaviors Before going in silence To take speech	Constantly while listening therapist's relatively long speech None affirmative behaviors while listening with constant need for self regulatory behavior and therapist too avoidant Frequent simultaneous with therapist last words and so beginning of her own speech before going silence moment after her own speech No vocal affirmation	Before answering after therapist's speech While listening to avoidant therapist made eye contact At the termination session, constantly while listening therapist's relatively long speech
Facial Emotional	Therapist	Mostly neutral repeated "surprised" face	Mostly unstable	Slight positive during her speech	Slight positive her own speech

Expressiveness		while listening; independent from patient's emotion Unmatched slight positive emotion which is not caring" Slight and moderate positive emotion while talking to increase positive emotion (only seen once)	Self regulatory behavior or talking to be neutralized Mostly in unmatched emotional expressions with the patient (slight happiness rather than caring) Automatized "surprised" face mostly not reflect mirroring, or emotional understanding Punctuation, slight positive emotion and sometimes moderate negative emotion while sharing her own feelings about the situation	Repeated "surprised" response in moderate positive Mostly unmatched with "müstehzi" One caring emotion during three seconds Because of general self regulatory eating lips behavior she seems anxious	She was not more than 30 seconds emotionally expressive Increased at the termination session Mostly unmatched and sometimes müstehzi Repeated "surprised", "approval" or "bravo" expressions Very limitedly increased patient's positive emotion, in the sequence both of them dominantly neutral
	Patient	Mostly stable negative affect Increased ambivalence before giving therapist floor	Mostly emotionally expressive with slight negative Positive emotions are restricted and mostly together with therapist	Mostly emotionally expressive with stable slight or moderate negative, but neutral while listening therapist or in the moments of silence Restricted positive emotion but interactive because they were coded in the mutual focus after her block off	Positive emotion with sarcastic or accompany therapist's increased positive emotion, but generally positive affect restricted Increased interactive positive emotion after both slight positive negative affect, she looked at the therapist, but therapist note look her, then patient increased emotion

Self Regulatory Behavior	Therapist	At least one for all sequence except one seqeunce 10.22 of first seeion in which she almost neutral all seqeunce Unique eating lips behavior among other therapist which was eating lips inside. While listening after unmatched emotion before dysregulated attention Block eating lips in the sequence in which she talked and listened to patient answer in this sequence therapist irrelevant positive emotion was not accompanied by the patient	At least one for all sequence except 7th (11:17 in which mostly neutral) While listening with eye contact with unmatched emotion After her intervention While talking In the moment of silence While making eye contact with neutral emotion While listening with gaze on Beginning of unmatched emotion At the times of unmatched emotion While talking in mutual positive emotion Beginning of her speech before applying with other regulatory behaviors and gaze off Before silence and before going gaze off	After finishing her own speech &/ which follows patient's avoidance Before her own speech &/ with gaze off After unmatched emotion with the patient, and the patient did not response her positive emotion In detach moments	When the patient in avoidant mood After unmatched emotion before &/ during müstehzi expressio n During and after her own speech In detach moment After mutual positive emotion While listening with gaze on
	Patient	While talking without looking While listening the avoidant therapist While listening with eye contact Imitating therapist's self regulatory behavior	While listening &/or before constant nodding While talking before moderate negative While finishing her talk with	While listening to avoidant therapist with constant nodding In her own speech, before moderate negative emotion After therapist's surprised expression	Engaging all self regulatory behavior at once while listening without no nodding After therapist's surprised expression In her speech after moderate negative emotion

		moderate positive In detach moments (with fake cough) After therapist's surprised expression At the beginning phase of sequence While lookin g therapist's notes, Waiting therapist's talk Before looking camera In the moments of silence While listening to relatively long speech of avoidant therapist Before answering	In detach moments End and before her speech	One seconds later her slight positive emotion In detach moment In stable slight negative emotion While listening avoidant therapist Longest duration of face touch while talking (13 seconds) in the termination session

Results for Latent Pattern Content Analysis Representing Self Regulation Characteristics of Patient and Therapist of Dyad 6 based on Nonverbal Behaviors

		Beginning (1-2-3)	**Earlier Middle (4-5-6-7-8)**	**Late Middle (9-10-11-12)**	**Final (13-14-15)**
Focusing	Therapis t	=< 10 sec GAZE ON while listening; block gaze off 14 Gaze on while asking after the patient's long avoidance Gaze off after asking Gaze off starting talk Unpredictable in the moment of silence (sometimes gaze on sometimes off) Sometimes patient's gaze on behavior remove therapist's	=< 16 sec; block off Ambivalent like listening steady with gaze on, but being avoidant when patient comes gaze on. Gaze off after asking; even sometimes question very emotional and deep Block gaze off while talking	=< 15 sec; block off Ambivalent like listening steady with gaze on, but being avoidant when patient comes gaze on Not responding patient's eye contact	=< 14 sec; block off Unpredictable in the moment of silence (sometimes gaze on sometimes off) Gaze off while talking Not responding patient's eye contact

	avoidant position, but not always steady	Not responding patient's eye contact Unpredictable in the moment of silence (sometimes gaze on sometimes off) Goes after patient's avoidance when her own focus was good Gaze off starting talk Gaze off when their mutual focus was better	Unpredictable in the moment of silence (sometimes gaze on sometimes off) Gaze off starting talk Gaze off after frequent mutual focus Gaze on stability was better when patient came with positive emotion Fast rthmic gaze off while talking sometimes after patient's gaze off Her focus get better in 9th &10th. For instance, not avoiding after asking question; but not steady, again start avoid	Fast rthmic gaze off while talking
Patient	=< 5 sec block ON while talking Fast ritmic avoidance while listening Unpredictable in the moment of silence (sometimes gaze on sometimes off) Predictability of gaze on while listening not stable Gaze off start talking	! =<4 sec block ON while talking (except 6th 11:47) Unpredictable in the moment of silence (sometimes gaze on sometimes off) Gaze on while listening Gaze off while talking In the sequence where therapist focus was better, the patient also made more gaze on (e.g., 6th; 11:47) Gaze off start talking	! = <5 sec block ON while talking Predictability of gaze on while listening not stable Fast rthmic gaze off while talking when the therapists was also fast rthmic on gaze on/off Block gaze off while listening therapist after therapist's block off Gaze off while talking	= 2.5 sec block ON while talking, block off 17 maximum Predictability of gaze on while listening not stable Fast ritmic avoidance while listening Gaze off after the therapist's gaze off Gaze off while listening Gaze off start talking Gaze off in the moment of silence Maksimum 17 block of while

				Gaze off start talking Gaze off in the moment of silence Maximum 29 block of while talking in detach mood. Her gaze off duration in detach moment decreased when therapist's focus became better Although her gaze on while listening seems more predictable, then it became disorganized again	talking in detach mood. Her gaze off duration in detach moment decreased when therapist focus better Her gaze off duration in detach moment decreased when therapist's focus became better
Displacement of selfobject needs	Therapist	After shared positive emotion During talking with slight positive emotion	While talking after patient's gaze off	None	None
	Patient	After mutual focus and two seconds later getting "surprised" or "questioning" response While listening avoidant therapist After looking to the therapist end of her long avoidance Two seconds later mutual focus	After failed to build mutual focus At three block on in 6th (7:47) after mutual focus and getting "surprised" response In avoidance mood with moderate positive emotion (after confessing she will lie to her mother) In avoidant mood but getting "surprised" response even she did not directly see this response	After failed to build mutual focus While listening with mutual focus &/ also three seconds three seconds later mutual positive emotion which follows eating lips	While listening with mutual focus, two seconds later after "meeh" face which came after shared positive emotion

Affirmative	Therapist	Encourage patient to mutual focus During detach moment After patient's gaze off To invite avoidant patient to mutual focus Before taking speech after silence moment While talking Before/During gaze off	Encourage patient to mutual focus Frequent before her own speech While going gaze off At the moment of silence in detach mood To invite avoidant patient to mutual focus Frequent after speech overlap with gaze off During detach moment Before and end of her speech; (sometimes frequent and/or big)	To invite avoidant patient to mutual eye To encourage eye contact Big frequent nodding which invite patient to mutual focus, when patient positive emotion & With mutual positive emotion includes big nodding While going gaze off During detach moment While not responding to patient's mutual focus attempt While patient in avoidant Before (sometimes, big and frequent), during, and after her speech During the patient's gaze off After patient speech	In the moment of silence During detach moment which invited patient to mutual focus, but therapist did not look While going gaze off from mutual focus During gaze off To encourage eye contact Before (frequent), end, during her speech
	Patient	Before silence to give speech to therapist Before gaze off while listening Frequently and close to therapist's end of speech	During therapist's relatively long speech with gaze on Close to end of therapist speech Before gaze off while listening	During therapist's gaze off while talking Frequent and constant with bıkkın face while listening Before her own speech, so end of therapist's talk	While listening with gaze on but therapist's avoidant Mirroring to therapist After her gaze off While listening avoidant Before her speech Frequent fast ritmik before her speech

				In detach mood while listening Mirroring therapist	Frequently with bıkkın face and hair touch Not always while listening
Facial Emotional Expressiveness	Therapist	Mostly neutral includes moderate positive spikes with surprise expression and moderate negative spike (tek kaş kaldırma) while listening Accompany patient positive emotion Anxious before talking Slight positive, confused , thoughtful, threatful, anxious, punctuation while talking Stable changing valence of positive emotion Anxious in silent moments Increase patient emotion with ambivalent expressio n Shared negative emotion in detach mood Curious listening observed in 3th session	Mostly neutral Unmatched slight negative when patient moderate positive Stable moderate negative while listening with eye contact to avoidant patient. Repated surprised face doubtful,,"I do not know", tension, tired (bıkkın) punctuation, confused, while talking Little accompany patient positive emotion Increase of duration mutual positive emotion when patient gaze on Anxious while finishing her speech Curious listening observed in only 3 seconds	Mostly neutral (bura bir önceki ile yer mi değiştirmişti, bir kere kontrol et bi hızlıca) Accompany patient positive emotion Decrease in the amount of repeated surprised face After shared positivity, expressed negative unmatched emotion Increase patient emotion making blink of an eye Anxious end of her own speech "I do not know", begging, sad, tired (bıkkın), doubtful, punctuation, tension, slight positive spike, suprised while talking Shared stable slight negative when patient avoidant, then she became detach with neutral face	Mostly neutral "surprised" and "approval" &/ "okey" with gaze off Fear, doubtful, sad, tension, over &/ frequent punctuation, terror, "I do not know, disdain (küçümseme), slight positive confused while talking Anxious end of her speech Accompanying patient positive emotion &/ at the beginning sequence Shared negative (tension) emotion with mutua focus while listening Slight negative unmatched to defensive positive emotion of patient

