The role of therapeutic alliance and its ruptures and resolutions in the treatment of adolescent depression

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Declaration

I, Antonella Cirasola, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Signature:

Date:

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Abstract

The therapeutic alliance is considered an important mechanism of change in youth psychotherapy. Yet, alliance research with young people is scarce and hampered by methodological limitations. This PhD aimed to seek a deep understanding of the alliance and its role in psychotherapy for adolescent depression. Study 1 aimed to learn more about the empirical definition of the alliance and examined the factor structure of the most used alliance measure, the Working Alliance Inventory short-form. The theorised multidimensional structure was not supported, and a single, overall alliance dimension was found to be empirically more valid. Study 2 investigated whether the mean strength of the alliance, as well as its trajectory over time, differed between three equally effective psychological treatments for adolescent depression. The average alliance strength was found to differ across treatment types, being highest in cognitive therapy and lower in brief psychosocial intervention and especially psychoanalytic psychotherapy. Study 3 aimed to better understand the direction of the effect between alliance and outcome by investigating the associations between early alliance and subsequent outcome, while controlling for patients' baseline severity and prior symptom change. It also examined potential moderators of this association. Early alliance was found to predict subsequent outcomes even after controlling for patients' baseline severity and prior symptom change. The strength of this relationship was moderated by treatment type. Study 4 described and explored alliance rupture and resolution events and their impact on the change process in a single-case of a successful short-term psychoanalytic-psychotherapy. Frequent alliance ruptures occurred, but most of them were repaired. There was converging evidence that the patient-therapist relationship and its dynamics played a crucial role in promoting change. Together, these studies provide a rich picture of the role of the alliance in youth psychotherapy while challenging some of the assumptions in the current alliance literature.

Impact Statement

Little is known about how therapeutic change is facilitated, especially with young people. One of the most researched mechanisms of change in psychotherapy is the therapeutic alliance. This research aimed to better understand the alliance and its role in psychotherapy for adolescent depression. Its findings challenge both the definition and operationalisation of the alliance and have several implications. Firstly, this research did not support the hypothesised alliance structure underlying the most popular alliance measure, the Working-Alliance-Inventory short-form. Due to the high correlations between the alliance subscales, it is advisable to use the overall score only in future research using this scale. Importantly, the high correlation between the alliance subscales might be related not only to the operationalisation of the alliance but also to its definition. It might be that with young people the alliance is an integrated phenomenon and that failure to establish one aspect of it impedes its development entirely. More should be learnt about what constitutes a good alliance in youth psychotherapy. In this regard, one element of the therapeutic relationship that emerged as important for a good alliance is the development of trust. Clinicians should, thus, pay attention to fostering trust with young people.

Secondly, the results of this research also challenge the assumption that the alliance is a generic, rather than therapy-specific, treatment variable. It was found that treatment type can influence the average strength of the alliance and its relationship with outcomes. Hence, the notion of the alliance as a common factor acting independently of specific techniques might be methodologically and theoretically flawed. It might be more beneficial to think of the alliance as a complex variable that might change across types and stages of therapy. Considering these issues, both the alliance definition and its measurement might require revision, and further attention should be paid to the relationship between alliance and treatment types.

This research also contributes to the literature on the relationship between alliance and outcomes. Specifically, it was found that the strength of the alliance early in therapy plays a role in determining subsequent outcomes independent of prior symptom change and initial severity. This provides support to the assumption that the alliance drives symptom changes rather than merely being the product of prior symptom improvement. However, as the alliance-outcome relationship was found to

be stronger when prior symptom improvement and baseline severity were not controlled for in the analyses, future research should control for these variables to avoid inflated estimates of the alliance effect. Finally, this research found evidence that the alliance and its dynamics, including the process of resolving alliance ruptures, can play an important role in producing change in psychodynamic treatment. From a clinical perspective knowing the alliance's - and its dynamics - subsequent effect on youth outcomes, clinicians should increase efforts to foster a good alliance and repair eventual ruptures through treatment. Alliance research is complex but important to provide further insight into what makes psychotherapy work and inform clinical practice.

To my uncle Carlo:
I miss you,
but you keep inspiring me,
and always will.

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Chapter 1. The content of this thesis

1.1 Introduction

The importance of the quality of the relationship between patient and therapist in talking therapies has long been recognised, and strenuous efforts have been made to conceptualise and measure this crucial and universal element of psychological treatments. The most studied aspect of this relationship is the alliance, which refers to the collaboration between patient and therapist in the therapeutic process. Different labels have been chosen to describe this important, yet complex, psychotherapy variable. Terms such as *therapeutic alliance, treatment alliance, working alliance,* and *helping alliance* have all been used to refer to one or more specific aspects of the alliance. Because the use of these labels has not been consistent, the term *alliance* is mostly used in this thesis.

Over the last few decades, a growing body of research has endeavoured to understand the role of the alliance in psychotherapy. No other therapy process factor has received as much attention in empirical research as the alliance. Most of the studies on the alliance investigated its relationship with outcomes and found a moderate but consistent association between strong alliance and good outcomes across a broad array of psychological treatments (Flückiger et al., 2018; Karver et al., 2018). While the literature on the alliance in adult psychotherapy is vast and complex, youth psychotherapy research, despite its recent growth, lags behind the adult literature and presents several methodological limitations (Karver et al., 2018; McLeod, 2011).

The overall aim of this PhD is to seek a deep understanding of the role of the alliance in youth psychotherapy. Specifically, this thesis will focus on the role of the alliance in the treatment of adolescent depression, as this is one of the most common mental health issues for which this age group seeks treatments. To provide some context for this thesis, this chapter presents a brief overview of the treatments for adolescent depression, followed by a short description of the content and structure of this thesis.

1.2 Treatments for adolescent depression

Treatments for depression include both medications and talking therapies, and the guidelines and choices of treatment are not the same for adolescents and adults.

International guidelines for the treatment of adolescent depression advise psychological therapies and/or selective serotonin reuptake inhibitor (SSRI) antidepressants (Birmaher et al., 2007; Sinyor et al., 2020). However, clinical guidelines vary in different countries, especially around the issue of the use of antidepressant drugs in patients younger than 18 years old (Thapar et al., 2012).

In the UK, the National Institute for Clinical Excellence (NICE) provides national guidance for the appropriate treatment and care of mental health conditions. For moderate to severe depression in children and adolescents, NICE (2019) guidelines recommend evidence-based psychological therapies as the first line of treatment (Luxton & Kyriakopoulos, 2021). They also caution against prescribing antidepressants unless the young person is unresponsive to psychological therapy, in which case they recommend combined psychological therapy and fluoxetine, a type of SSRI (NICE, 2019). This is because, unlike with adults, tricyclic antidepressants have demonstrated, at best, to be only moderately effective (Hetrick et al., 2012) or not effective at all (Goodyer et al., 2007) in the treatment of adolescents with depression. Furthermore, antidepressant drugs might lead to serious risks including suicide and aggression (Sharma et al., 2016). Currently, in the UK Fluoxetine is the only approved antidepressant for persons under 18 years of age (NICE, 2019).

Amongst all psychological treatments, CBT has been the most well-studied therapy type, with several meta-analytic studies providing evidence for its effectiveness in the treatment of adolescent depression (Jacobs et al., 2008; Muñoz-Solomando et al., 2008; Oud et al., 2019). In the last few decades, research has endeavoured to examine the effectiveness of other therapeutic approaches too. There is some growing evidence for the effectiveness of interpersonal psychotherapy (IPT) (Duffy et al., 2019; Tang et al., 2009), family therapy (G. S. Diamond et al., 2002, 2010; Sanford et al., 2006), and psychodynamic psychotherapy (Goodyer et al., 2017a; Midgley et al., 2020; Trowell et al., 2009) in the treatment of adolescents with depression.

Based on existing empirical evidence, over the last two decades NICE (2019, 2005) guidelines in the UK have recommended CBT as the first choice evidence-based treatment for adolescent depression. Further, due to the growing research on the effectiveness of other therapies too, more recently they have also included IPT, family therapy, psychodynamic psychotherapy, and brief psychosocial intervention as

alternative evidence-based psychological therapies for adolescent depression (NICE, 2005, 2019).

Despite the increasing understanding that talking therapies are effective treatments for adolescents' mental health issues (Cuijpers et al., 2020; NICE, 2005), less is known about what makes psychotherapy work. Therapies comprise a package of interventions, and when these are tested for efficacy, it remains unclear which of their many components were necessary or sufficient for ensuring change. Therefore, psychotherapy research has become interested in discovering which psychotherapy processes are responsible for outcomes. As different psychological interventions have often shown similar effects (Cuijpers et al., 2008; Goodyer et al., 2017a), clinicians and researchers have endeavoured to explore whether there are shared or unique features of effective therapies which contribute to their success. Concerning the relationship between patient and therapist, a universal aspect of all therapies, the therapeutic alliance has been considered a key variable across most types of psychotherapy. Based on the evidence that the alliance is associated with outcomes in youth psychotherapy (Karver et al., 2018), this thesis makes the case that the alliance is a promising research avenue to shed more light on which aspects of the therapeutic process are effective in treating adolescent depression. Some reflections on whether there are any specific issues to be considered in regard to the therapeutic alliance when working with depressed adolescents are reported in Chapter 3 (paragraph 3.7).

1.3 The content and structure of this thesis

This thesis aims to seek to better understand the role of the alliance in the treatment of adolescent depression. To do so, after presenting an overview of the available literature on the alliance in youth psychotherapy, it includes four studies exploring different aspects of the alliance in a sample of adolescents who received therapy for depression. These empirical studies all draw on data from the "Improving Mood with Psychoanalytic and Cognitive Therapies" (IMPACT, Goodyer et al., 2011, 2017a) and the "IMPACT-My Experience" (IMPACT-ME, Midgley et al., 2014) studies.

Following this introductory chapter, the second chapter of this thesis focuses on the theoretical and empirical definition of the alliance and describes the literature on the alliance-outcome relationship in youth psychotherapy. The third chapter focuses on what has been called the 'second generation of the alliance research',

which studies the alliance fluctuations over the course of therapy, including the processes of alliance ruptures and resolutions. The fourth chapter describes the context of the empirical studies presented in this thesis by introducing the IMPACT and IMPACT-ME studies and the epistemological position of this research project. This is followed by four empirical chapters, each outlining one of the four studies that comprise this research project. Each study attempts to address a different aspect of the alliance including (a) its measurement (Study 1 presented in Chapter 5), (b) the relationship between alliance strength and treatment type (Study 2 presented in Chapter 6), (c) the alliance-outcome relationship (Study 3 presented in Chapter 7), and (d) the alliance dynamics, including its ruptures and resolutions, and their role in the change process in short-term psychoanalytic psychotherapy (Study 4 presented in Chapter 8). The final chapter includes the overall discussion of the research of this thesis where the results of each empirical study are brought together and discussed in the context of the available literature in the field of youth alliance research.

Research on psychotherapy processes is essential to actively identify which factors contribute to treatment outcomes and to inform evidence-based principles in psychotherapy (Norcross, 2011; Norcross & Wampold, 2011). With this thesis, I endeavour to do so by shedding more light on the role of the alliance in the treatment of young people. Gaining a better understanding of the role of the alliance has the potential to increase knowledge of what factors/processes affect outcomes. It is hoped that this is a step towards providing useful clinical guidance regarding the therapeutic relationship when treating adolescents presenting with depression.

Chapter 2. The alliance and its relationship with outcomes in youth psychotherapy

2.1 Introduction

The literature on the alliance is vast and complex, and some have argued that it can be divided into three periods (De Bei et al., 2007; Hatcher, 2010a). The first period refers to the concept definition and starts with Freud's writings on transference in 1910-1912. The second period could be dated from the mid-1970s and refers to the operationalisation of the alliance and the empirical investigation of the relationship between alliance and psychotherapy outcomes. The third period, starting around the 1990s, is characterised by a shift in the alliance research towards a better understanding of what makes the alliance therapeutic. Specifically, it focuses on the alliance fluctuations, including the processes of alliance ruptures and resolutions, and the role they play in relation to outcomes. These three periods are interconnected and overlap.

This chapter will present a brief review of the first two periods of the alliance literature. The third period will be covered in Chapter 3. Since this thesis focuses on the role of the alliance in the treatment of adolescents, the emphasis will be on the alliance literature in the context of youth psychotherapy.

2.2 Origin of the alliance theory in the psychoanalytic tradition

"The concept of a working alliance is an old one in both psychiatric and psychoanalytic literature. It has been described under a variety of labels." (Greenson, 1965, p. 156).

The concept of the alliance has deep roots in the psychoanalytic literature. The first author to use the term 'therapeutic alliance' was Elizabeth Zetzel in 1956. However, the origin of the concept -but not the term itself- could be traced back to the work of Freud. Since his early studies on hysteria, Freud recognised the need to "*make the patient into a collaborator*" for the success of treatment (Breuer & Freud, 1893-95; p. 282.). Yet, he noted that the relationship between patient and therapist is coloured by 'shadows' from the patient's past (e.g. unconscious conflicts and fears) that get transferred onto the therapist, a process Freud (1912) called transference. Transference was initially considered an obstacle to therapy, as it leads to the patient's

tendency to repeat rather than remember in an attempt to avoid certain painful feelings from the past. In this sense, transference can hinder the therapeutic work of exploring and working through negative feelings. To explain what keeps the patient in treatment in the face of these unconscious fears and reluctance to explore repressed material, Freud postulated the existence of some "*friendly and affectionate aspects of the transference*"; which he called '*unobjectionable positive transference'* (1912, p. 105). Positive transference was considered an aid to therapy, being "*the strongest motive of the analysand for co-operating in the work of analysis*" (S. Freud, 1937, p. 388). Nevertheless, Freud was more concerned with the negative aspects of the transference and did not elaborate much on its positive counterpart (Meissner, 2001).

Consistent with Freud's ideas, others used terms such as rational transference (Fenichel, 1941) or mature transference (Stone, 1961) to refer to some collaborative aspect of the relationship between patient and therapist within the transference phenomena. Sterba (1934) expanded on Freud's formulation of the positive transference, by suggesting that the patient has a rational, observing capacity with which the analyst can ally against the irrational forces of the patient's transference and defences. Zetzel (1956) further elaborated on this and coined the term "therapeutic alliance" to better disentangle this positive and more rational aspect of the relationship from the transference. A few years later, Greenson (1965) expanded on the difference between transference and alliance and introduced the term "working alliance" to describe "*the relatively nonneurotic, rational rapport which the patient has with his analyst"* (Greenson, 1965, p.157). He preferred the term working alliance to the existing terminology "*because it emphasises its outstanding function: it centres on the patient's ability to work in the analytic situation."* (Greenson, 1965, p. 157).

In line with Sterba (1934) and Zetzel (1956), Greenson (1965) proposed that the working alliance is formed between "*the patient's reasonable ego and the analyst's analysing ego"* (p. 157) and it is based on "*the patient's motivation to overcome his illness, his conscious and rational willingness to cooperate, and his ability to follow the instructions and insights of his analyst*". (p.157). Greenson (1971) was also responsible for conceptualising the therapeutic relationship as a more reality-based collaboration between patient and therapist consisting of three components: (1) the working alliance, e.g. the part of the relationship devoted to the "work" of treatment, (2) the transference and countertransference, e.g. the distortions and defensive projections of both patient and analyst, and (3) the real relationship, e.g. the real and

transference-free reactions between patient and analyst (Greenson, 1971). However, while transference and alliance might be two distinct aspects of the same relationship, there is not a clear-cut distinction between them: in all *"relationships there is some element of transference"* (Greenson, 1971, p. 218).

Despite the attempts to distinguish between alliance and other transference reactions, in the psychoanalytic tradition the early conceptualizations of the alliance were all anchored to the notion of transference. Hence, the efforts to distinguish the alliance from the transference remained (and remains) controversial. This is because, in this tradition, some authors have used the transference construct to explain the whole therapist-patient relationship and have downplayed or openly critiqued the concept of the alliance (Brenner, 1980; Joseph, 1985; Klein, 1952); whereas others have embraced it as a structural dimension of the therapeutic relationship crucial for outcomes (Greenson, 1971; A. Freud, 1946). It is also important to notice that, in the psychoanalytic tradition, the alliance was originally described as a one-sided concept, rather than a relational one, and more emphasis was initially placed on the patient's - unconscious or conscious- contributions to the alliance than the therapists' contributions. Furthermore, in the early psychoanalytic formulations, the alliance was not considered as a therapeutic mechanism in itself, but as a necessary pre-condition for the therapeutic work. Later developments on the conceptualisation and role of the alliance within and outside the psychoanalytic tradition are described below.

2.3 Towards a more pan-theoretical definition of the alliance

Despite its psychoanalytic origin, the concept of the alliance was soon recognized as a relevant construct by other psychotherapeutic traditions, including Humanistic, Cognitive and Behavioural approaches (Hayes et al., 2007; Leahy, 2008; Raue et al., 1997; Rogers, 1965). In contrast to the initial psychoanalytic formulations of the alliance that emphasised the unconscious distortions of the relationship between therapist and patient (i.e. Freud, 1912; Sterba 1934), other traditions shifted the attention to the real relationship and to the therapists' contributions to it (Rogers & Wood, 1974). Furthermore, several authors started to emphasise the curative role of the alliance in and of itself, rather than considering it a pre-condition for other therapeutic interventions (Beck, 1979; Bordin, 1979; Rogers, 1965). This emphasis was particularly strong in the Humanistic tradition, where the therapist's willingness to

be empathic, congruent, and unconditionally accepting of the client was seen as a sufficient condition for therapeutic success (Rogers, 1965). Seminal contributions by Luborsky (1976) and Bordin (1979) were responsible for the modern developments in the alliance definition and for galvanizing interest in the role of alliance across diverse theoretical traditions. They also began to link the clinical and conceptual ideas on the alliance to the empirical field.

Luborsky (1976) proposed an extension of Zetzel's (1956) conceptualization of the alliance, which he called "helping alliance", by highlighting its dynamic and interactive nature. Specifically, he acknowledged more actively the contribution of both patient and therapist and suggested that the alliance develops in two phases. The first phase is characterised by the therapist's efforts to create a secure holding relationship, which enables the patient to trust the therapist as a potent source of help (Type I alliance). Building on this, in the second phase, the patient assumes a more active role and, in a collaborative relationship with the therapist, is committed to overcome his/her problems and work to achieve the goals of therapy (Type II alliance) (Luborsky, 1976). This alliance definition, while still rooted in the psychoanalytic tradition, was one of the first to be operationalised and placed in a broader clinical and empirical context, i.e. not exclusively within psychoanalytic psychotherapy.

In 1979 Bordin completely lifted the alliance out of its psychoanalytic theoretical framework. He, like Greenson (1965), talked of 'working alliance', but his ideas departed from the psychoanalytic premises and contained the assumption that the alliance is a generic phenomenon independent of treatment modality. Bordin described the alliance as a "*mutual understanding and agreement about change goals and the necessary tasks to move toward these goals along with the establishment of bonds to maintain the partners' work*" (Bordin, 1994, p. 13). This definition involves three interrelated processes: agreement on therapeutic goals, agreement on therapeutic tasks, and the quality of the relational bond between the patient and therapist. Goals are the changes that the therapeutic process aims towards. The tasks are the activities necessary to meet such goals. The bond refers "*to the nature of the human relationship between therapist and patient*" and the importance of establishing "*some basic level of trust*" (1979, p. 254).

Bordin's definition, being a-theoretical, was considered as a "pan-theoretical" concept (Horvath & Luborsky, 1993) and has become the most used definition to date in the alliance literature. Importantly, although Bordin (1979) considered his definition

'universally applicable' (Bordin, 1979, p 252), he also recognised that various types of therapy would emphasize different alliance aspects. For instance, the tasks assigned during therapy might vary across different psychological therapies, and clinicians from different approaches might focus more on the bond rather than discuss more or less openly tasks and goals. Yet, this hypothesis has received little empirical attention and uncertainty remains about whether alliance actually manifests differently in different types of therapy (Horvath, 2018). The relationship between alliance and treatment type is further discussed in Chapter 6.

There has been little theoretical elaboration of the meaning and structure of the alliance since Bordin's definition of the construct and, thus far, there is not a unique and commonly accepted alliance definition. Without a rigorous theoretical debate about the conceptualization of the construct, starting from the mid-1970s, there has been a straight move into the empirical measurement of the alliance (Horvath, 2018). In other words, the literature on the alliance moved from the theoretical field to the empirical one. To understand this shift, it is important to consider the historical/intellectual context in which the alliance became popular in psychotherapy research.

The interest in the role of the alliance was primarily stimulated by the results from numerous studies indicating that different forms of psychotherapy are equally effective (Luborsky et al., 1975; Rozenzweig, 1936; Smith & Glass, 1977). Since different psychological therapies have shown similar results, researchers and clinicians have become increasingly interested in understanding whether there are common factors across various types of therapy that are responsible for their success. The alliance was a perfect candidate for such a generic, common psychotherapy variable. Another source of the growing interest in the alliance was due to the relational turn in many psychotherapeutic traditions. Clinicians from various therapeutic approaches began to emphasise the importance of relational factors, like the alliance, in therapy (for more details see Lingiardi et al., 2016). Based on this 'need' to learn more about psychotherapy process and the role of the alliance in psychotherapy, starting from the mid-1970s, several researchers endeavoured to develop alliance measures, even if the conceptualisation of the construct was not clear yet. This resulted in a proliferation of alliance measures. More details on the operationalisation of the alliance and the research on the alliance-outcome relationship are reported in paragraphs 2.5 and 2.6, respectively.

2.4 Developmental considerations on the alliance and its components

As the construct of the alliance was originally developed in the context of therapeutic work with adults, it is critical to reflect on how it might translate to youth psychotherapy. Developmental issues make working with young people different from working with adults. Adolescence involves numerous transitions including puberty, identity development, separation from caregivers, forming friendships and romantic relationships, as well as managing academic demands (Spear, 2000). Puberty is a critical physical process that deeply affects personality development: physiological changes are related to emotional changes and the way to relate to oneself and others. Therefore, several developmental considerations need to be taken into account when assessing the nature and role of the alliance and its components in youth psychotherapy (Norcross, 2011).