				Very short duration of curious listening	
	Patient	Instability in valence of emotion Mostly anxious with eating lips Negative or positive spikes Unstable including both positive and negative ambivalent Positive emotion and/ or playfulness during mutual focus	Mostly neutral Negative emotion (tired, anxious, ambivalent, ağız displacement) while listening Interactive (gaze on) and not interactive (gaze off) positive emotion spikes or clusters Unstable with positive negative spike and neutral cluster High positive emotion spike after moderate negative emotion Moderate positive while answering “I do not know” while talking Increase to positive emotion in sequence Listening with positive and answering with moderate negative with angry face	Mostly neutral Increase to positive emotion in sequence Accompany therapist positive emotion Anxious, bıkkın, confused while listening Answering with positive emotion after listening with negative emotion Interactive or not interactive positive spikes while talking in neutral Negative spikes like “bıkkın” or “meh” while talking in slight positive Stable slight negative includes moderate negative spikes while talking in avoidant or detach Not emotion readable head shift while talking (11th: 13.53) Answering with ambivalent like playfullness	Mostly neutral includes positive and negative spikes Answering with positive emotion after listening with negative emotion Increase to positive emotion in sequence Stable moderate or high positive includes moderate negative spikes Slight positive while listening (14:10:46: for the first time) Ambivalent like playfulness but limited Negative emotion while listening

Self Regulatory Behavior	Therapist	Before & end her speech At the moment of speech overlap At the moment of silence During or after shared positive emotion when patient talking avoidantly Rub her eyes while asking and continued listening While talking after patient's gaze off	Before, during or end speech While listening to patient who made confused face While talking after patient's gaze off while talking Frequently, when she was in very closed posture In the moment of silence with gaze on	At detach moment One second after patient's gaze off from mutual focus Beginning of her speech during shared positive emotion While talking after patient's gaze off while talking Before, during or end speech Mirroring patient's behavior During talking with mutual focus while patient was making frequent affirmative gesture While talking even after patient shared positive emotion finish	While talking after her avoidance which came after mutual positive emotion During mutual positive emotion even after when avoidant patient made short gaze on At the moment of mutual positive emotion but patient avoidant While talking with fast rthmic gaze on/off pattern Before shortly cut mutual focus while talking While talking avoidantly In the moment of silence Beginning/end of her speech While listening avoidant patient
	Patient	Applied at least one for all sequences While listening with "fast rthmict" gaze on/off pattern or constant gaze on While talking without eye contact and looking therapist notes in detach moment At the moment of silence End of her speech During shared positive emotion &/ with gaze off After failed to get response from therapist with gaze on	After her speech Talking in detach mood End of mutual focus after detach moments In the moment of silence While listening with gaze on After positive emotion in avoidant mood After cutting gaze on After getting "suprsied" response End of therapist speech	Applied at least one for all sequences While avoidantly talking Mirroring therapist behavior While listening with mutual focus (sometimes, both behavior together; lips and hair touch) &/ after shared positive emotion	Applied at least one for all sequences, (except one session; 14(10:46) End of her own speech While listening with "fast rthmict" gaze on/off pattern End off therapist speech and continued her own speech in detach mood with moderate

			After speech overlap	While talking in avoidant mood and after shared positive emotion While listening after stop frequent affirmative gesture with tired face Talking in detach mood While going gaze off during talking In the moment of silence (sometimes applied both of behavior) End of her speech End of positive emotion Face touch like sahte öksütük talking in detach mood after positive emotion	negative emotion While listening with eye contact &/after shred positive emotion but ruptures of therapist, &/ after positive emotion in detach mood At the moment of shared positive emotion With bıkkın face and frequent affirmative gesture while listening with gaze on

Results for Latent Pattern Content Analysis Representing Self Regulation Characteristics of Patient and Therapist of DYAD7 based on Nonverbal Behaviors

		Beginning (1-2-3)	**Earlier Middle (4-5-6-7-8)**	**Late Middle (9-10-11-12-13)**	**Final (14-15-16-17)**
Focus	Therapist	Gaze off with at the times patient's gaze off Beginning and during her speech Block gaze off before increasing	Gaze off two seconds before her speech Which cause rupture as an out off pattern for this therapist; cutting eye contact while patient looking. She made this at the moments of positive emotion	Which cause rupture as an out off pattern for this therapist; cutting eye contact while patient looking. She made this at the moments of positive	Beginning and during end off her speech Which cause rupture as an out off pattern for this therapist;

		negative patient to positive Gaze off during mutual positivity by taking something from behind	Beginning and during her speech Block gaze off before increasing negative patient to positive	emotion, even fast rhythmic Beginning and during end off her speech Gaze off at the times of patient's gaze off while listening to the patient	cutting eye contact while patient looking. She made this at the moments of positive emotion, even fast rhythmic Gaze off at the times of patient's gaze off while listening to the patient
	Patient	Listening with eye contact Not more than four seconds block gaze off Gaze off before speech	Listening with eye contact Also, talking with eye contact but including fast rhythmic gaze off Not more than four seconds block gaze off, except eight seconds while crying Gaze off before speech	Listening with eye contact Also, talking with eye contact but including fast rhythmic gaze off (particularly at the beginning sequence) Not more than four seconds block gaze off, except seven seconds while ambivalent Mostly gaze off before speech	Listening with eye contact Also, talking with eye contact but including fast rhythmic gaze off (particularly at the beginning sequence) Not more than three seconds block gaze off Mostly gaze off before speech
Displacement of selfobject needs	*Therapist*	None	None	None	One in the termination session before her speech

	Patient	None	At the moment of mutual positivity by cutting eye contact in already fast rhythmic avoidance By cutting eye contact in already fast rhythmic avoidance	By cutting eye contact in already fast rhythmic avoidance Frequently in the sequence she expressed kind of unstable emotions	By cutting eye contact at the moment of mutual positivity, and same time end of therapist's speech
Affirmative	*Therapist*	To invite patient to mutual eye Before gaze off To encourage mutual eye During and end of her speech As response to the patient's emphasized body shift and change in affect To take the speech	To invite patient to mutual eye Before gaze off To encourage mutual eye As response to the patient's emphasized body shift and change in affect To take the speech End of her speech During gaze off	To invite patient to mutual eye Before gaze off To encourage mutual eye As response to the patient's emphasized body shift and change in affect To take the speech End of her speech (need for approval) During gaze off	To invite patient to mutual eye To encourage mutual eye As response to the patient's emphasized body shift and change in affect
	Patient	To regulate avoidant therapist who was talking with gaze off Before going gaze off	During her speech (need for approval)	During her speech (need for approval) To take the speech Mirror therapist hıhı while talking or vica versa To regulate therapist who	Before gaze off To take speech

				talking avoidantly Mirroring of therapist or vica versa	
Facial Emotional Expressiveness	*Therapist*	Anxiety end of her speech "I understood" mimic Accompany patients positive emotion Increased positive emotion Ambivalent expression accordance with patient's ambivalence Neutral while talking with some punctuations and slight positive emotions There were sequences she was mostly neutral except for surprised spikes and I understood mimics	Tensined smile to the patient' high positive Dominantly neutral at the some sequences except for surprised or slight positive Accompany patients positive emotion Unmatched but suitable with defensive positive of the patient "I understood" mimic Anxiety end of her speech Unmatched, when patient's turned to negative, she was still positive Not always increase or decrease in accordance with the patient Stably negative while patient unstable Stably negative while the patient was negative	Accompany patients positive emotion Dominantly neutral at the some sequences except for surprised or slight positive or accompanying the patient's positive Accompany the patient's decrease or increase in the valance Unmatched; Stable positive while patient was ambivalent Stably negative while the patient was negative Tensined smile to the patient' high positive "I understood" mimic Tensioned-happy while asking Playfulness	Accompany patients positive emotion Accompany the patient's decrease or increase in the valance Sudden anxious face in the middle of mutual positivity "I understood" mimic Stably negative while the patient was negative Playfulness Increase the patient's positive emotion Surprised face
	Patient	Because of spikes she seems unstable	Because of spikes she seems unstable	Because of spikes she seems unstable, but	Because of spikes she seems

		Accompanying the therapist's positive emotion Slight negative while listening with eye contact Valanced positive emotion including body shifts Increased positive emotion Neutral while listening Ambivalent expressions Negative or ambivalent spikes Positive spikes	Playful expressions Some sequences neutral while talking Crying Increased positive emotion Ambivalent expressions Negative or ambivalent spikes Positive spikes	more stable compared to previous phases More stable while in negative emotion Playful expressions Crying Increased positive emotion Ambivalent expressions Negative or ambivalent spikes Positive spikes	unstable, but more stable compared to previous phases More stable while in negative emotion Playful expressions Valanced positive emotion including body shifts Increased positive emotion Ambivalent expressions Negative while listening Accompanying therapist's positive emotion Negative or ambivalent spikes Positive spikes
Self Regulatory Behavior	*Therapist*	Consistent face touch while listening stable negative patient with eye contact During her speech	At the moment of listening avoidant patient in positive/ambivalent emotion After silence at the times of mutual	hair touch while listening with mutual eye contact in the moments of mutual positivity, which was also one second later than	Before her speech with mutual positivity Listening with eye contact to

	Imitate patient's behavior	positivity with gaze off End of her speech to down-regulate positive emotion Consistent face touch while listening the patient when both of them were neutral Face touch while listening angry patient with eye contact Face touch with bıkkın face During her speech and with mutual positive emotion	the patient's face touch During her speech at the moment of mutual positivity with gaze off İmitating patient's behavior Limited compared to other phases compared negative which may me more internal unless it is anger toward the partner	the negative patient
Patient	Very limited numbers Eating lips during her speech with gaze off End of therapist's speech End of her speech Imitating therapist	Hair touch two seconds after therapist's touch, also with gaze off After therapist's speech After silent moments at the beginning sequence with mutual positive emotion and gaze off While looking camera During her talk with gaze off but positive emotion Before coming mutual eye from longer avoidanceConsistentl y in the sequence she cried before crying	Talking with gaze off/on during mutual positive emotion Before coming mutual eye after long avoidance While crying After therapist's speech Mostly need except for 13th; 8.47 & 14th; 2.24	Talking with gaze off during mutual positive emotion After looking camera During her talking with eye contact by increasing positive emotion Applied only in final phase

Results for Latent Pattern Content Analysis Representing Self Regulation Characteristics of Patient and Therapist of Dyad8 based on Nonverbal Behaviors

		Beginning (1-2-3)	**Earlier Middle (4-5-6-7-8)**	**Late Middle (9-10-11-12-13)**	**Final (14-15-16-17)**
Focus	Therapist	Listening and talking with eye contact However limited numbers of gaze off Gaze off in the moment of silence Gaze off simultaneously with patient's gaze off while talking Not more than four seconds block off Gaze off before her speech	Listening and talking with eye contact However limited numbers of gaze off Gaze off during her speech after patient's terror mimic Gaze off while listening avoidant patient Gaze off before her speech Gaze off in the moment of silence Only two gaze off when patient was talking with eye contact at the beginning phase Fast rhythmic gaze on/off at the beginning sequence of the sessions	Listening and talking with eye contact However limited numbers of gaze off Gaze off while listening avoidant patient Gaze off before her speech Gaze off during her speech after patient's negative emotion expressions Gaze on/off in the moment of silence Fast rhythmic gaze on/off at the beginning sequence of the sessions	Listening and talking with eye contact However limited numbers of gaze off, changed increased amount in 16th (0.26; but fast rhythmic as seen earlier, than 4 blocks off while talking, also combined with Gaze off during her speech after patient's negative emotion expressions) Gaze off while listening avoidant patient Gaze off before her speech Gaze on/off in the moment of silence
	Patient	Listening with eye contact	Listening with eye contact	Listening with eye contact	Listening with eye contact

		More stable and constant eye contact in the sequences in which there were turn takes Increase in avoidance in the sequence in which she was entirely speaking More constant eye contact during positive emotion Not more than 3 seconds gaze off Gaze off before talk	More stable and constant eye contact in the sequences in which there were turn takes More constant eye contact during positive emotion Not more than 7 seconds gaze off Some sequences her eye contact got worse hard to predict the pattern Gaze off before talk	More stable and constant eye contact in the sequences in which there were turn takes More constant eye contact during positive emotion Maksimum gaze off block emerged during 10 seconds while she was crying Gaze off before talk Some sequences her eye contact got worse hard to predict the pattern	More stable and constant eye contact in the sequences in which there were turn takes More constant eye contact during positive emotion Not more than 5 seconds gaze off block Gaze off before talk
Displacement of selfobject needs	*Therapist*	None	None	Only on in the 13th session at the moment of mutual positivity and beginning of her speech in the sequence they are talking about the patient's hair change	None
	Patient	Looking camera end of	Looking camera with	Looking to the camera	None

		therapist's speech Looking camera by leaving mutual focus with sad expression	sad expression when she already was in avoidance Increased frequency in the sequence she was less expressive than other sequences Before looking therapist during her speech End and duration of therapist speech	while listening the therapist Looking camera before going mutual eye from her avoidance while talking Looking camera after her playfulness	
Affirmative	*Therapist*	Before going gaze off To take the speech To encourage mutual eye As response to changes in the patient's emotions or emphasized body or head movements	Before going gaze off To take the speech To encourage mutual eye To invite patient to mutual eye Nodding end of her speech (need for approval) As response to changes in the patient's emotions or emphasized body or head movements	Before going gaze off To take the speech To encourage mutual eye To invite patient to mutual eye Nodding end of her speech (need for approval) As response to changes in the patient's emotions or emphasized body or head movements	To take the speech To encourage mutual eye To invite patient to mutual eye Nodding end of her speech (need for approval) As response to changes in the patient's emotions or emphasized body or head movements

	Patient	To regulate avoidant therapist who was talking with gaze off	To regulate avoidant therapist who was talking with gaze off To take the speech During her speech (need for approval)	To regulate avoidant therapist who was talking with gaze off To take the speech During her speech (need for approval) To express her approval while listening	To regulate avoidant therapist who was talking with gaze off To take the speech To express her approval while listening
Facial Emotional Expressiveness	*Therapist*	Anxious while talking Slight positive while talking Curious listening Sad-curious to changes in patient's emotion from neutral to the positive Increase positive emotion while talking which turns patient's negative emotion to the positive Anxious end of her speech Stable positive emotion Decrease and decrease her emotion	Decrease her emotion accordance with the change in the patient's emotions Ambivalent but caring as response to patient's ambivalence Curious listening Accompanying patient's positive emotion Anxious while listening to the patient who express negative emotions "I understand" mimic (anlıyorum) Neutral or slight negative	Decrease and decrease her emotion accordance with the change in the patient's emotions Curious listening Accompanyi ng patient's positive emotion Anxious while listening to the patient who express defensive positive emotions "I understand" mimic (anlıyorum) Neutral or slight negative while	Unmatched to moderate positive patient with slight negative Anxious while listening to the patient who express defensive positive emotions Decrease and decrease her emotion accordance with the change in the patient's emotions "I understand" mimic (anlıyorum) Curious listening Increased positive emotion of the patient Accompanying patient's positive emotion

		accordance with the change in the patient's emotions "Anladım" mimic	while talking accordance with patient's emotion Also, positive while talking in the moments of mutual positivity	talking accordance with patient's emotion Also, positive while talking in the moments of mutual positivity Caring anxious while listening ambivalent patient Stable slight sad while listening to the patient's negative emotions on face Higher negative valence than the patient while listening	Anxious or slight positive while talking
	Patient	Accompany to the therapist's slight positive with more valanced positivity Mostly expressive and higher valance of the expressions Interactive positive emotions	Mostly stable negative with variate valance Interactive positive emotions Positive emotions dominate to reunions Ambivalent expressions while listening with eye contact	Mostly stable negative with variate valance Interactive positive emotions Playful expression with eye contact including body shifts Negative emotions	Ambivalent expressions including sarcatics while talking with eye contact Interactive positive emotions Playful expression with eye contact Negative emotions while listening to the therapist Approval expressions while

		Ambivalent expressions with gaze off	Instability of the expressions were sometimes observed in the sequences in which she looked at the camera Winking to the therapist while talking Negative emotions while listening to the therapist Increased positive emotion while talking after listening with negative emotions	while listening to the therapist Increased positive emotion while talking after listening with negative emotions Ambivalent expressions including sarcatics while talking with eye contact Positive emotions dominate to reunions Instability until 11th session in which there were negative stability with crying, as well. Approval expressions while listening to the therapist	listening to the therapist Instabilities with neutral blocks or negative spikes during positive emotions
Self Regulatory Behavior	*Therapist*	Applied all sessions Eating lips while listening with eye contact to the tensioned patient Hair touch in the moment of	Applied all sessions except for 8th (2.47) Face touch almost during the entire sequence in which she never cut eye contact with the patient who expressed	Before, during, and end of her speech While listening with eye contact to the patient who had negative	While listening with eye contact to unstable patient During mutual positivity in or not reunion During her speech While listening with eye contact to

		mutual positive Hair touch before her speech Face touch while listening avoidant patient, which began after patient's camera looking	consistently stable negative emotion Face and hair touch started end of her speech Face touch after turned the lights on Face touch beginning of her speech Hair touch during her speech with gaze off Hair touch during fast rhythmic change in patient's gaze on/off behavior	emotions on her face While listening fast rhythmic patient Applied all except for 9th 2.40 & 12th 10.36	defensive positive patient
	Patient	Eating lips end of her speech Eating lips while listening eye contact Eating lips during her speech before and after her gaze off	Face touch end of the therapist's speech Face touch end of the her speech Eating lips during her speech with gaze off Eating lips during her speech with gaze on after her longer avoidance Eating lips while listening	Face touch during her speech with gaze off Face touch before coming mutual eye from her avoidance Hair touch while talking with eye contact in mutual positive emotion Eating lips and face touch talking with gaze off during	Face touch before coming mutual eye from her avoidance Eating lips while talking with gaze off Face touch with gaze off while increasing positive emotion Eating lips while listening avoidant therapist Hair touch end of the therapist's speech

with eye contact	mutual positive emotion	Face touch during her speech with gaze off
Face touch one second later than being responded with the therapist's surprised face	Eating lips during her speech with gaze off	
Face touch before going mutual eye after her longer avoidance	Face touch before going gaze off	
Face touch while listening with eye contact two seconds before looking to the camera	Eating lips while listening with eye contact	
	Hair touch while talking with longer duration of gaze off	
	Hair touch before increased negative emotion	
	Frequently in crying sequence	
	During or after looking to the camera	

CURRICULUM VITAE

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EDUCATIONAL BACKGROUND

2013 -2019 Doctoral Education

Middle East Technical University, Clinical Psychology Program

2010 – 2013 Master Education

Middle East Technical University, Clinical Psychology Program

2006 – 2010 Undergraduate Education

Hacettepe University, Psychology

2002 – 2006 High School

İzmir Anatolian Teacher Training High School

WORKING EXPERIENCE

December 2009 – September 2010

Clinical Assistant (Ankara University Medicine Faculty Cebeci Hospital)

December 2009 – September 2010

Coordinator for the Center (Johson & Johson, paliperidon Er Validity Study with Schizophrenia Patients, Ankara University Medicine Faculty, Cebeci Hospital)

September 2010 – April 2011

Research Assistant (Karabük University, Department of Psychology)

April 2011 -

Research Assistant (Middle East Technical University, Department of Psychology)

ABROAD EXPERIENCES

August - December 2012

Visiting Scholar (University of South Florida; Prof. Jamie Lynn Goldenberg's Laboratory)