Similar to the adult literature, the theorisation on the alliance with young people started in the psychoanalytic tradition. Anna Freud (1946) was one of the first to talk about the alliance with young people. She considered the alliance as the more mature and rational part of the therapeutic relationship based on the young person's wish for help with internal difficulties (A. Freud, 1946). According to her, the alliance "*involves an acceptance of the need to deal with internal problems and do analytic work in the face of internal resistance or external resistance, as from the family*" (Sandler et al., 1980 p.45). Like Greenson (1965), Anna Freud attempted to disentangle the alliance from the transferential components of the therapeutic relationship, but also recognised that some elements of the transference might inevitably influence the alliance: "*a solid alliance […] is not the same as positive transference even though positive transference may assist the alliance "(*Sandler, et al., 1980, p.47). This alliance definition, perhaps due to its affiliation to a specific therapeutic tradition, was neglected in the empirical field and two other definitions have been prominent in both the theoretical and empirical alliance literature in youth psychotherapy.

In line with the adult literature, Bordin's (1979) conceptualisation of the alliance is one of the most widely used with younger patients too. Alongside Bordin's definition, Shirk & Saiz (1992) developed the other prominent alliance conceptualization in youth psychotherapy. They described the alliance as a two-dimension phenomenon, including an affective and a collaborative component (Shirk & Saiz, 1992). The affective component refers to the interpersonal relationship between patient and

therapist (similar to Bordin's bond). The collaborative component addresses the more contractual aspects of the treatment process and planning (i.e. the young person's involvement in the specific tasks/activity of therapy). Although this alliance conceptualization draws upon Bordin's (1979) ideas, it is also rooted in the psychodynamic perspectives of the therapeutic relationship (A. Freud, 1946; Meeks & Bernet, 1971; Shirk & Saiz, 1992) and it has been specifically developed for young people.

Like in the adult literature, in youth psychotherapy there is not a consensual definition of the alliance. Further, uncertainty remains about which elements of the therapeutic relationship (e.g. bond, agreements on goals and/or tasks) constitute a good alliance with young people. Notably, in the youth alliance literature more has been written about the affective/relational component, than any other alliance components (A. Freud, 1946; Karver et al., 2008; Shirk & Saiz, 1992; Zack et al., 2007). Such emphasis has been based on the assumption that a positive bond is an essential prerequisite to foster young people's participation in the therapeutic work (Axline, 2013; A. Freud, 1946; Hougaard, 1994; A. E. C. Kazdin et al., 1990; Reisman & Ribordy, 1993). This is because youths' motivation to engage in treatment might be lower than in adults for several reasons (DiGiuseppe et al., 1996). Firstly, differently from adults, young people tend to be referred to treatment by others (parents, family and/or school) and attending mental health services may conflict with their needs for social acceptance and autonomy (Gopalan et al., 2010). Secondly, adolescence is characterised by establishing independence from adult figures, which may impact on young people's willingness to engage with adult clinicians (Gopalan et al., 2010). As such, the issue of trust has been regarded as particularly important due to "*the mistrust, suspicion, scepticism, and doubt that they [adolescents] often experience in association with their effort to break the ties with the parental figure*" (Sandler, et al., 1980, p.50).

However, sometimes young people do express a need for help, especially when older and/or experiencing anxieties or obsessional problems. Accordingly, some have criticized the exclusive emphasis on the bond component of the alliance in youth psychotherapy for failing to recognise the importance of its more contractual features (DiGiuseppe et al., 1996; Sandler et al., 1980). For instance, Sandler and colleagues (1980) took a developmental perspective on the alliance and specified that, while for a young child the bond might constitute "*the main basis for the therapeutic work*"

(p.47), an older child and/or adolescent is expected to develop "*a proportionally greater awareness of his problems and greater wish to work towards their solutions; for him less of the work should depend on a positive relationship with the therapist*" (Sandler, et al., 1980, p.45). The cognitive perspective has also emphasised the importance to reach a collaboration on therapy goals and tasks for the success of treatment (Leahy, 2008). These considerations point to the importance of a collaborative effort between patient and therapist for a successful alliance with young people.

Nonetheless, important developmental considerations concern the alliance tasks and goals components and especially their distinction. Firstly, developing an agreement on goals may be particularly challenging if the young person has been referred to treatment by others (Fernández et al., 2016; A. E. Kazdin, 2003). Secondly, a variety of cognitive skills is necessary to formulate long term-therapeutic goals and to elaborate the link between such broad, sometimes abstract, goals, and the specific tasks of therapy (Shirk, 2013; Zack et al., 2007). Such judgments may exceed the cognitive capacities of some young people. Furthermore, young people have little knowledge or understanding about the activities expected in therapy (DiGiuseppe et al, 1996). Accordingly, it has been argued that in youth psychotherapy it might be more appropriate to talk about an overall collaborative alliance component, rather than distinguish between alliance tasks and goals, in line with Shirk & Saiz's (1992) alliance definition.

Another difference between adult and youth alliance is that the latter is more complex, as it is not only based on a single, dyadic relationship between patient and therapist, but it also includes an alliance with caregivers. Caregivers can be directly or indirectly involved in youth psychotherapy. They could be the referral source and/or they might be involved in the initial assessment or some of the sessions. Even when caregivers are not directly involved with their children's treatment, they are often responsible for bringing them to therapy, and/or for its financial cost. Consequently, alongside developing an alliance with their young patients, youth therapists need to negotiate an alliance with their patient's caregiver(s) and perhaps manage various sets of goals, as the goals of parents and youths might diverge. In this regard, Anna Freud (1946) argued that a poor alliance with the caregivers might hinder the therapeutic work with the young patient directly or indirectly: "*often the way the young*

patient brings material to the session reflects the attitudes of the parents to the treatment" (p.51).

With regards to the role of the alliance in the treatment of young people, the literature is mixed. In the psychoanalytic tradition, although Anna Freud considered the alliance a *"prerequisite for all later work"* (Freud, A. 1946, p. 31), she also highlighted that the alliance can be a mechanism of change. In this sense, the therapist could act as a new and understanding object, providing the young person with a different experience, which can produce change in and of itself (A. Freud, 1946). The emphasis on the importance of the alliance, or the therapeutic relationship more generally, as curative has also been highlighted by play therapists (Axline, 1947, 2013; Landreth, 1993). In this tradition, the young person's experience of the therapist as supportive, attuned, and non-judgmental is considered central for therapeutic change. Drawing on the work of Rogers (Rogers & Wood, 1974), play therapy is seen as an opportunity for the young person to experience the relationship with the therapist as a curative factor (Axline, 2013). In cognitive behavioural therapy (CBT) relationship factors were initially hardly considered, or only considered as a way to facilitate the young person's involvement in the tasks of therapy (Kendall et al., 2009). However, with the second generation CBT the alliance started to be seen as directly beneficial and a vehicle for promoting therapeutic learning and change in this tradition too (Leahy, 2008; Tee & Kazantzis, 2011).

2.5 Operationalisation of the alliance construct

Researchers wishing to develop measures to assess the alliance were faced with an important challenge: the lack of a consensually endorsed definition of the construct. This inevitably led to an proliferation of measures based on various conceptualizations of the construct. A conservative estimate suggests that over 70 different measures have been used in alliance research, and the development of new instruments continues (Elvins & Green, 2008; Horvath, 2018). Due to the abundance of alliance measures, this review provides only a brief description of the core alliance measures in the youth literature.

There is excessive variability in how the alliance construct has been measured with young people. Furthermore, despite the developmental difference between adults and adolescents, in most cases, the operationalization of the alliance has been directly imported or mildly revised from the adult core alliance measures (Elvins & Green,

2008). The latest review on the alliance–outcome relationship in youth psychotherapy identified 17 different measures across 28 studies (Karver et al., 2018). Such diversity of measures reflects substantial variability in alliance definitions. Bordin's (1976) and Shirk and Saiz's (1992) definitions of the alliance have been the most widely used as a theoretical base for the development of most youth alliance measures. A brief description of the four most used alliance measures is reported below.

2.5.1 Youth alliance measures

The two most frequently used self-report measures of the alliance with young people are the Working Alliance Inventory (WAI) (Horvath & Greenberg, 1989) and the Therapeutic Alliance Scale for Children (TASC) (Shirk & Saiz, 1992). The TASC has been used more often with children and young adolescents, while the WAI has been used primarily with adolescents and adults. Several observer-rated measures of the alliance have also been developed. Amongst these, the two most used are the Vanderbilt Therapeutic Alliance Scale (VTAS) (Faw et al., 2005; Hartley & Strupp, 1983) and the Therapy Process Observational Coding System for Child Psychotherapy–Alliance scale (TPOCS–A) (McLeod & Weisz, 2005).

The WAI was originally developed for adult therapy and then adapted for use with young people. Two adapted versions of the WAI have been developed: the WAI-Adolescent (WAI-A) (DiGiuseppe et al., 1996) for use with adolescents aged between 11 and 18, and the WAI-Children and Adolescents (WAI-CA) (Figueiredo et al., 2019) for children and adolescents aged between 7 and 17. Nonetheless, the original adult version, and especially the short version of the WAI (WAI-S; Tracey & Kokotovic, 1989) have been employed most frequently with young people (Shirk, et al., 2011; Karver et al, 2018). The WAI and the WAI-S include patient, therapist, and observer rated versions. All WAI versions aim to measure Bordin's three-dimensional alliance model (Bond, Task and Goal) and have demonstrated adequate internal consistency and good discriminant validity in different populations (Capaldi et al., 2016; DiGiuseppe et al., 1996; Figueiredo et al., 2016; Hawley & Garland, 2008). Similar to the adult literature, all factor analytic studies have indicated that the WAI is essentially unidimensional with adolescents (Anderson et al., 2012; DiGiuseppe et al., 1996; Falkenström et al., 2015; Marcus et al., 2011). More information about this scale is reported in Chapter 5.

The TASC was developed specifically for youth therapy and is based on Shirk and Saiz's (1992) alliance definition. As such, it includes items targeting two alliance components: the affective bond and the collaboration (Shirk & Karver, 2003; Shirk & Saiz, 1992). Although the TASC items on the Bond subscale remain constant, the items on the Collaboration scale vary with treatment type to be consistent with CBT or psychodynamic tasks. The TASC includes parallel versions for the child and the therapist, but no observer version. The TASC subscales have shown good internal consistency and stability (Shirk et al., 2008). Similar to other alliance measures for young people, multiple studies demonstrated positive and high associations between the TASC subscales within raters (Accurso & Garland, 2015; Fjermestad et al., 2012; Ormhaug et al., 2015; Shirk & Saiz, 1992).

The VTAS is an observer-rated alliance instrument that draws upon both psychodynamic (Greenson, 1965; Luborsky, 1976) and pan-theoretical conceptualisations of the alliance (Bordin, 1979). Like the WAI, the VTAS was developed for adult samples and later adapted for use with adolescents (Gomes-Schwartz, 1978; S. Johnson et al., 1998). The VTAS items are grouped into three theoretically based subscales: (a) Therapist Contribution (b), Patient Contribution, and (c) Therapist-Patient Interaction. However, factor analytic studies in youth samples have found high correlations between the subscales and suggested the use of the overall score only (G. M. Diamond et al., 1999; Faw et al., 2005; Meyer et al., 2002; Shelef & Diamond, 2008). The VTAS has demonstrated adequate reliability as well as construct and predictive validity (Shelef & Diamond, 2008).