9-11 March 2010

A Workshop in Maastricht University:

Gene-environment interactions in psychiatry; forging bridges with neurosciences

PSYCHOTHERAPY EDUCATION

- Cognitive Behavioral Therapy (METU, Clinical Psychology Education)
- Schema Therapy (METU, Clinical Psychology Education)
- Interpersonal Process Group Therapy (METU, Clinical Psychology Education)
- Psychoanalytic Self Psychology Therapy (Anatolian Psychoanalytic Psychology Association)

PSYCHOTHERAPY EXPERIENCES

- Adult Psychotherapy
- Adolescent Psychotherapy
- Interpersonal Process Group Therapy for Adults
- Trauma Support Group Therapy

INTERNSHIP EXPERIENCES

July-August 2007

Child and Adolescent Mental Health (Volunteer Internship; Ege University, Medicine Faculty)

June-July 2007

Adult Psychiatry (Volunteer Internship, Hacettepe University, Medicine Faculty)

September- 2011- January 2012

Child and Adolescent Mental Health (Master Internship, Hacettepe University, Medicine Faculty)

September 2015- January 2016

Adult Psychiatry, (Doctorate Internship, Ankara University, Medicine Faculty Cebeci Hospital)

AWARDS AND SCHOLARSHIPS

- Thesis Award, Middle East Technical University Social Sciences Graduate School, 2013
- TUBİTAK, BİDEB-2205 National Undergraduate Scholarship Program
- TUBİTAK, BİDEB-2211 National Graduate (Master) Scholarship Program
- TUBİTAK, BİDEB-2211 National Graduate (Doctorate) Scholarship Program

PROJECTS

- EU-GEI: European Networks of National Schizophrenia Networks studying Gene-Environment Interaction; European Commission under the Seventh Framework Programme for Research with grant agreement number HEALTH-F2-2010-241909 (A member of Turkish national networks)

- TUBİTAK - 111K555 (Researcher)- *Examining the influence of death anxiety on attitudes towards diet pills according to terror management theory*

ACADEMIC PUBLICATIONS

SSCI, SCI, SCI-E Publications

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PROFESSIONAL ASSOCIATION MEMBERSHIPS

- Executive Member Committee Membership to *Anatolian Psychoanalytic Psychology Association*
- Membership to *International Psychoanalytic Self Psychology Association*

VOLUNTEER WORKS

- Executive Committee Membership to the *Association of Experience Sharing Center*

TURKISH SUMMARY/TÜRKÇE ÖZET

Psikoterapi sürecinde açık içerik ve dil ile örtük süreçler ve sözel olmayan etkileşim birbirinden ayrılamaz. Hatta, açık ve görünen etkileşimin ön planda, örtük süreçlerin arka planında işlediği iddia edilir. Fakat gerek psikoterapi eğitimlerinde gerekse süpervizyon süreçlerinde psikoterapi sürecinin bu yönü genellikle ihmal edilir. Bunun en önemli sebebi, bu süreçleri incelemek için gerekli olan araştırmaların oldukça zaman ve emek istemeleridir. Bunun yanı sıra örtük süreçleri incelemekte kullanılacak iyi tanımlanmış teorik çerçeveler de kısıtlıdır.

Psikoterapi sürecindeki örtük süreçleri incelemede rehber olarak kullanılabilecek bir teorik çerçeve anne-bebek çalışmalarının teorik varsayımlarını uygulamaktır. Terapist ve danışan arasındaki ilişki anne bebek arasındaki ilişki gibi asimetriktir. Terapist yardım sunan danışan ise yardım arayandır. Kendilik temelli psikoanalitik teorinin tanımladığı gibi terapist terapi sürecinde kendiliknesnesi işlevi görür (Kohut, 1971, 1977, 1984). Psikoterapi sürecinde erken dönemde doyurulmamış kendiliknesnesi ihtiyaçları yeniden harekete geçer ve terapi sürecinde işlemlenmeleri beklenir. Bebek erken dönemde, danışan da terapi sürecinde kendiliknesnesinin psikolojik işlevlerini karşılıklı düzenleme deneyimlerini dönüştürerek içselleştirme yoluyla kendisine mal eder ve kendini düzenleme becerilerini edinir. Kendilik temellli psikoanalitik terapinin bu yönü onu bağlanma teorisine yaklaştırır. Bağlanma kaygısı ve bağlanma kaçınmasını içeren savunucu bağlanma stilleri gibi, aynalanma, idealizasyon ve ikizlik isimli kendiliknesnesi ihtiyaçlarından kaçınılabilir ya da bu ihtiyaçlara aşırı bir açlık hissedilebilir (Bowlby, 1969, 1973, 1980; Banai, Mikulincer, & Shaver, 2005). Güvenli bağlanmanın anne bebek arasındaki dil gelişimi öncesi dönemdeki etkileşimlerden doğduğunu gösteren birçok çalışma vardır (Beebe & Lachmann, 2014). Dolayısıyla, örtük ve sözel olmayan etkileşim kendini düzenleme ve karşılıklı düzenlemenin önemli dinamikleridir. Bu durum yetişkin terapisindeki

örtük süreçleri anne bebek çalışmaları perspektifi ile çalışma fikrini ortaya çıkarmıştır.

Anne bebek ilişkisinde ilerideki güvenli bağlanmadan sorumlu olan üç prensipten bahsedilmektedir (Beebe & Lachmann, 2014). Bu prensipler karşılıklı düzenlenme, kırılma ve onarılmalar ve belirginleşmiş duygusal anlardır. Bu prensipler hem sözel hem de sözel olmayan etkileşimlerde altta yatan dinamiklerin örüntülü ve belirgin haller almasını sağlarlar. Örüntü oluşturan iletişim yöntemleri ise yetişkin terapisinde şu kanallar üzerinden gözlemlenip deneyimlenebilir; bedensel deneyimler, bedensel uyarılmalar, duygusal reaksiyonlar, yüz ifadeleri, kafa hareketinin yönelimi, sesteki duygu, dokunma ya da sandalyede yer değiştirme gibi davranışlardır. Buralardaki örüntü ve ritimler etkileşim halindeki terapist ve danışanın birbirlerini saniye saniye sözlere ihtiyaç duymadan anlayıp birbirlerine göre uyumlanabilmesini sağlar (Beebe & Lachmann, 2014). Anne bebek etkileşimindeki bu üç prensip bebeklerde çalışılmıştır ama yetişkinlerdeki çalışmalar çok kısıtlıdır. Öncü araştırmalardan birisi terapist ve danışan arasındaki sözel olmayan uyumlanmanın danışanın bağlanma güvenini artırdığını göstermiştir (Havas, Svatberg, & Ulvenes, 2015). Yine de son yıllarda psikoterapi ilişkisinde danışan ve terapist arasındaki ilişkide sözel olmayan etkileşimin önemi oldukça vurgulanmakla birlikte yapılan görgül çalışmaların sayısı oldukça kısıtlıdır. Örneğin, Tickle-Degnen and Gavett (2003) danışan ve terapist arasındaki sözel olmayan etkileşimi önceki araştırmaların en genelde üç başlıkta incelediğini öne sürmüşlerdir. Bunlar: a) dikkat, b) pozitiflik-negatiflik ve c) koordinasyondur. Bu üç boyutun terapinin farklı fazlarında farklı işlevleri üstlendiği iddia edilmiştir. Örneğin, ilk fazda işbirliğinin kurulması ile ilişkili iken daha sonra beraber çalışabilmeyi etkilemiştir. Koole and Tschacher (2016) tarafından ise psikoterapide kişilerarası senkron modeli geliştirilmiştir. Çalışmaları sözel olmayan senkron ile iyi terapi sonuçları arasında ilişki olduğunu göstermiştir (Ramseyer & Tschacher, 2014; Ramseyer & Tschacher, 2011, Salvatore, Tschacher, Gelo, & Koch, 2015). Dahası farklı beden bölgeleri arasındaki senkronun terapi sürecinin mikro ya da makro sonuçları ile farklı ilişkide olduğunu bulmuşlardır. Örneğin kafa hareketi senkronu tüm terapi sürecine ilişkin başarı ile ilintiliyken, gövde hareketlerindeki

senkron ise seans bazlı başarılar ile ilişkili bulunmuştur (Ramseyer & Tschacher, 2014).

Bu çalışmaların yanı sıra anne-bebek çalışmalarından gelen bulgular terapistlerin sözel olmayan örtük ve işlemsel etkileşimin önemine dair farkındalıklarını artırmıştır. Özellikle sözel olmayan senkron çalışmaları, içerilmiş (emobodied) iletişim ve davranışsal koordinasyonun önemi vurgulanmış ve objektif olarak çalışılmaya başlanmıştır. Yanı sıra klinisyenler bebeğin nörolojik, bilişsel, duygusal ve sosyal gelişimini inceleyen çalışmaların bulgularını klinik uygulamalarına entegre etmişlerdir (Boston Process Change Group, 1998a, 1998b, 1998c, 1999, 2002, 2007, 2012). Böylece, bu doktora tezinde terapist ve danışan arasındaki kişilerarası senkronun çağdaş psikoanalitik psikoloji çerçevesinde incelenmesi amaçlanmıştır.

Çalışma

Bu doktora tezi temel olarak, yetişkin yüzyüze terapisinde terapist-hasta arasındaki sözel olmayan ilişki dinamiklerinin, dil gelişimi öncesi anne-bebek ilişkisindeki dinamiklerine benzediğine işaret eden anolojiyi (Beebe & Lachman, 2002) test etmeyi amaçlamıştır. Çalışma yetiştikin yüz yüze psikoterapi sürecindeki örtük süreçleri terapist-hasta arasındaki sözel olmayan senkronun mikroanalizi ile incelemeyi hedeflemiştir. Anne bebek çalışmalarında incelemeler, anne-bebek etkileşimini "oyun" sırasında gözlemleyerek yapılmaktadır. Bu çalışmada ise terapist ve hastanın, anne bebeğin oyun sırasında birbiri ile uyumlu olarak artacağı düşünülen davranışsal hareket miktarlarını andıran şekilde, hareketlerinin birlikte arttığı birer dakikalık zaman dilimleri mikro analizle incelenmiştir. Bu birer dakikalık aralıklar "koordineli etkileşim birimleri" olarak isimlendirilmiştir. Bu birimler Hareket Enerji Analizi kullanılarak MATLAB üzerinden elde edilmiştir. Her bir terapist hasta çifti arasındaki sözel olmayan davranışlarındaki bireysel ve karşılıklı örüntüleri tespit edebilmek için, sonrasında bu koordineli etkileşim birimleri araştırmacı tarafından saniye saniye içerik analizi bağlamında kodlanmıştır. Böylece, nicel ve nitel yöntemin entegre edildiği hibrit yöntem kullanılmıştır. Çalışmanın beklenen sonuçları aşağıdaki gibidir:

1. Yetişkin yüzyüze terapisinin anne-bebek iletişim dinamiklerini belirleyen üç prensibi (devam eden düzenlenmeler, kırılma ve onarım ve belirgin duygusal anlar) içerip içermediğini bireysel ve karşılıklı düzenleme özelliklerine dayanarak görgül olarak test etmek.
2. Danışan ve terapistin mizaç, bağlanma ve kendiliknesnesi ihtiyaçlarının, onların arasındaki sözel olmayan etkileşimdeki dinamiklere etkisini ve onların psikoterapi sürecini değerlendirmelerini nasıl etkilediğini betimlemek.
3. Danışan ve terapistin mizaç, bağlanma ve kendiliknesnesi ihtiyaçlarının arasındaki benzerliğinin onların sözel olmayan etkileşimlerini ve psikoterapi sürecini değerlendirmelerini nasıl etkileyeceğini incelemek. Benzer özellikteki danışan terapist çiftlerinin özellikle terapinin başlangıcında psikoterapi sürecini bu tanıdıklık etkisi sebebiyle daha olumlu değerlendirecekleri beklenmiştir.
4. Çalışmadaki terapist-danışan çiftlerinin psikoterapi süreçlerinin makro ve mikro çıktıları bağlamında birbirleri ile sözel olmayan senkronlarındaki farklılıklar bağlamında karşılaştırılacaktır. Yüksek ve anında senkron (gecikmiş senkrondansa) daha iyi terapi çıktıları ile ilişkili olacaktır.

Yöntem

Katılımcılar

Çalışma iki farklı örneklemi içermektedir. Birinci örneklem çalışmanın hedef ve amaçlarını bilmeyen altı farklı danışan-terapist çiftinden oluşmaktadır. İkinci örneklem ise çalışma sahibini ve onun iki farklı danışanını içermektedir. Dolayısıyla, ikinci örneklemde terapist çalışmanın amaç ve hedeflerinden haberdar iken danışanlar bundan haberdar değildirler.

Örneklem 1

İlgili literatürde gösterildiği gibi aynı cinsiyetteki çiftler arasında sözel olmayan senkron farklı cinsiyetteki çiftlerde olduğundan daha yüksektir (Ramseyer & Tschacher, 2014; Ramseyer & Tschacher, 2011). Dolayısıyla bu çalışmadaki tüm katılımcılar kadındır. Tüm terapistler Orta Doğu Teknik Üniversitesi klinik psikoloji programında doktora öğrencisidirler (n = 6; $m_{yaş}$ = 30.66; min-maks$_{yaş}$ = 28-37; orta gelir algılanan hepsi için). Hepsi ortalama 2.4 yıl boyunca kendi psikoterapi süreçlerinden geçmişlerdir. Çeşitli teorik ardaalanlara sahiptirler. Psikoterapi deneyimi olarak neredeyse homojen bir grupturlar (m =5.66 yıl ya da neredeyse 656 saat; min-maks = 4-9 yıl). Sadece Çift 4'ün terapisti neredeyse dört yıl daha fazla diğerlerinden deneyimlidir. Tüm terapistler (sadece Çift 2'nin terapisti hariç) psikodinamik psikoterapiyi psikoterapi yönelimleri arasında sıralamıştır.

Çalışmanın örneklemindeki danışanlar (n = 6; $m_{yaş}$ = 23.83; min-max$_{yaş}$ = 19-38; orta algılanan gelir), araştırmacıya duyuru üzerinden ulaşmışlardır. Aktif psikotik dönemde olmamak çalışmaya katılmayı engelleyen tek koşul olarak belirlenmiştir. Danışanlar, eğitim düzeyleri (lisans veya yüksek lisans öğrencisi olma), iş yaşamları (öğrenci), medeni halleri (bekar; yalnızca birisi evli) ve geçmiş psikoterapi deneyimleri ya da psikiyatrik tedavi öyküleri olmamaları bağlamında homojen özellikler göstermişlerdir.

Örneklem 2

İkinci örneklemin terapisti, (kadın, orta gelir düzeyi, 29 yaş) yaklaşık beş yıllık psikoterapi deneyimine sahiptir ve BDT, Şema Terapi ve Psikoanalitik Kendilik Terapisi alanlarında eğitim görmüştür. 4 yıl boyunca psikoanalitik yönelimli kendi psikoterapi sürecinden geçmiştir. Teorik yönelimini psikoanalitik kendilik psikolojisi olarak belirtmiştir. Örneklem 2'nin katılımcılarından birisi lisans öğrencisi (yaş = 20) diğeri ise tezgahtardır (yaş = 29). Her iki danışan da gelirlerini orta düzey olarak bildirmişlerdir ve her ikisinin de daha önceden psikoterapi ve psikiyatrik tedavi geçmişi vardır.

Araçlar

Kendiliknesnesi İhtiyaçları Envanteri

Envanter 38 maddeden oluşan 6'lı Likert tipinden bir kendini bildirim ölçeğidir (Banai, Mikulincer, & Shaver, 2005; Yurdeşen & Gençöz, 2015; (Toplam Puan: Min-Maks: 1-7). Ölçek idealizasyon, aynalanma ve ikizlik kendiliknesnesi ihtiyaçlarına yakınlaşma ve bunlardan kaçınma düzeylerini ölçmek için kullanılmıştır.

Yetişkin Mizaç Ölçeği

(Evans & Rothbart, 2007; Gölcük, 2014). Ölçek 39 maddeden oluşan 7'li Likert tipinde bir kendini bildirim ölçeğidir (min-maks. toplam puan: 1-7). Ölçek yetişkin mizacını şu alt ölçekler bağlamında ölçer; negatif duygulanım, dışadönüklük, çabalı kontrol ve yönelimsel duyarlılık.

Yakın İlişkilerde Yaşantılar Ölçeği/Kısa Formu

(Fraley, Waller, & Brennan, 2000; Selçuk, Günaydın, Sümer, & Uysal, 2005). Ölçek 36 maddeden oluşan 7'li Likert tipinde bir kendini bildirim ölçeğidir (min-maks toplam puan:1-7). Bağlanma kaygısı ve kaçınmasını ölçmek için kullanılmıştır.

Kısa Semptom Envanteri

(Derogatis, 1992; Şahin & Durak, 1994; Şahin, Durak, & Uğurtaş, 2002). Çalışmaya katılan danışanların semptonlarındaki iyileşmeyi ölçmek üzere kullanılan ölçek 54 maddeden oluşan 5'li Likert tipinde bir kendini bildirim ölçeğidir (min-maks. toplam puan: 0-4). Anksiyete, depresyon, olumsuz ben, somatizasyon ve hostilite ölçeğin alt boyutlarıdır.

Kişilerarası Problemler Envanteri-Döngüsel Ölçekler Kısa Formu

(Alden, Wiggins, & Pincus, 1990; Akyunus & Gençöz, 2016). Envanter 32 maddeden oluşan 5'li Likert tipinde bir kendini bildirim ölçeğidir (min-maks. toplam puan: 0-4). Danışanların kişilerarası ilişkilerde problemli stilleri sekiz alt boyut ile değerlendirilmiştir, bunlar: baskıcı/kontrolcü, girici-muhtaç, kendini feda

eden, aşırı uyumlu, girişken olmayan, sosyal çekinik, soğuk-mesafeli ve kinci/ben merkezcidir.

Terapötik İttifak Ölçeği

36 maddeden oluşan ölçek, 7'li Likert tipindedir ve terapist ve danışan formu olmak üzere iki ayrı formu vardır (Horwart & Greenberg, 1989; Soygüt & Işıklı, 2008, min-maks toplam puan: 0-6). Bağ, görev ve hedef alt boyutlarında terapötik ilişki hem danışan hem de terapist tarafından değerlendirilmektedir.

Yakın İlişkilerde Yaşantılar Envanterinin Değiştirilmiş Versiyonu

Bu çalışma kapsamında, terapist ve danışanların birbirlerine olan bağlanmalarını ölçmek üzere bağlanma ölçeğinin her bir maddesi "partnerim" ifadesi yerine "terapistim" ya da "hastam" olarak değiştirilmiştir (min-maks: 1-7).

Prosedür

Çalışmaya başlamadan önce, Orta Doğu Teknik Üniversitesi İnsan Katılımcılar Etik Komitesinden kurumsal değerlendirme izni alınmıştır. 15 haftadan 17 haftaya değişen psikoterapi süreçleri ODTÜ Psikoloji Bölümü Laboratuarlarında yapılmıştır. Hem terapistler hem de danışanlar çalışmaya gönüllü katıldıklarını onam formunu imzalayarak belirtmişlerdir. Danışanlar psikoterapi süreçleri için ödeme yapmamışlardır. Psikoterapistlere de çalışma kapsamında herhangi bir ücret ödenmemiştir. Hem terapistler hem de danışanlar istedikleri zaman çalışmadan ayrılma haklarına sahip oldukları konusunda bilgilendirilmişlerdir. Terapiler kısa süreli ve zaman süreli olmuştur. Terapilerin süresi üniversitenin bir akademik dönemine denk gelecek şekilde belirlenmiştir (min: 15 – maks: 17, m = 16.16). Terapilerin hedef ve amaçları çalışma amacından bağımsız olarak her bir terapi çifti için kendileri tarafından belirlenmiştir. Her bir psikoterapi seansı, birisi sadece danışanı birisi sadece terapisti çeken iki farklı kamera ile kaydedilmiştir. Terapi sürecinin farklı fazları boyunca hem terapistler hem de danışanlar araştırmanın ölçüm araçlarını doldurmuşlardır. Bu anketleri doldurmaları yaklaşık 20 dakikalarını almıştır. Terapi sürecinin başında hem terapist hem de danışanlardan mizaç, bağlanma ve kendiliknesnesi ihtiyaçları için ölçümler alınmıştır. Yanı sıra, terapilerin başında danışanların semptomları ve kişilerarası ilişkilerdeki problemli

stilleri ölçülmüştür. Terapi sürecinin dört fazında ise hem terapist hem de danışan terapötik süreci değerlendirmişlerdir. Terapi sürecinin altıncı seansında ise terapist ve danışan arasındaki bağlanma ölçülmüştür. Terapi süreçlerinin bitiminde ise danışanın yine semptomları, bağlanma özellikleri ve kişilerarası ilişkilerdeki problemli tarzları ölçülmüştür.