The TPOCS (McLeod & Weisz, 2005) is an observer-rated instrument that assesses the affective elements of the alliance and client participation in treatment. Like the TASC, it has been specifically developed for children and children and adolescents (aged 8-18 years old) and is based on Shirk and Saiz's (1992) two-dimensional model of the alliance. Accordingly, it includes two subscales measuring the bond and task elements of the alliance (McLeod & Weisz, 2005). However, a factor analytic study found that the overall score best represented the structure of this scale (Fjermestad et al., 2012). The psychometric properties of the TPOCS–A have been

supported across different types of child problems and treatments (Chiu et al., 2009; Langer et al., 2011; Liber et al., 2010; McLeod & Weisz, 2005).

Alongside, these four most used measures there are many less well validated alliances instruments and assessment that have been used in a few studies only.

2.5.2 Measurement issues

Despite the popularity of the alliance concept, defining and measuring this complex construct has involved several conceptual and methodological challenges, and the construct and its measurements have attracted criticisms (Elvins & Green, 2008; Horvath, 2011). One of the main criticisms concerns the ambiguity about the way the alliance and its structure have been operationalised. This issue is mostly resulting from the absence of a consensual definition of the alliance, and the consequent proliferation of different labels and measures. While there are some important shared aspects across the many alliance definitions and measures, there are some concerns about the extent to which various measures assess the same construct (Elvins & Green, 2008; Horvath, 2011).

Another issue concerns the factor structure of the alliance scales. Conceptually the alliance has been defined as a multidimensional phenomenon, therefore, most alliance measures include different subscales to assess the different alliance components. Yet, there is accumulating evidence indicating that youth alliance scales are not able to discriminate between the various alliance components (Diamond et al., 1999; Faw et al., 2005; Fjermestad et al., 2012; Hogue et al., 2006; Meyer et al., 2002; Shelef & Diamond, 2008; Shelef et al., 2005). This raises questions on whether the alliance with adolescents really is a one-factor phenomenon, and/or whether the current measures struggle to empirically discriminate the various alliance components. Further research is needed on the factor structure of youth alliance scales to shed more light on these issues (see Chapter 5 for more details on the factor structure of the WAI-S).

There also are several criticisms of the way standard scales assess the strength of the alliance. Some researchers have argued that existing measures do not capture the way patients perceive the alliance in therapy (Bedi, 2006; Mohr & Woodhouse, 2001; Owen et al., 2013). It has been suggested that alliance scales should describe the alliance aspects accordingly to what patients and therapists report as being

important to them (Bedi, 2006). Qualitative research is needed to grasp the unique, holistic constellations of alliance components from both patients' and therapists' perspectives and inform the development or refinement of alliance scales.

A further criticism of therapeutic alliance scales is that nearly all of them do not capture any aspect of the alliance related to a specific therapeutic approach (Hatcher, 2010a). Empirically the alliance has been operationalised as a general psychotherapy variable and alliance scales have been used across different therapeutic approaches, even if their 'pan-theoretical' nature has not been empirically evaluated (Horvath, 2018). More should be learnt about the relationship between alliance and therapeutic approach and future research ought to determine whether some measures capture aspects of the alliance that are more typical of certain types of treatment than others. For instance, it might be that agreement on therapy task is an aspect of the alliance more present in CBT than other types of treatment, and therefore it might be rated more poorly in other therapeutic traditions (see Chapter 6 for more details on the relationship between alliance and treatment type).

Overall, the abovementioned issues highlight the importance of addressing the measurement limitations of the existing alliance scales, as they could be adding noise to alliance research and its findings.

2.5.2 The alliance-outcome link in child and adolescent psychotherapy

The most popular aspect of alliance research concerns the study of the relationship between alliance and therapy outcomes. In the adult literature, a growing body of evidence has demonstrated a moderate but consistent association between high alliance and good outcomes ranging from $r = .21$ to $r = .28$ (Eubanks et al., 2018; Horvath et al., 2011; Horvath & Bedi, 2002; Horvath & Symonds, 1991; Martin et al., 2000). This association was found to be consistent across various (a) assessor perspectives, (b) alliance and outcome measures, (c) treatment approaches, and (d) patient characteristics (e.g. age, gender, problem type). Based on this extensive evidence, the American Psychological Association concluded that fostering a good alliance represents an important component of evidence-based practice (Norcross et al., 2011).

Following the adult literature, in the last two decades, youth psychotherapy research has also endeavoured to assess the alliance-outcome association. To summarize this growing body of research, to date, six meta-analytic reviews have

been conducted on the alliance-outcome link in children and adolescent psychotherapy. In line with the adult literature, their findings have demonstrated the existence of a relationship between strong alliance and good outcomes (Karver et al., 2006, 2018; McLeod, 2011; Murphy & Hutton, 2018; Shirk et al., 2011; Shirk & Karver, 2003). However, compared to the adult literature, the alliance-outcome association was found to be smaller (ranging from r=.14 to .29) and moderated by several variables, such as treatment type and patient's presenting problems. Moreover, the meta-analyses on the alliance-outcome relationship in youth psychotherapy, especially the earlier ones, have been hampered by several methodological shortcomings and need to be interpreted with caution. More details about each of these meta-analyses are presented below.

Shirk and Karver (2003) conducted the first meta-analysis on the relationship between several relationship variables, including the alliance, and outcomes across different forms of child and adolescent psychotherapy (e.g. family therapy, group and/or individual therapy). This meta-analysis included 23 studies and yielded a moderated mean weighted association of r=.22, which was moderated by several variables. Specifically, this association resulted higher (a) in adolescents with externalising rather than internalising disorders, (b) if the alliance was measured later rather than earlier in therapy, and (c) if the alliance reporters were professionals (therapists/treatment provider) rather than young patients. Since this review did not focus directly on the alliance, but included a wider set of relationship variables, it is unclear whether the estimated effect is a valid measure of the alliance-outcome association.

A few years later, Karver and colleagues (2006) conducted a second meta-analysis and attempted to address some of the issues of the previous review. Although the focus of this second review was still the relationship between the broad category of relationship variables and outcomes in youth and family therapy, the authors produced a separate effect size estimate for the studies that specifically focused on the alliance. Of the 49 studies included in this review, only 10 reported on the alliance. The magnitude of the alliance–outcome association across these 10 studies was found to be moderate (r=.21) but varied widely across studies (ranged from 0.05 to 0.49).

Alongside their small sample sizes, the first two meta-analyses were both limited by their broad inclusion criteria. Firstly, they consisted of studies using different

modes of therapies, and the role of the alliance might vary in individual settings compared with group settings, like family therapy. Secondly, they included studies where alliance and outcomes were measured concurrently (e.g at the same time, usually late in treatment) rather than requiring alliance assessments to be conducted prior to outcome measurements (i.e. prospective assessment of the alliance-outcome relationship). This is an important limitation as measurements of relationship variables late in therapy might be confounded with outcomes and therefore be biased by the concurrent perception of progress. As such, this research design makes it more difficult to assess whether the alliance drives symptom improvement, and it is not a product of it.

Despite their limitations, these first reviews stimulated further interest in the alliance-outcome association in youth psychotherapy and led to an increase in research in the field. Following this progress, in 2011 two further meta-analyses were published focusing exclusively on alliance measures (McLeod, 2011, Shirk, et al., 2011). One of them was conducted by McLeod (2011) and included 38 studies assessing the alliance–outcome relation in different modes of therapies (e.g. child-, parent-, and family-focused intervention) for children and adolescents. In this review the mean weighted effect size estimate was found to be lower than previous estimates (r=.14) and varied across many factors. In particular, the alliance-outcome association was found to be higher (a) for children than adolescents, (b) in individual therapies than family therapies, (c) when the alliance was rated by parents than by either youth and observers, (d) in samples of youths with externalising and "mixed" problems than in sample of youths with internalising and substance abuse problems, (e) when the alliance was assessed late, as opposed to earlier in treatment, (f) in studies that relied upon the same informant source for both alliance and outcome than in studies using multiple informants. Although this review had a larger sample size than previous ones, it still adopted broad inclusion criteria (e.g. different types of therapy and concurrent rather than prospective assessment of the alliance-outcome association), which limit the interpretation of its findings.

Utilising more strict inclusion criteria, in the same year, Shirk and colleagues (2011) conducted the first meta-analysis that assessed the prospective association between alliance and treatment outcome (e.g. alliance measured prior to outcomes) in individual youth treatment only. As a result, only 16 studies could be included in this review, which yielded an overall weighted mean correlation of r=.22. Although there

were trends showing stronger alliance–outcome associations for child versus adolescent therapy, and for behavioural versus nonbehavioral therapies, only problem type significantly moderated the alliance–outcome association. Specifically, the alliance-outcome relation was stronger for young people with eating disorders than for young people with substance abuse and mixed problems. While this meta-analysis was the first to use inclusion criteria like those used in the adult alliance literature, the sample size was very small (n=16), limiting its power.

Since 2011 there has been an extensive increase in studies evaluating the alliance–outcome association in youth individual therapy. Thus, in 2018 two other meta-analyses were produced. Karver and colleagues (2018) updated their 2011 meta-analysis and found a weighted effect size of r=.19 across 28 studies assessing the prospective relation between alliance and subsequent outcome in child- and adolescent- individual treatments. In this review, the alliance-outcome association was found to be similar across youth gender and ethnicity, but moderated by treatment type and setting, study design, and young person's presenting problem. Specifically, larger effect sizes were observed for (a) outpatient than inpatient treatment, (b) behavioural treatment than treatment that was a mix of behavioural and nonbehavioral components, (c) non-randomized vs. randomized studies, (d) young people with externalising than internalising disorders.

In 2018 Murphy and Hutton also conducted a meta-analysis on the alliance-outcome link but focused only on adolescent samples (within the 12–19 age range). This meta-analysis included 27 studies and yielded an alliance-outcome correlation larger than previous estimates (r = .29). However, this review had less strict criteria than Karver and colleagues' ones (Shirk, et al., 2011; Karver et al., 2018), as it included different types of treatments and concurrent not only prospective measurements of alliance and outcome. These limitations might have affected its results.

Overall, several methodological and conceptual issues complicate the interpretation of the alliance–outcome association in youth psychotherapy. Although the number of studies focusing on the alliance-outcome link with young people almost doubled in the last decade, it is still low compared to the adult literature. Furthermore, only two of the existing meta-analyses on the topic have used strict inclusion criteria like the ones used in the adult literature (Shirk, et al, 2011; Karver, et al, 2018). Due

to several methodological limitations, the alliance literature in youth psychotherapy needs to be interpreted with caution.

One of the most important issues in youth alliance research concerns the timing of alliance assessment. Most studies have not systematically measured the alliance in the early stages of treatment or across its duration, but assessed it at one time-point, often towards the end of treatment (McLeod, 2011; Simpson, Frick, Kahnx, & Evans, 2013). Moreover, time of alliance assessment was found to be a significant moderator of the alliance-outcome link, with later alliance assessment being more associated with outcomes than earlier assessments (Shirk & Karver, 2003; McLeod, 2011; Karver et al., 2018). When the alliance is measured late in therapy, it may be a function of how treatment has progressed, and therefore a product of the success of therapy rather than a cause of it.