Data Analizi

Psikoterapi Çiftlerindeki Sözel Olmayan Etkileşimin Ölçülmesi

Psikoterapi çiftlerinin sözel olmayan etkileşimleri birbirini tamamlayan iki farklı yöntem ile ölçülmüştür.

Hareket Enerji Analizi

Değişen video saniyelik kadrajlarda, sadece kafa bölgesindeki hareket miktarını ölçmek için siyah beyaz görüntüdeki piksel değişiklikleri Hareket Enerji Analizi kullanılarak MATLAB'da bu çalışma kapsamında geliştirilen bir kod üzerinden Ramseyer ve Tschacher'in fikir ve analizine sadık kalınarak hesaplanmıştır (2011; Ramseyer, 2018). Yine Ramseyer & Tschcaher (2014)'in çalışmalarına uygun olarak terapist danışan arasındaki etkileşimlerin yalnızca her seansta ilk on beş dakikasının hareket enerji analizi yapılmıştır. Danışan terapist çiftinin zaman içerisindeki hareketlerindeki artışın birbirine korelasyonun değeri üzerinden $\pm$5 saniye zamansal gecikme dikkate alınarak hesaplanmıştır. Korelasyon değeri 0.40'ın üzerinde, yani orta düzeyde olan (Cohen, 1992) etkileşim birimleri koordineli etkileşim birimi olarak isimlendirilmiş ve her bir terapi çiftinin sözel olmayan etkileşiminin mikro analitik düzeyde incelenmesi için seçilmiştir.

Koordineli Etkileşim Birimlerinin Mikro Analizi

Beş iletişim yöntemine araştırmacı tarafından mikro düzeyde yani saniye saniye içerik analizi temelinde kodlama yapılmıştır. Terapist danışan arasındaki bu beş iletişim yöntemi a) göz kontağı, b) yüzde duygu, c) kendini düzenleme davranışları (çeneye, burna, ağza, yanağa, kulağa, ya da saça dokunma ve dudak yeme), d) konuşma-sessizlik döngüleri and e) kafa sallama ve sözel teşvik. İçerik analizi yaparken kendi ve karşılıklı düzenleme dinamikleri tahmin edilebilirlik,

stabilizasyon ve ritimsel özellikleri açısından değerlendirilmiştir. İçerik analizi gözlemlenen davranışın olduğu gibi kaydedilmesi ve sonrasında bunların altındaki örtük örüntüleri tarif eden içerik belirlemeleri şeklinde iki basamakta yapılmıştır. Açık içeriğin kodlanmasında kodlayıcı her bir iletişim yöntemini her bir terapist danışan çifti için terapist ve hastayı analiz edilen her birer saniyelik birimlerde ayrı ayrı gözlemlemiş ve saniye saniye kodlamıştır (videonun sesi kapalı olarak). Örtük örüntüleri kodlanmasında ise danışan ve terapist bu sefer birlikte gözlemlenmiş ve iletişim yöntemleri bütüncül olarak değerlendirilmiştir. Kodlayıcı örtük örüntüleri kodlarken ilk önce videonun sesi kapalı olarak kodlamış ikinci seferde ise videonun sesinin açmış ve özellikle duyguların içerikle uyumunu değerlendirmiştir.

Bulgular

Çalışmanın analiz sonuçları öncelikle Örneklem 1 ve Örneklem 2'nin ayrı ayrı değerlendirilmesi gerektiğini göstermiştir. Çünkü iki örneklem arasında terapötik ittifak sonuçları açısından farklılık bulunmuştur. Örneklem ikide bulunan danışanlar örneklem birde bulunanlara göre terapi sürecinin görev boyutunu daha düşük değerlendirmişlerdir

Örneklem 1 Bulgular

Bulgular hem danışan hem de terapistlerin mizaç biçimi olarak yönelimsel duyarlılığının, kendiliknesnesi ihtiyaçları bağlamında ise ikizliğe duyulan ihtiyacın en yüksek olduğunu göstermiştir. Yanı sıra örneklem 1'deki katılımcıların bağlanma kaygıları bağlanma kaçınmalarından daha yüksek bulunmuştur. Bağlanma özellikleri 4 puan orta nokta olarak alınarak kategorize edilmiştir (Bartholomew, 1990). 3 katılımcı güvenli bağlanma, 3 katılımcı korkulu, 3 katılımcı yapışkan ve iki katılımcı kopuk bağlanma özelliklerini gösterdiklerini bildirmişlerdir.

Örneklem 1'deki danışanların semptomları ve kişilerarası ilişkilerdeki problemleri stilleri bağlamında sonuçlar, danışanların en fazla depresif, anksiyöz ve olumsuz benlik semptomlarından muzdarip olduklarını, problemli ilişki stilleri açısından ise kendini feda, aşırı uyum, ve girişken olmama özelliklerine sahip olduklarını göstermiştir.

Terapist ve danışanların bireysel özellikleri arasındaki uyum sonuçları çoğu terapi çiftinde danışan ve terapistin birbirine benzer özelliklere sahip olduğunu göstermiştir. Bireysel özellikler açısından çabalı kontrol mizaç özelliği, bağlanma anksiyetesi ve idealizasyondan kaçınma kendiliknesnesi ihtiyacı bazı danışan terapist çiftlerinde danışan ve terapist arasındaki benzerliğin en düşük olduğu özellikler olarak bulunmuştur.

Hareket Enerji Analizi Sonuçları

Örneklem 1'de toplam 250 koordineli etkileşim biriminin zamansal gecikme ortalaması, karşı korelasyon değerlerinin toplamı ve ortalaması sırasıyla şöyle bulunmuştur 41.67, 2.45, 23.8 ve 0.57. Sonuçlar göstermiştir ki Örneklem 1, anında senkrondansa gecikmiş senkrona sahiptir. Çift 1, 2, 3, ve 6'nın koordineli etkileşim birimlerinin sayısı örneklemin ortalamasından düşüktür. Çift 4 ve 5 yüksek sayıda koordineli etkileşim birimlerine sahiptir.

Koordineli Etkileşim Birimlerinin İçerik Analizi

Öncelikle, açık içerik analizi sonuçlarının değerlendiriciler arası güvenirliliği yeterli ve iyi düzeyde bulunmuştur. Sadece hastanın yüzdeki duyguları ve sözel pekiştirmeleri ile terapistin dudak yeme davranışı araştırmacı ve diğer değerlendirici tarafından farklı değerlendirilmiştir. Dolayısıyla, düşük güvenilirliğe sahiptir.

Açık İçeriklerin Örtük Örüntü İçeriklerinin Analizi

Açık içeriklerin işaret ettiği örtük paternleri bulmak için yapılan örtük pattern analizi sonucunda elde edilen kategori isimleri, üç deneyimli kendilik temelli psikoanalitik psikoterapi uzmanı ile bir odak grup yapılarak değerlendirilmiştir. Bulunan karşılıklı etkileşim dinamikleri şunlardır: karşılıklı düzenlemeler, karşılıklı düzensizlik (bozukluk), kırılmalar, onarımlar ve belirgin duygulanımsal anlar. Alt kategoriler ise, karşılıklı düzenlemeler için; yakınlığı arttıran karşılıklı düzenleme, olumsuz duyguya dayanan karşılıklı düzenleme, danışanın aktif olduğu karşılıklı düzenleme, davranışsal taklide dayalı karşılıklı düzenleme, onaylayıcılığın (olumluluğun) karşılıklığı, uyumluluk ve yansıtmacılık olmuştur.

Karşılıklı düzensizlik ise, karşılıklı dezorganizasyon, olumsuz duyguya dayanan duygusal karşılıklılık, karşılıklı düzensizlik, chase and dodge, yaklaşma-kaçınma ikilemi ve still face olmuştur. Kırılmalar ise geri çekilmeden kaynaklı kırılma, uygunsuzluk, red etme, yargılacı olma, onarımdan vazgeçme, reflektif olmaktansa tepkisiz olma ve pozitiflik ve yakınlıktan kaçınma alt kategorilerini içermiştir. Onarım ise partnerinin kırılmasını onarmak için çabalama ve kendi kırılmasını optimal engellenme düzeyinde tutma olarak iki alt kategoriyi içermiştir.

Kendini düzenleme dinamikleri ise altı örtük patern ortaya çıkarmıştır. Bunlar, partnerine odaklanma, partnerinden kaçınma, yüzdeki duygu dışavurumculuğu, onay vericilik (olumluluk), kendini düzenleme davranışları ve kendiliknesnesi ihtiyaçlarının yer değiştirmesidir.

Niceliksel Analize Dayanan Örtük Örüntüleri Gösteren Bulgular

Çiftler arasında objektif değerlendirme yapabilmek için, göz kontağı ve yüzdeki duygu iletişim yöntemleri sayısallaştırılarak yedi boyut elde edilmiştir. Bunlar, karşılıklı bakma, (karşılıklı göz kontağının olduğu toplam süre), nötr yüz ifadesi ile karşılıklı bakma, ikircikli yüz ifadesi ile karşılıklı bakma, olumsuz yüz ifadesi ile karşılıklı bakma, pozitif yüz ifadesi ile karşılıklı bakma, birbirleri ile eşleşmeyen yüz ifadesi ile karşılıklı bakma ve kopuk ya da ayrı geçirilen süre. Her bir karşılıklılık boyutunun analiz edilen etkileşim biriminin toplam süresine yani altmış saniyeye oranına göre çiftler arası değerlendirmeler yapılmıştır.

MANOVA sonuçları terapi çiftleri arasında karşılıklı düzenleme dinamikleri açısından farklılıklar olduğunu göstermiştir (Wilks's $\lambda = 0.49$, $F(35, 835.341) = 4.40$, $p < 0.000$). Tüm dinamiklerde (karşılıklı olumluluk ve karşılıklı olumsuzluk dışında) istatistiksel olarak anlamlı farklılıklar bulunmuştur.

Çift 1; Çift 4, 5 ve 6'dan daha düşük karşılıklılık dolayısıyla daha yüksek kopukluk ya da ayrı olma süresine sahip olmuştur. Yanı sıra, Çift 1, Çift 4'ten daha düşük ikircikli yüz ifadesi ile karşılıklı bakma ve birbiri ile uyuşmayan ifade ile karşılıklı bakma süresine sahip olmuştur. Ancak, Çift 2, Çift 5'ten daha fazla birbiri ile uyuşmayan ifade ile karşılıklı bakma, ve Çift 6'dan daha düşük nötr ifade ile

karşılıklı bakma süresine sahip olmuştur. Çift 6, Çift 4'den tüm karşılıklı regülasyon dinamiklerinde daha yüksek değerlere sahip olmuştur. Ancak, Çift 6, Çift 2'den daha yüksek nötr ifade ile karşılıklı bakma süresine sahip olurken, Çift 5'ten daha düşük birbiri ile uyuşmayan karşılıklı bakma değerine sahip olmuştur.

MANOVA sonuçları göstermiştir ki terapi çiftleri arasında terapistin bağlanma özelliklerine göre karşılıklı düzenlenme dinamikleri arasında fark (Wilks's $\lambda = 0.59$, $F(21, 574.842) = 5.16$, $p < .001$). Endişeli terapisti olan terapi çiftleri, korkulu terapisti olan çiftlere göre daha düşük karşılıklılık ve nötr ifade ile karşılıklı bakma değerine sahip olmuşlardır. Güvenli bir terapiste sahip olan çift ise tüm diğer çiftlerden daha fazla karşılıklılık, ikircikli ifade ile karşılıklı bakma ve birbiri ile uyuşmayan ifadeler ile karşılıklı bakma süresine sahip olmuştur.

Kendini düzenleme dinamiklerinin nicel analiz sonuçları

MANOVA sonuçları terapi çiftlerin kendini düzenleme dinamikleri açısından farklılıklara sahip olduğunu göstermiştir (danışanın olumluluk davranışları hariç Wilks's $\lambda = 0.091$, $F(60, 907.52) = 10.09$, $p < .001$).

Sonuçlar örneğin göstermiştir ki, Çift 1'de terapistin danışanına odaklanma süresi terapi ilerledikçe artmıştır. Diğer terapistlere kıyasla, bu terapist en yüksek odaklanma süresine sahiptir (Çift 4'ün terapisti hariç). Benzer şekilde terapistin yüzdeki duygu dışavurumculuğu süreç boyunca artmıştır. Diğer terapistlerle karşılaştırıldığında Çift 2'nin terapistinden daha düşüktür. Bu terapist tüm diğer terapistlerle karşılaştırıldığında en düşük kendini düzenleme davranışına sahip olan terapisttir. Olumluluk/onay davranışları da süreç içerisinde artmıştır, fakat sadece Çift 2'nin terapistinden daha fazladır. Bu terapistin kendiliknesnesi ihtiyaçlarının yer değiştirmesi tüm diğer terapistlerden daha fazladır. Bu çiftin danışanı ise tüm diğer danışanlar arasında (Çift 2'nin danışanı hariç) en düşük odaklanma değerine sahip olan danışandır. Terapistindeki düşme ile uyumlu olarak terapinin üçüncü fazında göz kontağı daha da azalmıştır. Tüm diğer danışanlarla karşılaştırıldığında bu danışan en dışavurumcu olandır. Ayrıca, yine tüm hastalardan daha fazla kendini düzenleme davranışı kullanmıştır. Yine tüm hastalarla karşılaştırıldığında en düşük

olumluluk/onaylayıcılık değerine sahiptir. Kendiliknesnesi ihtiyaçlarının yer değiştirmesi diğer danışanlardan daha düşüktür.

Terapistlerin bağlanma özelliklerine göre terapi çiftleri arasında kendini düzenleme dinamikleri açısından farklılıklar vardır (danışanın yüzdeki duygu dışavurumculuğu, terapistin kendini düzenleme davranışları ve danışanın olumluluk davranışları hariç; Wilks's $\lambda = 0.27$, $F(36, 576.85) = 8.83$, $p < .001$).

Kaçıngan terapistlere göre, kaygılı terapistleri olan terapi çiftleri tüm kendini düzenleme dinamiklerinde daha düşük değerlere sahiptirler (terapistin onaylayıcılığı ve daşanın kendiliknesnesi ihtiyaçlarının yer değiştirmesi hariç). Korkulu terapisti olan terapi çiftleri ile karşılaştırıldığında ise, kaygılı terapisti olan terapi çiftlerinde danışanın terapistten kaçınma ve kendiliknesnesi ihtiyaçlarının yer değiştirmesi ve terapistin danışanına odaklanmasında daha yüksek değerlere sahip oldukları görülmüştür. Fakat terapistin olumluğu boyutunda daha düşük değerlere sahip olmuşlardır. Güvenli terapisti olan terapi çifti ile karşılaştırıldığında ise, kaygılı terapisti olan terapi çiftleri daha çok danışanın kaçınma davranışına sahip olmuşlardır. Korkulu terapisti olan çiftlerle karşılaştırıldığında, kaçıngan terapisti olan terapi çiftlerinde terapistin odaklanma süresi daha yüksekken, danışanın kaçınması ve kendini düzenleme davranışları ve terapistin olumluluk/onaylayıcılık davranışı daha düşük bulunmuştur. Güvenli terapisti olan terapi çifti ile karşılaştırıldığında ise, kaçıngan terapisti olan terapi çiftlerinde, danışanın kendini düzenleme davranışı ve terapistin odaklanması daha düşüktür. Son olarak, güvenli terapisti olan terapi çifti ile karşılaştırıldığında korkulu terapisti olan terapi çiftlerinde terapistin odaklanması daha düşükken, terapistin olumluluk davranışı daha yüksek bulunmuştur.

Örneklem 1'in Mikro ve Makro Sonuçlarına Ait Bulgular

Mikro Sonuçlara İlişkin Bulgular

Mikro sonuçlar açısından öncelikle terapist ve danışan arasındaki bağlanma özellikleri incelendiğinde, örneğin, Çift 1'nin terapisti danışanına partnerine bağlandığından daha kaçıngan bağlanmıştır. Ancak, danışan ise partnerine

bağlandığından daha güvenli bir biçimde terapistine bağlanmıştır. Danışanın terapideki bağlanması terapistininkinden daha güvenlidir. Terapötik ittifak sonuçları açısından örnek bulgular göstermiştir ki, terapide daha güvenli bağlı olan partner terapi sürecini daha olumlu değerlendirmiştir. Örneğin, Çift 1'nin danışanı terapötik ittifakın her boyutunda süreci terapistininkine kıyasla daha olumlu değerlendirmiştir. Sürece bakıldığında ise, danışanın görev ve hedef boyutlarındaki değerlendirmesi yükselen bir eğilim göstermiştir (altıncı seanstaki düşme hariç). Ancak, bağ boyutundaki değerlendirmesi ise düşme eğilimi göstermiştir. Çift 1'in terapisti tüm boyutlardaki değerlendirmesi süreç boyunca artma eğilimi göstermiştir (beşinci ve onuncu seansta görev boyutunda, terapi bitişinde ise bağ boyutundaki düşmeler hariç).

Örneklem 1'in Makro Sonuçlarına ait Bulgular

Wilcoxon Signed Ranks Testi sonuçlarına göre, terapi sürecinin sonunda sadece ikizlik ve idealizasyondan kaçınma ve idelizasyona açlık özellikleri açısından danışanlarda değişiklik olmuştur. İki danışanın idealizasyona olan açlığı terapi süreci sonunda düşmüştür. İstatistiksel olarak anlamlı olmakla birlikte danışanların olumsuz ben semptomlarının terapiler sonunda artması ile, bağlanma kaygılarının artması sonuçları birbiri ile uyumludur. Yine istatistiksel olarak anlamlı olmamakla birlikte, tüm danışanların sosyal çekiniklik özellikleri terapi sürecinin sonunda azalmıştır.

Örneklem 2 Bulgular

Yönelimsel duyarlılık, olumsuz duygulanım mizaç özellikleri ve idealizasyona olan açlık özelliklerinin terapist ve danışanlarda yüksek olduğu bulunmuştur. Bağlanma özellikleri açısından terapist güvenli bağlanmaya sahipken, her iki danışan da korkulu bağlanma özellikleri bildirmişlerdir. Örneklem 2 danışanları en çok anksiyete, depresyon ve olumsuz ben semptomları bildirmişlerdir. Kişilerarası ilişkilerdeki stilleri olarak ise kendini feda, aşırı uyum ve girişken olmama özellikleri öne çıkmıştır. Terapist ve danışanları arasındaki bireysel özellikler

açısından ilk danışanı ile birçok özellik de oldukça benzer özelliklere sahipken ikinci danışanı ile özellikleri arasındaki uyum daha düşük bulunmuştur.

Hareket Enerji Analizi Sonuçları

Koordineli etkileşim birimlerinin sayısının ortalaması, zamansal gecikme ortalamaları ve karşı korelasyon değerlerinin toplamı ile ortalaması sırasıyla şöyle bulunmuştur; 55.5, 1.85, 34.7, and .63. Örneklem 2 orta derece kafa senkronuna sahiptir ve anında senkrondansa gecikmiş senkronları vardır.