To clarify the causal direction of the relationship between alliance and outcome, in the last decades, researchers have attempted to better determine temporal precedence of the alliance and symptom change using more sophisticated research designs and analyses. For instance, to reduce the risk of confounding by the effect that early symptom improvement may have on subsequent alliance, researchers have started to focus on early ratings of the alliance while also controlling for previous symptom gain. Yet, in youth psychotherapy, only a handful of studies have used such statistical methods when investigating the alliance-outcome relationship, and their findings are mixed. Some found a significant association between early alliance and later symptom severity while controlling for initial severity, not prior change (Chiu et al., 2009; Labouliere et al., 2017; Marker et al., 2013; Reyes, 2014). Others failed to predict symptom change with and without controlling for early change in manual-guided CBT for adolescents with depression (Reyes, 2008).

Future research is needed to address the methodological limitations of the current literature and provide further insight into the association between alliance and outcome in youth psychotherapy. Recent empirical advances offer opportunities to evaluate this association in more sophisticated ways. For instance, it would be important to parse out sources of variance in the alliance–outcome correlations using advanced statistical techniques such as multilevel modelling. Since several factors have been found to moderate the alliance-outcome relationship in youth psychotherapy, a deeper understanding of what moderator variables influence this association, and how, is also needed.

2.6 Conclusion

Both the theoretical and empirical literature on the alliance have been controversial from the outset. Historically several labels have been used to refer to this important psychotherapy variable, and different aspects of the therapeutic relationship have been emphasised while using the same label. To date, the alliance has no consensual definition, nor its relation to other similar constructs has been clarified (Horvath, 2018). Being atheoretical, Bordin's (1976) alliance definition marked a milestone in the alliance literature, becoming the most widely used. Despite its benefits, describing the alliance in more general and pan-theoretical terms was responsible for loosening the boundaries of the construct. This led to the risk that researchers and clinicians from different perspectives use the same word, but might mean different things (Horvath, 2011). The existence of so many alliance scales can be considered as evidence of confusion and excessive diversity in the field (Horvarth 2018).

Despite its growth, the literature on the alliance in youth psychotherapy still represents a heterogeneous group of studies with several limitations, and inevitably, meta-analyses include the problems of the literature they summarise. Like the alliance definition, the alliance–outcome relationship is complex and needs to be interpreted with caution. Not surprisingly, the direction and strength of this association have been questioned in recent years (McLeod, 2011). Above all, the link between alliance and outcomes cannot prove causality and it is difficult to clarify the direction of the alliance-outcome relationship (Castonguay et al., 2006; Crits-Christoph et al., 2011). Studies using mixed methods design, including sophisticated statistical analyses alongside some qualitative assessment of patient and therapist's views on the alliance and its role, can be helpful to gain further insight into the role of the alliance in youth psychotherapy.

In conclusion, beyond clarifying the strength of the alliance–outcome relationship, the field would also benefit from a revision of the current definition and measurement of the alliance with young people (Elvins & Green, 2008; McLeod, 2011). Taken together, clarification of underlying theory and psychometric and statistical advances in the measurement of and research on the alliance, all have critical potential to increase the clarity and knowledge of the alliance literature. The first three studies of this thesis attempt to address some of the gaps in alliance

research by investigating the factor structure of one of the most popular alliance measures (Study 1, Chapter 5), the relationship between alliance and treatment type (Study 2, Chapter 6), and the alliance-outcome relationship (Study 3, Chapter 7) in youth psychotherapy for adolescent depression.

Chapter 3. The second generation of alliance research: alliance ruptures and resolutions

"I believe that the amount of change is based on the building and repair of strong alliances. This building and repair process is the treatment" (Bordin, 1983, p.36).

3.1 Introduction

As highlighted in Chapter 2, the first generation of research on the alliance focused mainly on investigating the association between alliance and outcome. The second generation of alliance research has endeavoured to better understand how the alliance links with outcomes by focusing on the alliance dynamics over the course of treatment, including the process of alliance ruptures and their resolutions. This shift was prompted by both research and clinical reasons. Firstly, although a large body of research had consistently shown an association between strong alliance and good outcomes (Flückiger et al., 2018; Karver et al., 2018), the mechanisms by which alliance might produce change were still unclear. Secondly, the alliance concept started to be revised in light of the increased recognition of its dynamic, rather than static, nature (Colli & Lingiardi, 2009). This aspect of the alliance was already noted by Bordin (1994), who declared "*almost from the beginning of my research I have given central importance to the events surrounding strain in the therapeutic alliance and to the understanding of how and why change occurs. I may not (however) have been clear and explicit about it. In my view three key elements in therapeutic working alliance that bear on change are: (a) strength of alliance, (b) the power of therapeutic tasks, and c) the dynamics of strains in the alliance*" (p. 18).

Safran and Muran (2000a) furthered Bordin's (1994) ideas of the importance of the processes of 'tear and repair' in the alliance and inaugurated what became a fruitful period of research on how patients and therapists co-construct the alliance over the course of treatment. This chapter will explore this shift in the alliance literature, with a particular focus on youth psychotherapy.

3.2 Alliance ruptures and their resolutions

Drawing on Bordin's (1979, 1994) ideas, Safran and Muran (1996, 2000a) redefined the alliance as a continuous, dynamic process of intersubjective negotiation between patient and therapist, characterised by moments of deterioration in its quality

(ruptures) and moments in which such tensions are resolved (resolutions). Their conceptualization of the alliance shifted the emphasis from agreement and collaboration to the interpersonal and continuous negotiations between patient and therapist. Safran and Muran (2000) introduced the word alliance 'rupture' to describe *"the inevitable strains in the alliance… consisting either of disagreements about the tasks or goals of therapy or of problems in the bond dimension"* (p. 16). While in common language the term 'rupture' may imply a major conflict or breakdown and has a negative connotation, in the alliance literature it is used to refer to a broad range of alliance strains, which might or might not be considered as negative (Safran & Muran, 1996, 2000a). Alliance ruptures can vary in duration and form: "*from relatively minor tensions, of which one or both of the participants may be only vaguely aware, to major breakdowns in understanding and communication that if not addressed, may lead to premature termination or treatment failure"* (Safran, 2003, p.450).

Following Harper's coding system (1989b, 1989a) and drawing upon both clinical and empirical data, Safran and Muran (1996) identified two main types of ruptures: withdrawal and confrontation. In withdrawal ruptures, patients either move away from the therapist and/or the work of therapy (e.g. minimal response, avoidant storytelling, self-criticism/hopelessness), or move toward the therapist, but in a way that denies an aspect of his/her own true experience (e.g. denial, content-affect split, deferential behaviour). In confrontation ruptures, patients express their anger/dissatisfaction in a direct and hostile way, by trying to pressure or control the therapist and/or by complaining about the therapist or some aspect of therapy (Safran & Muran, 2000a). Ruptures can include elements of both withdrawal and confrontation, as patients wrestle with their ambivalence or concerns about their needs and fears. The process by which alliance ruptures are repaired is usually referred to as alliance resolutions or repair (Lingiardi & Colli, 2015). A rupture is generally considered to be repaired or resolved when the patient and the therapist resume collaborating on the work of therapy with a positive affective bond. This usually requires the patient's and the therapist's commitment to work together on their relationship (more information on how to repair ruptures are reported in paragraph 3.5).

Although Safran and Muran (2000a) mainly described alliance ruptures in terms of patient's behaviours, they also acknowledged that therapists can contribute to ruptures by engaging in withdrawal and confrontation behaviours themselves (see

Eubanks et al., 2019). For example, therapists may withdraw by becoming passive in the session or by engaging in intellectualized digressions that move away from the patient's presenting emotions and worries. Alternatively, therapists may engage in confrontation ruptures by criticising the patient or being overly controlling of the session (more information on how therapists can contribute to ruptures is reported in paragraph 3.6). Hence, in their re-definition of the alliance, Safran and Muran (2000a) emphasised the relational and transactional aspects of the alliance, where both patient and therapist are recognised as active contributors to both the initial establishment of the alliance and its dynamics throughout treatment.

Like the definition of the alliance, the alliance rupture "*is a very slippery concept*" (Safran & Muran, 2006 p.288-289) and it is not easy to distinguish the term from other definitions of impasse in psychotherapy. Alliance fluctuations have been conceptualised using various terms, such as strains in the alliance (Bordin, 1994), weakening and repairs of the alliance (Lansford, 1986), impasses in the therapeutic relationship (Kohut, 1972), misattunement (Stern, 1985), and alliance ruptures and repairs/resolutions (Colli & Lingiardi, 2009; Safran & Muran, 2000a). Alliance ruptures are also related to constructs such as ambivalence, resistance, and negative transference (Muran & Safran, 2017). Although the term rupture might be controversial, what makes Safran and Muran's work influential and a milestone in the psychotherapy literature is that they firmly supported their theory with rigorous clinical and empirical investigation (Eubanks et al., 2018, 2019; Muran et al., 2009; Safran, Muran, Eubanks, et al., 2011). Safran and Muran's (2000a) conceptualization of alliance ruptures and resolutions has been informed not only by Bordin's ideas on the alliance, but also by research on affect regulation, Attachment theory, Blatt's theory of motivation (2008), and Infant Research (Beebe & Lachmann, 1998). The links between Safran and Muran's ideas on the process of alliance rupture-resolution in psychotherapy and these theories are briefly discussed below. The empirical literature on alliance ruptures and resolutions is presented in paragraph 3.4.

Infant Research studies on mother-child attunement have shown that healthy development is not linked so much to perfect attunement, but to the capacity of the dyad to repair misattunement (Beebe & Lachmann, 1998; Ham & Tronick, 2009; Lachmann & Beebe, 1996). Safran and Muran have linked this finding with the therapeutic relationship and the idea of the inevitability of fluctuations in the quality of the alliance. Similar to the mother-infant dyad, it would be difficult for therapists to

show a perfect attunement to their patients. Likewise, some patients' behaviours or thoughts might inevitably cause tensions in the patient-therapist relationship. Ruptures might thus be inevitable even in the context of a good enough patient-therapist relationship. Yet, if patient and therapist manage to work together and repair such ruptures, this can strengthen the therapeutic relationship and lead to positive change. Conversely, if ruptures are not resolved they could be events that threaten to harm the therapeutic alliance and can lead to poor outcomes or drop-out (Muran & Eubanks, 2020; Safran & Muran, 2000b).

It has also been suggested that alliance ruptures can act as a window into the patients' core interpersonal themes/patterns and become opportunities to understand and change them (Christian et al., 2012; Safran & Kraus, 2014). For instance, the types of ruptures that emerge in therapy might reflect different attachment patterns. Attachment theory (Bowlby, 1982; Mackie, 1981) suggests that maladaptive interactions with important attachment figures can lead to the development of maladaptive representations of self, others and relationships. These are known as relational or interpersonal schemas and can be activated in psychotherapy in the relationship with the therapist (Safran et al., 2014; Safran & Muran, 2000a). In this sense, movements away from or against the therapist could be seen as learned efforts to protect attachment and avoid rejection. If the therapist is able to recognise this patterns and explore them with the patient, the process of repairing ruptures can help patients to overcome rigid and non-realistic representations of self and others (D. Diamond et al., 2003; Levy et al., 2015).

Another way of thinking about alliance ruptures is to see them as reflecting different ways of coping with the dialectical tension between the two fundamental human motivations formulated by Blatt (2008): the need for agency and the need for relatedness. Under this theory, personality development is seen as proceeding through a continuous dialectic interaction between two polarities: (1) interpersonal relatedness (e.g. the capacity to establish mature, reciprocal, and satisfying interpersonal relationships), and (2) self-definition (e.g. the development of a realistic, essentially positive, and integrated self-definition and self-identity) (Blatt, 2008). In this sense, ruptures might reveal the patients' ways of negotiating these two fundamental needs. For instance, a withdrawal rupture could be understood as the pursuit of relatedness at the expense of the need for self-definition. A confrontation rupture, instead, could be seen as an expression of self-definition at the expense of

relatedness. In this sense, the type and pattern of alliance ruptures that emerge in therapy can provide important information about patients' personality traits. Exploring and resolving ruptures could, thus, be an important opportunity to work on relational maladaptive patterns and learn how to negotiate the need for self-definition versus the need for relatedness in a healthier way (Lingiardi et al., 2016).

Based on this rationale, the type of ruptures emerging in the therapeutic relationship can provide important information about the patient's internal world and interpersonal skills. Furthermore, the development of a good relationship that can survive tensions and disagreement might be beneficial in and of itself. Achieving a collaborative relationship can be an objective of therapy, especially in the treatment of serious personality disorders and psychoses, as they are characterised by severe relational difficulties (Bateman & Fonagy, 2004; Farina & Liotti, 2005). Exploring and repairing alliance ruptures can also shed light on how patients understand and experience themselves in relationships (Muran & Eubanks, 2020). The alliance can, thus, serve as an interpersonal learning field in which patients' representations of self and others can be explored and challenged in the here and now of the secure therapeutic relationship, leading to important changes.

3.3 Measuring alliance ruptures

Researchers have attempted to detect alliance ruptures in various ways using indirect and direct methods. Both methods have strengths and limitations.

Indirect methods involve the repeated use of alliance scales over time to capture fluctuations on alliance scores over the course of treatment, where lower scores are interpreted as ruptures and subsequent increases are interpreted as resolutions (Strauss et al., 2006). Indirect methods could be either self-report or observer-report questionnaires evaluating the alliance as a general factor (see Chapter 2 for more details about the most widely used alliance measures). Self-report assessments can be limited since they rely on patients' and therapists' abilities to recognise ruptures, as well as on their willingness to report alliance strains. One way of dealing with this issue is to use observer-rated alliance scales applied to recordings of therapy sessions. Yet, regardless of the reporter, indirect methods provide an evaluation of the alliance at a macro level, and, even if completed after each session, do not account for alliance rupture resolution processes occurring within sessions (Falkenström & Larsson, 2017; Stevens et al., 2007).

Direct methods to assess alliance ruptures and resolutions consist of observer-based instruments that are specifically designed to identify the occurrence of ruptures and resolutions within sessions. These methods can be applied to recordings and/or transcripts of therapy sessions. In contrast with indirect methods, they allow a microanalytic investigation of the way patients and therapists construct the alliance via assessing in-session transactions of the alliance. Despite their benefits, even observer-based direct methods cannot fully capture the patients' and therapists' subjective experience of alliance ruptures and their resolutions, as they are rated by an external observer.

The most frequently used direct measures of alliance ruptures and resolutions are the Rupture Resolution Rating System (3RS) (Eubanks et al., 2019) and the Collaborative Interaction Scale (CIS) (Colli & Lingiardi, 2009). The 3RS is applied to recordings of therapy sessions and yields ratings of (a) withdrawal ruptures, (b) confrontation ruptures, (c) therapist attempts to resolve ruptures, and (d) overall resolutions (more information about the 3RS is reported in Chapter 8). The CIS (Colli & Lingiardi, 2009) assesses patients' and therapists' positive and negative contributions to both alliance ruptures and resolutions, and it is scored from transcripts of therapy sessions. Both 3RS and CIS have demonstrated good interrater-reliability with intraclass correlation coefficients (ICCs) ranging from .73 to .98 for the 3RS; and mean ICCs of 0.77 for the CIS (Colli et al., 2017; Coutinho et al., 2014).

The various methods to assess alliance ruptures seem to lead to different results. Specifically, research has found that patients and therapists report ruptures less frequently than observers (Muran et al., 2009). Therefore, a combination of both direct and indirect methods, alongside qualitative data (e.g. post-session and/or post-therapy interviews with patient and therapist) is usually recommended, as it can provide a multi-prospective, more accurate description of the alliance and its fluctuations within and across therapy sessions (Eubanks et al., 2018). Alliance research has not yet identified a gold standard for measuring alliance ruptures and repairs. This is probably due to "*both the nascent stage of this area of research and the complex nature of rupture phenomena*" (Eubanks et al., 2019, p. 511).

3.4 Alliance rupture-repair and therapy outcomes

Over the last two decades, the second generation of alliance research has demonstrated that the alliance commonly undergoes periods of strains or ruptures and

that working through these relational impasses can be beneficial for treatment retention and outcomes (Eubanks et al., 2018; Safran, Muran, Eubanks, et al., 2011). In particular, lower rupture intensity and higher rupture resolution has been found to predict better ratings of the alliance, session quality, and good outcomes. In contrast, unresolved alliance ruptures have been found to be associated with poor outcomes and treatment dropouts (Eubanks et al., 2018).

Although research on alliance ruptures and resolutions is relatively recent, it is growing fast. To date, two meta-analyses have been conducted to summarise the available empirical evidence on the relation between alliance rupture-repair episodes and outcomes. The first of these meta-analyses found a statistically significant association between positive resolution of alliance ruptures and good outcomes with a medium effect size of $r = 0.24$ across three studies (148 patients). (Safran, Muran, Eubanks, et al., 2011). However, this meta-analysis is limited by its low statistical power due to the small sample size.

Following the increase in the empirical literature on rupture and resolutions that occurred in the last decade, in 2018 Eubanks and colleagues conducted an updated meta-analysis on the link between rupture-repair episodes and outcomes. Similar to the previous one, this meta-analysis found a moderate association of $r=.29$ between successful resolution of ruptures and good outcomes across 11 studies (1,314 patients) (Eubanks et al, 2018). Since there was significant heterogeneity between the effect sizes across the studies involved in this review, the authors also examined some potential moderators that could explain this variability. These included patients' presenting problems, therapist's experience, treatment type, and methods for identifying ruptures. None of these variables demonstrated a statistically significant moderator effect on the relationship between rupture-repair episodes and outcomes. Although the number of studies included in this review was higher than the previous one, it was still relatively small and its results need to be interpreted with caution.

Alongside assessing the relationship between alliance ruptures and resolutions and outcomes, Eubanks and colleagues also conducted two meta-analyses on the relationship between rupture-resolution training and patient outcomes (Eubanks et al., 2018; Safran, Muran, Eubanks, et al., 2011). Rupture resolution training focuses on strengthening clinicians' capacity to foster and maintain a good alliance over the course of treatment, including identifying and addressing ruptures when they occur. The first meta-analysis showed that treatments delivered by therapists who had

undertaken rupture-resolution training were associated with patient improvement in both pre-post (r= .65, N= 217) and group contrast effect sizes (r= .15, N =343) across 8 studies (Safran, et al., 2011). This might suggest that therapists who have attended specific training on the alliance achieve better outcomes than therapists who have not attended such training. In other words, rupture resolution trainings seem to be beneficial to improve therapy outcomes.

Conversely, the updated meta-analysis conducted in 2018 did not find a statistically significant relationship between rupture resolution training/supervision and patient outcome across 6 studies (Eubanks et al., 2018). Furthermore, the effect of alliance training on outcome was found to differ across several variables. Moderator analyses indicated that the relationship between therapists' attendance of rupture-resolution training and their patients' achieving good outcomes was stronger when (a) the sample included fewer patients with personality disorders, (b) the training was more closely aligned with cognitive behavioural therapy (CBT) than psychodynamic therapy, and (c) the treatment was brief. However, it might be that the limited number of studies included in this meta-analysis affected its statistical power and, therefore, its results. Further research using larger sample sizes is needed to better understand how and in what circumstances rupture-resolution training could help promote better outcomes.

Overall, the second generation of alliance research points to the existence of a relationship between the resolution of alliance ruptures in psychotherapy and good outcomes. Accordingly, the repair of alliance ruptures has been regarded as a promising and probably effective treatment process (Norcross, 2010). However, the small number of studies and their heterogeneity in terms of clinical populations, type of treatment, and method used to assess the alliance ruptures and resolutions, all limit the generalizability of their findings. Furthermore, most of the available research on alliance ruptures and resolutions consists of studies with adult clients and it may not necessarily transfer to therapy with adolescents. Additional research is needed to gain further insight into the role of the alliance and the process of alliance rupture-resolution in youth psychotherapy.

3.4.1 Alliance rupture-repair and therapy outcome in youth psychotherapy

As discussed in Chapter 2, the dynamics of the patient-therapist relationship with young people are, in some respects, inherently different than that of adults.

Developmental issues can bring additional challenges to the establishment and maintenance of an alliance in youth psychotherapy. In fact, therapists have often reported that fostering a strong alliance with adolescents "is hard work" (Binder et al., 2008 p.65). Accordingly, it has been argued that alliance ruptures tend to be frequent with youths (DiGiuseppe et al., 1996; Karver et al., 2018). Yet, at an empirical level little is known about the process of repairing alliance ruptures and its link to outcomes in the treatment of young people.

With regards to research using indirect methods to assess alliance ruptures, the small number of studies examining the alliance trajectory over time found little variability in adolescents' alliance ratings and yielded mixed results. Specifically, some have found no changes in the alliance average strength over time (Accurso & Garland, 2015; Chu et al., 2014). Others have identified patterns of slight linear positive change (Bickman et al., 2012; A. E. Kazdin et al., 2006; Kendall et al., 2009). This limits our ability to draw conclusions about the link between alliance fluctuations over time and outcomes. Yet, the small number of studies that have involved repeated assessments of the alliance over treatment found an association between improvements in the alliance and good outcomes. For instance, Robbins and colleagues (2006) measured the alliance in the first and second session of family therapy for adolescents with drug abuse issues and found that the alliance declined over time for those adolescents who subsequently dropped out of therapy, but not for those who completed treatment. Halfon and colleagues investigated the trajectory of observer-rated alliance with young people with internalising and externalising problems in psychodynamic therapy. This study found a quadratic trend (high–low–high) over the course of therapy (Halfon et al., 2019), which was associated with positive outcomes. Although the deterioration in alliance scores may reflect the presence of ruptures, and subsequent improvement in alliance ratings might indicate their resolution, it is difficult to draw conclusions about the relationship between alliance rupture-resolution processes and outcomes based on these findings.

Similarly, the few studies using direct methods to assess the presence of alliance ruptures and resolutions have so far found a relationship between the resolution of ruptures and good outcomes in youth psychotherapy. For instance, Daly and colleagues (2010) found that more ruptures were fully resolved in sessions rated by adolescents as 'good' than in sessions rated as 'poor' in cognitive analytic therapy (CAT) for borderline personality disorder. This study also found a relationship between

positive outcomes and the number of resolution strategies used by therapists (Daly et al., 2010). This might suggest that repairing ruptures with young people might require multiple therapist attempts. Likewise, in another study with a similar population and type of treatment, Gersh and colleagues (2017) found that early treatment ruptures were associated with poor outcomes, and that greater late treatment resolutions were associated with better outcomes.