Koordineli etkileşim birimlerinin içerik analizi sonuçları

Öncelikle değerlendiricilerarası güvenirlik değerleri sonuçlarına bakıldığında, araştırmacı ve ikinci kodlayıcı arasında birçok özelliğin açık kodlaması iyi uyum göstermiştir. Sadece, danışanların kafa onaylaması ve sözel teşvik uyumları orta derecede, danışanların yüzde duygu dışavurumları ve dudak yeme davranışlarında düşük uyum göstermişlerdir.

Açık İçeriklerin Örtük Örüntüler Analizi

Bulgular, hem karşılıklı regülasyon hem de kendini düzenleme açısından birinci örneklemdeki örtük patternlerle aynı olmuştur.

Nicel Analiz Sonuçları

T-test analizi sonuçları terapistin ikinci danışanı ile daha çok karşılıklılık, ikircikli ifade ile karşılıklı bakma ve birbiri ile uyuşmayan ifade ile karşılıklı bakma sürelerinin birinci danışanından daha yüksek olduğunu, olumsuz duygu ifadesi ile karşılıklı bakmanın ise daha düşük olduğunu göstermiştir. Kendini düzenleme boyutları açısından iki çift arasında danışanın terapistten kaçınması ve terapistin kendini düzenleme davranışları açısından farklılıklar bulunmuştur. İlk danışan ikinciye kıyasla terapist ile daha az göz teması kurmuştur. Terapistin ilk danışanla olan süreçte kendini düzenleme davranışlarını kullanması ikinci danışan ile olan süreçtekinden daha fazla olmuştur.

Örneklem 2'nin mikro ve makro sonuçlarına ilişkin bulgular

İlk danışan terapistine partnerine bağlandığından daha güvenli bağlanmıştır. Terapistin ilk danışana bağlanması ikinci danışanına bağlanmasından daha güvenlidir. Hatta terapistin ilk danışana bağlanması partnerine bağlanmasından daha güvenli iken, ikinci danışanına bağlanması partnerine bağlanmasından daha kaçıngandır. İkinci danışan, partnerine bağlandığından daha güvenli bir şekilde terapistine bağlanmıştır. Terapötik ittifak değerlendirmelerinde bazı örnek bulgular şu şekilde olmuştur. İlk danışan görev ve bağ boyutlarında stabil bir eğilim gösterirken, hedef boyutunda düşen bir eğilim göstermiştir. Terapist ise görev boyutunda düzensiz diğer boyutlarda ise süreç içerisinde artan bir eğilim göstermiştir.

Makro Sonuçlara İlişkin bulgular

İkinci örneklemdeki düşük katılımcı sayısı sebebiyle istatistiksel analizler yapılamamış olsa de sonuçlar her iki danışanın da bağlanma güveninin arttığına işaret etmiştir. Daha detaylı bakıldığında, örneğin ilk danışanın ikiziliğe açlığı, idealizasyona açlığı, aynalanmadan kaçınması, olumsuz ben, somatizasyon, hostilite, kendini feda, girişken olmama ve girici muhtaç özelliklerinde iyileşmeler görülmüştür.

Tartışma

Bu tez çalışması temel olarak anne-bebek etkileşimindeki dil öncesi özelliklerin yetişkin yüz yüze terapisinde görüleceğine işaret eden analojiyi test etmeyi amaçlamıştır. Sonuçlar, sözel olmayan etkileşim dinamiklerinde bu dinamiklerin görülebileceğine işaret etmiştir. Bu tez çalışması yetişkin yüz yüze terapisindeki örtük süreçlerin video kayıtları üzerinden iletişimin ikili modeli (Beebe & Lachman, 1996) çerçevesinde incelendiği öncü çalışmalardan bir tanesidir. Çalışma bulguları ile kafa hareketlerinde senkron olan etkileşim halindeki terapi partnerlerinin sözel olmayan ilişki dinamiklerini anlama çalışmalarına önemli katkılar yapılmıştır. Çalışmanın sonuçları klinik psikoloji eğitimlerinde (APA'nin de önerdiği gibi, 2006) kullanılabilir. Ayrıca, çalışmanın gözleme dayanan bulguları, mizaç, bağlanma ve kendiliknesnesi ihtiyaçlarının sözel olmayan

davranışlara nasıl yansıyacağını kendini düzenleme ve karşılıklı düzenleme dinamiklerine dayanarak ortaya koymuştur. Başka bir deyişle bu bireysel özelliklerdeki farklılıklar kendilerini göz kontağı, yüzde duygu ifadesi, kendini düzenleme davranışları (dokunma ve dudak yeme), kameraya bakma (kendiliknesnesi ihtiyaçlarının yer değiştirmesi), kafa ile onay, sözel teşvik ve konuşma-susma döngüleri gibi iletişim yöntemlerinde göstermişlerdir.

Çalışmanın bir diğer özgün yanı genel psikoterapi çalışmalarında terapist ve danışan ayrı sistemler olarak ele alınmakta ama bu iki sistemin etkileşiminden ortaya çıkan ikili sistemin dinamiklerine genellikle değinilmemektedir denilebilir. Bu çalışmada ise ikili sistemin özellikleri birbirlerinden nasıl karşılıklı olarak etkinliklerini gösteren örüntüler şeklinde incelenmiştir.

Çalışmanın bir diğer katkısı ise sözel olmayan davranışların senkronu ölçmede hem bilgisayar yönteminin hem de içerik analizi kodlamasının kullanılması olmuştur. Bu sayede hem anne bebek çalışmalarındaki oyun ortamının yetişkin etkileşimindeki çalışılma şekline ilişkin bir yöntem önerilmiş (karşılıklı olarak artan pozitif kafa senkronu), hem de bilgisayar analizi ile yapılan çalışmalardaki içeriğin analiz edilememesi kısıtlaması aşılabilmiştir.

Kısıtlılıklar ve Gelecek Çalışmalar İçin Öneriler

Çalışmanın ilk kısıtlılığı oldukça emek içeren yoğun bir çalışma olması nedeniyle araştırmacının bulguları yorumlamasını kısıtlaması olmuştur. Diğer çalışmalarla uyumlu olarak seansların sadece ilk on beş dakikasındaki kafa hareketleri senkronlarının analiz edilmesi de bir başka kısıtlılıktır. Çalışmada sadece pozitif kafa hareketi senkronuna, yani terapist ve danışanın hareketlerinin birlikte arttığı anlara odaklanılması başka bir kısıtlılık olmuştur. Bir başka sınırlılık koordineli etkileşim birimlerinin arasından içerik analizine dahil edileceklerin seçilmesinde her bir terapist danışan çifti için farklı kesme noktasının seçilmesi olmuştur. Son sınırlılık ise daha önceki sözel olmayan senkron çalışmalarında yapılan sahte senkronu analizinin bilgisayar analizi ile değil araştırmacının her bir analiz birimini

kendisinin izlemesi ile sahte mi gerçek mi senkron olduğunu anlaması ile yapılmış olmasıdır.

Örneklem açısından sınırlıklar ise çalışmadaki terapistlerin teorik yönelimlerinin birbirlerinden farklı olmasıdır. Yanı sıra, danışan grubu da farklı psikopatoloji özelliklerini içermiştir. Terapi sürecinin etkililiğine dair sınırlılık ise terapi sürelerinin kısa olması ile ilişkili olmuştur denilebilir.

Çalışma Bulgularının Klinik Uygulamaya Katkıları

Klinik katkılar açısından öncelikle kafa hareketlerindeki senkronun, terapist ve danışan arasındaki duygusal alışverişin niteliğine işaret ettiği söylenebilir. Birbirleri ile uyumu gösterdiği gibi aralarındaki kırılma onarılma dinamiklerini de göstermektedir. Dolayısyla terapistlerin danışanları ile sözel olmayan uyumlanmalarını geliştirmeleri beklenmektedir. Bu çalışmada önemli terapötik becerilerin örneğin empati ve reflektif olmanın sözel olmayan davranışlara yansıdığı görülmüştür. Dolayısıyla terapistler klinik becerilerinin örtük süreçler üzerindeki etkilerine dair de farkındalık geliştirmelidirler. Ayrıca, çalışmada karşıaktarım tepkilerinin de sözel olmayan davranışlara yansıdığı bulgulanmıştır, dolayısıyla süpervizyon süreçlerinde bazen terapist henüz söze dökebilecek farkındalığa ulaşamamış olsa da video kayıtları üzerinden karşıaktarım tepkilerini öğrenebilmesi sağlanmalıdır. Terapistlerin bireysel özellikleri (mizaç, bağlanma ve kendiliknesnesi ihtiyaçları) danışanları ile kurdukları ilişkide davranış örüntülerini etkilediği için terapistlerinin bu özelliklerinin davranışlarını nasıl şekillendirdiklerine ilişkin bilgilerini de artırmaları gerekmektedir. Bu çalışmada terapi sürecindeki farklı fazlarda sözel olmayan davranış örüntülerinin değiştiği bulunmuştur. Dolayısıyla, kendini bildirim ölçekleri ya da danışanın kendi sözel beyanı dışında da terapistler progronozu sözel olmayan davranış örüntülerindeki değişiklikleri anlayarak tespit edebilirler.

Çalışma sonuçları diğer tüm iletişim yöntemleri üzerinde etkisi olan göz teması kurmanın önemini göstermiştir. Göz teması kurma süresi ve ritmi diğer iletişim yöntemlerinin de örüntülerini şekilllendirmiştir. Örneğin kafa onaylama

hareketlerinin niteliğini değiştirmiş ya da duyguların aynalanmasını daha eş zamanlı hale getirmiştir. Özetle, davranışsal ve duygusal uyumlanmayı en çok etkileyen iletişim yöntemi göz teması kurmak olmuştur. Dolayısıyla, terapi süreçlerinde terapistler danışanlarını göz teması kurmaya teşvik etmeli. Elbette bunu yaparken danışanın güncel ve gelişimsel ihtiyaçlarına uygun olacak yöntemler belirlemelidir. Bu çalışmada terapistlerin göz teması kurmalarını engelleyen en önemli etken not tutma davranışları olmuştur. Fakat not tutma davranışı kayıt alma işlevinin yanı sıra terapistin kendini düzenleme davranışı olarak gözlemlenmiştir. Sonuç olarak, artan kendini düzenleme ihtiyacı karşılıklı etkileşimden terapistleri çekmiştir.

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