Schenk and colleagues (2019) assessed alliance ruptures and resolutions patterns within sessions in a clinical sample of 10 adolescents (aged 14 to 18) with borderline personality symptoms undertaking psychodynamic treatment. Findings showed that alliance ruptures, especially withdrawal ones, occurred frequently and showed a U shape pattern (e.g. more alliance ruptures appearing in the middle phases of treatments). Nevertheless, adolescents in this study showed a significant reduction in psychopathology and an improvement in psychosocial functioning over time. O'Keeffe and colleagues (2019) also found a relationship between rupture-repair patterns and types of treatment ending in youth psychotherapy for adolescent depression. Their sample comprised adolescents who had either completed their treatment or were classified as 'dissatisfied drop-out' or 'got-what-they-needed drop-out' based on post-therapy interviews with adolescents and therapists. Observer-rated in-session rupture-repair episodes were found to be similar for completers and got-what-they-needed dropouts, while dissatisfied dropouts had a poorer therapeutic alliance, more ruptures, and ruptures were more frequently unresolved.

Overall, in line with the adult literature, the existing research on rupture and resolution processes in youth psychotherapy provides some evidence for the existence of a relationship between the positive resolution of ruptures and good outcomes. Research on rupture-repair patterns is a potentially fruitful avenue towards improving our understanding of the link between alliance and outcome.

3.5 Repairing alliance ruptures

Given the potential link between the successful reparation of alliance ruptures and good outcomes, it is important to learn how therapists can respond to the pressure of ruptures in a way that contributes to their reparation and better outcomes. Alliance ruptures pose significant emotional challenges to therapists, which if not handled well, can hinder the therapist's capacity to successfully explore and resolve them (Muran & Eubanks, 2020). In adult psychotherapy, a growing body of research has focused on

understanding how to repair alliance ruptures in various treatment types. This led to the development of guidelines and training to support and upskill therapists in addressing alliance ruptures in a helpful way (Eubanks et al., 2015a). Safran and Muran (2000a) were the first to develop a model of how ruptures could be successfully repaired in the context of Brief Relational Therapy (BRT) (Safran, et al.2005). To do so they combined both clinical and empirical data, using task analysis. Task analysis is a research paradigm that integrates theoretical and empirical observations to describe the steps in the successful completion of a task, such as repairing alliance ruptures (Greenberg, 2007).

According to Safran and Muran's (2000a) model, a successful resolution process should adopt one or all of the following four stages. In Stage 1, the therapist recognises and addresses the rupture by drawing the patient's attention to it. In Stage 2, the patient and therapist collaboratively explore the negative feelings associated with the rupture. This process can become uncomfortable for the patient, who may try to avoid further exploration. If this happens, the therapist moves to Stage 3, in which they explore the patient's avoidance manoeuvres. In Stage 4, therapist and patient focus on clarifying the patient's core relational need that underlies the initial rupture. This final stage may differ by rupture type. In withdrawal ruptures, the therapist should focus more on helping the client to express their feelings more openly. In confrontation ruptures, the focus should be on helping the client to gain access to vulnerable feelings while being open to explore how the therapist might have contributed to the rupture(s) (Muran et al., 2010; Muran & Eubanks, 2020).

Building on Safran and Muran's (2000a) work, other researchers have used task analysis to develop rupture resolution procedures in other types of therapy for adults. While across treatment types, the resolution process begins with the acknowledgement of the rupture, various therapies seem to differ in the subsequent steps to address ruptures. For instance, in psychodynamic–interpersonal therapy Agnew and colleagues (1994) developed a model of rupture resolution which involved linking the rupture to situations outside of therapy rather than in the here and now of the relationship, like in Safran and Muran's model (2000a). Bennett and colleagues (2006) developed a model of successful rupture-resolution in CAT where, instead of focusing on the here and now of the therapeutic relationship (like in Safran and Muran model), they placed greater emphasis on linking the rupture to a pre-established case formulation and the patient's other relationships. Importantly, empirical research has

shown that competent resolution of alliance-threatening events in CAT is primarily dependent on therapists' ability to recognise ruptures, and secondarily on their adherence to the features of the hypothesised model (Bennett et al., 2006).

In CBT, Aspland and colleagues (2008) developed a rupture resolution framework, which emphasised the importance for therapists to acknowledge the presence of ruptures and adopt a collaborative stance in the exploration of such ruptures (Safran and Muran, 2000a; Agnew et al.,1994; Bennett et al., 2006). However, one study showed that rupture-repair processes in CBT mostly occurred through a change in the therapists' approach rather than an explicit acknowledgement of and working through the rupture (Aspland et al., 2008). Yet, in this study, the ruptures identified were primarily of the withdrawal type, and CBT therapists may manage withdrawal and confrontation ruptures differently, particularly because the former tends to be more difficult to identify and therefore resolve. Alongside developing new models to resolve ruptures, several authors have also attempted to integrate relational alliance-focused principles drawn from Safran and Muran's work (2000a) into standard CBT with positive results in terms of treatment outcomes (Newman et al., 2008).

Overall, empirical research seems to suggest that across therapeutic modalities there is some consensus (e.g. all models recognised the importance of identifying ruptures as a first step) but also some differences (e.g. the various steps to respond and explore ruptures) in the way ruptures should be addressed. Whether or not therapists explicitly acknowledge the presence of a rupture, it seems important for them to have some internal recognition that a rupture has occurred to be best positioned to resolve it. Accordingly, several studies have found an association between therapists' recognition of ruptures and subsequent improvements in alliance or outcomes (Atzil-Slonim et al., 2015; Chen et al., 2018; Rubel et al., 2018; Zilcha-Mano et al., 2017). Yet, across therapies, a critical issue for clinicians concerns the proper way to act when they become aware of ruptures. This is especially true in youth psychotherapy, given the dearth of research and guidance in the field.

3.5.1 Repairing alliance ruptures with young people

While there is research on the handling of alliance ruptures in adult psychotherapy, the literature offers less guidance in psychotherapy with young people (DiGiuseppe et al., 1996; Nof et al., 2019). Most of the research that aimed to develop

rupture resolution models for youth psychotherapy is a downward extension of models developed for adult clients and might not adequately take into account the additional challenges youth therapists might face. To date, there are only two models on how to address alliance ruptures with young people. Daly and colleagues (2009) validated for use with young people Bennett and colleagues' (2006) model of repairing rupture with adults in CAT. Nof and colleagues (2019) adapted Safran and Muran's (2000a) original rupture-repair model for child psychotherapy and developed the 'child alliance focused approach' (CAFA). However, while Safran and Muran's (2000a) original model has been empirically evaluated, CAFA has not been empirically validated yet. Furthermore, with emotionally and cognitively mature young people (aged 12-16 and above), the authors recommend the use of Safran and Muran's original rupture model.

Given the lack of guidance on how to handle ruptures with young people, it is not surprising that a few qualitative studies have found that youth therapists often feel vulnerable, even wary in relation to ruptures (Binder, Holgersen, & Høstmark Nielsen, 2008; Binder, Holgersen, & Nielsen, 2008; Morán et al., 2019). Ruptures pose great emotional and interpersonal challenges to the therapeutic work and cause pressure on therapists, who need to be able to withstand such pressure while managing to repair the ruptures and continue the work of therapy (Muran & Eubanks, 2020). This is especially relevant in youth psychotherapy since working with young people involves specific and complex challenges, as highlighted by a few qualitative studies. For instance, in one study youth therapists reported facing the following challenges: (1) young people's lack of personal motivation to engage in psychotherapy, (2) their mistrust of the therapist and/or the therapeutic intervention, (3) their negative expectations of therapy, and (4) caregivers' expectations towards therapy, especially in cases where there was lack of agreement about therapy goals between adolescents and their caregivers (Morán et al., 2019).

Binder and colleagues (2008) also explored therapists' experiences of challenges in establishing an alliance and repairing alliance ruptures with adolescents, using a phenomenological approach to interviews with youth therapists. They identified the following most common challenges: (1) getting to know the problem in a way that allows a collaborative work on it, (2) balancing between placing oneself as an adult with clinical expertise and responsibilities and being in a symmetrical listening position, (3) motivating the adolescent to be personally engaged, (4) establishing a

common frame for joint meaning-making (e.g. staying close to the adolescent's own words and description of their problem), and (5) handling ambivalence, while also respecting it.

In another study, Binder and colleagues (2008b) found that, although youth therapists might face similar challenges, they differ in the way they try to overcome them. For instance, youth therapists were found to differ in how much they would focus on the relationship per se, on intrapsychic factors, or on the adolescent's life outside therapy. Specifically, some therapists regarded adolescents' ambivalence as something to be validated and explored, i.e. as a way of communicating difficulties within the therapeutic relationship. Others tried to address ruptures via actively motivating the adolescent to engage in therapy or via inviting them to seek out other approaches. Such differences might, to a certain extent, be associated with therapists' theoretical preferences (Binder et al, 2008). For instance, CBT therapists might be more prone to use strategies such as validation and revising therapeutic tasks, than psychodynamic therapists, who might focus more on the therapeutic relationship. Yet, this hypothesis needs to be tested empirically.

The available research on alliance rupture-repair with young people seem to suggest that youth therapists face additional challenges, which might impact on their capacity to address ruptures. As ruptures, especially when unresolved, could be regarded as warning signs of disengagement and drop-out, it may be important to learn more about how youth therapists could address them. Training therapists on how to successfully repair ruptures might, therefore, be an important clinical endeavour and research is needed to develop evidence-based training on this.

3.6 Therapists' contribution to ruptures

To date, more attention has been paid to understanding and identifying patients' behaviours associated with ruptures and therapists' interventions associated with reparations, and less is known about patients' contributions to resolutions and therapists' contributions to ruptures. Ruptures and resolutions are relational phenomena, it is therefore important to understand the role that both patients and therapists play in them. As highlighted above, therapists can also cause or exacerbate ruptures, and this has been found to be associated with premature dropout from therapy (Eubanks et al., 2019; O'Keeffe et al., 2020). As such, it is crucial to help

therapists to recognise and limit their negative contributions to the alliance and its ruptures.

In adult psychotherapy, therapeutic techniques linked to poorer alliances and unresolved ruptures include over-structuring therapy, inappropriate use of self-disclosure, silence, and high intensity of transference interpretation (Ackerman & Hilsenroth, 2001; Roth & Fonagy, 2006). Therapists perceived to be rigid, uncertain, and critical have also been identified as therapists' characteristics associated with poor alliance and potential ruptures in adult psychotherapy (Ackerman and Hilsenroth, 2001). Furthermore, across therapies, research has found that in response to ruptures therapists often adhere to their particular treatment model in a rigid and defensive way (e.g. challenging distorted cognitions in cognitive therapy or making transference interpretations in dynamic therapy) rather than responding flexibly and prioritising the exploration of emerging tensions in the relationship over the delivery of treatment specific interventions (Castonguay et al., 1996; Henry et al., 1993; Muran & Eubanks, 2020). Such defensive and rigid adherence to treatment in response to ruptures was found to be associated with poor outcomes and drop-outs (Castonguay et al., 1996; Henry et al., 1993; Muran & Eubanks, 2020). Yet, training therapists in manualized approaches that emphasise the formation and maintenance of a strong alliance was found to improve therapists' abilities to manage alliance ruptures successfully (Bambling et al., 2006; Crits-Christoph et al., 2006; Eubanks et al., 2015a; Hilsenroth et al., 2002).

In youth psychotherapy, less is known about which therapists' characteristics or interventions can contribute to ruptures, and it is unclear whether the findings from research in adult psychotherapy also apply to psychotherapy with adolescents. Morán and colleagues (2019) explored therapists' subjective experiences of ruptures with adolescents using interpretive phenomenological analysis on eight therapists' interviews. According to most therapists, what contributed to ruptures was their own failure to recognise the adolescent's emotional experience in psychotherapy. Given the intensity with which adolescents feel their internal world, therapists felt that ruptures tended to be characterised by overwhelming emotions for the young person, which in turn generated equally intense emotions in the therapist leading to *'tension, paralyzing anguish, confusion, fear or perplexity'* (Morán, et al., 2019, p. 38). In another study, a qualitative analysis of sessions identified three categories of therapists' contribution to ruptures: (1) therapist minimal response (e.g. the therapist

was often passive, unresponsive, or silent for long periods of time), (2) persisting with a therapeutic activity, which the adolescent had rejected, was not engaging in, or which seemed to have led the adolescent to withdraw, and (3) focusing on risk issues and a potential need to break confidentiality (O'Keeffe et al., 2020). Further research is needed to better understand the alliance rupture-repair processes and how patients and therapists contribute to it, both positively and negatively, in youth psychotherapy.

3.7 Alliance and its rupture-repair with depressed adolescents

As this PhD dissertation will empirically assess the alliance in a sample of adolescents with depression, it is important to reflect on whether there are any specific issues to be considered in regard to the therapeutic alliance when working with depression in young people. As highlighted in both chapters 2 and 3, the empirical literature on the alliance and its rupture-repair with this age group, despite its growth, is still limited. Most alliance research has looked at the relationship between alliance and outcomes, while neglecting the relationship between the strength of the alliance and the young people presenting problem. To the best of my knowledge, to date, no research assessed whether the alliance and its dynamics have specific characteristics with depressed adolescents and/or whether these might differ across adolescents presenting with other diagnoses. As such, based on available evidence, it is difficult to draw conclusions on the topic.

Yet, as discussed in Chapter 2, most meta-analyses on the relationship between alliance and outcome found differences in the strength of this association based on whether young people presented with internalising or externalising problems (Shirk and Karver, 2003; McLeod 2011, Karver et al., 2018). Specifically, the alliance-outcome association was found to be stronger with young people with externalising symptoms compared with young people with internalising symptoms. There might, therefore, be a relationship between the adolescent presenting problems and both the strength of the alliance and its relationship with outcomes, which requires further investigation. Adolescents with internalising problems are characterized by anxious and depressive symptoms, social withdrawal, and somatic complaints. Adolescents with externalising problems present with aggressive, oppositional, and delinquent behaviour. It might be that the alliance is more responsible for change with young people with externalising symptoms, given their interpersonal difficulties and struggle to establish increasingly mature, reciprocal and satisfying interpersonal relationships.

Furthermore, because of the greater challenge in engaging oppositional and disruptive youths, the alliance might have more of a key role in promoting change with this population. In contrast, the alliance might be less responsible for change with adolescents with internalising problems, who tend to struggle more with issues of self-definition (e.g., the development of a realistic, essentially positive, and increasingly integrated self-identity) than with interpersonal relationships (Blatt, 1998). Yet, it has also been argued that specific depressive dynamics may well underlie both adolescents with internalising and externalising problems (Blatt & Luyten, 2009). This argument might be better understood in relation to Blatt's (1998) theory of depression.

Blatt (1998) outlines two empirically supported types of depression based not so much on manifest symptoms but, rather, on the individual's unconscious conflicts, defences, and fundamental character structure. He refers to these two types of depression as 'introjective' and 'anaclitic' depression. Introjective (self-critical) depression is characterized by a marked vulnerability to disruptions of a positive sense of self and is expressed in feelings of worthlessness, guilt, failure, and loss of autonomy. These individuals have a powerful longing for perfection but are vulnerable to criticism both from others and from themselves, and tend to be excessively preoccupied with issues of self-definition at the expense of relatedness. Anaclitic (dependent) depression, by contrast, is characterized by a marked vulnerability to disruptions of gratifying interpersonal relationships and is expressed primarily in feelings of loss, abandonment, and loneliness. In this type of depression, concerns about hurting or offending others lead to a fear of losing the gratification that dependent relationships can provide. Such individuals seek out the care and concern of others, including mental health professionals.

Based on whether young people are more preoccupied with issues of relatedness or self-definition, they might present different challenges in the development and unfolding of the alliance over the course of treatment. For instance, patients whose depression has introjective characteristics might be more difficult to engage and develop an alliance with, due to their excessive self-preoccupation and disconnection or isolation from others. Patients whose depression has anaclitic characteristics, instead, might show a pseudo-alliance rather than a genuine alliance, due to their tendency to comply rather than confront the therapist. These are important issues to consider when assessing the alliance with depressed adolescents, and further research is needed on the topic. For instance, as discussed in Chapter 2, it

might be important to assess whether certain patients' characteristics, like depression severity and/or the type of depression, predict the strength of the alliance and/or influence the alliance-outcome relationship.

Similar considerations can be done about the alliance rupture-resolution patterns. For instance, it can be assumed that patients with different problems or different types of depression will be associated with specific patterns of ruptures in the alliance, such as distinct rupture profiles (Lipsitz-Odess et al., 2021). For example, withdrawal ruptures may be more frequent in patients who are overly compliant, fearful, and averse to interpersonal conflicts, such as depressed patients. Confrontation ruptures may be more frequent in patients with externalising problems, as they have difficulties regulating their emotions and behaviour and may tend to pressure or criticize the therapist (Bender, 2005b). In the adult literature, recent research has started to confirm these hypotheses (Lipsitz-Odess et al., 2021). However, to the best of my knowledge, there is no empirical evidence to support these assumptions with young people.

The majority of research on alliance rupture-resolution with young people have involved depressed adolescents or adolescents with personality disorders and they have all found that adolescents display more withdrawal than confrontational ruptures (Gersh et al., 2017; O'Keeffe et al., 2020; Schenk et al., 2019). It might be that this age group, regardless of their diagnosis, have some difficulties expressing anger or dissatisfaction openly to their therapists and, if dissatisfied, might be more likely to drop-out than to confront their therapist, as found by previous research (O'Keeffe et al., 2020). Hence, it might be that the available research has been conducted with more complying patients, as confrontational young people might end therapy (and research) prematurely. However, it is difficult to draw conclusions on the topic based on the available evidence, and further research is needed to assess whether adolescents with different diagnoses present with specific challenges in the development and maintenance of the alliance. This could be critical information for therapists to forecast their patient's signature alliance and rupture tendencies and, thus, personalize the treatment for the individual patient. For example, if a patient has internalising problems, the therapist can prepare for an overall higher level of withdrawal than confrontational ruptures and be alert to and address any sign of ruptures, even if minors.

Finally, it is also relevant to consider that adolescents suffering from depression are likely to have a range of other difficulties and high levels of co-morbidity (Rice et al., 2017; Vyas et al., 2015). Depressed adolescents are likely to also suffer from anxiety disorders, disruptive disorders, substance abuse, eating difficulties, or emerging personality disorders. Accordingly, more and more researchers and clinicians prefer to talk about a general factor of psychopathology (the p factor) (Caspi et al., 2014; Castellanos-Ryan et al., 2016) rather than referring to a specific diagnosis. The psychopathology 'p' factor refers to a general latent dimension that is derived from a wide range of items measuring various psychiatric symptoms. It has been proposed that this single latent factor can encapsulate individuals' proclivity to develop all forms of psychopathology included within the broad internalising, externalising dimensions (Caspi et al., 2014). Furthermore, recent research shows how this general psychopathology better represents a longitudinal risk of psychiatric disorders and suggests that studying this factor will allow for a better understanding of the aetiology, correlates and prognosis of psychiatric disorders in young people (Patalay et al., 2015). As such, while it is important to explore whether specific diagnostic profiles might result in different alliance rupture-repair profiles, it is also crucial to consider the alliance dynamics and the adolescent's presenting problem on a spectrum rather than in categories. This is because the alliance and its dynamics can be related to multiple factors related not only to the young person and their presenting problems, but also to the therapist's characteristics, their therapeutic approach, the phase of therapy, as well as its setting. As the alliance is a relational and dynamic component of therapy influenced by both patient and therapist's characteristics and their interactions, it is essential to approach it in a complex way, e.g. via using a longitudinal, multi-perspective assessment of it and its relationship to the adolescent's presenting problem and symptom change.

3.8 Conclusion

The second generation of alliance research has attempted to investigate the underlying mechanisms of the therapeutic alliance beyond its predictive validity. This growing body of research has, thus far, demonstrated that alliance ruptures are typical aspects of the therapeutic process, which are not necessarily deleterious events in therapy. For instance, a rupture might provide important information about the patent's relational pattern. Equally, ruptures can signal a need for adjustments in the

therapeutic technique. Furthermore, the process of exploring and repairing ruptures can be a mechanism of change providing the patient with a relational learning opportunity.

To date, there is limited knowledge on the alliance rupture-resolution processes in youth psychotherapy and their role. Similarly, and perhaps consequently, there is lack of guidance about how youth therapists should address ruptures. This seems to be reflected in therapists' feelings of insecurity and confusion (Morán et al. 2019; Binder et al, 2008a, 2008b). Therapists' feelings of vulnerability in response to ruptures could hinder their capacity to successfully work through them and use ruptures as critical opportunities for exploration and therapeutic change (Lipner et al., 2019; Muran & Eubanks, 2020).

Alliance ruptures must be considered as a natural feature of the therapeutic relationship, it is therefore important to learn more about them and train therapists on how to successfully manage them. The last study of this thesis attempts to contribute to the literature on alliance ruptures and resolutions in youth psychotherapy via assessing the type and frequency of alliance ruptures and resolutions and their impact on the change process in a single case study of an adolescent with depression treated with Short-term Psychoanalytic Psychotherapy (see Chapter 8).

Chapter 4. Context for the research in this thesis: the IMPACT and the IMPACT-ME Studies

4.1 Introduction

The studies of this thesis draw on data from the 'Improving Mood with Psychoanalytic and Cognitive Therapies' (IMPACT, Goodyer et al., 2011, 2017a, 2017b) and the 'IMPACT-My Experience' (IMPACT-ME, Midgley et al., 2014) studies. This chapter provides the context for the research in this thesis and therefore presents a brief overview of the IMPACT and IMPACT-ME studies. It also describes the aims of the four empirical studies that comprise this thesis and the epistemological position of this research project.

4.2 The IMPACT Study

The IMPACT study is, to date, the first multicentre, pragmatic, randomised controlled trial (RCT) assessing the medium-term effects of three therapeutic interventions in the treatment of adolescent depression (Goodyer et al., 2011, 2017a, 2017b). Four hundred and sixty-five adolescents (aged between 11 and 17 years) with diagnosis of major depression were randomised to receive cognitive-behavioural therapy (CBT), short-term psychoanalytic psychotherapy (STPP) or brief psychological intervention (BPI). The IMPACT trial did not find strong evidence for a difference in effectiveness between the three treatments, with 78% of adolescents no longer meeting diagnostic criteria for depression approximately one year after the end of treatment (Goodyer et al., 2017b). The analysis of the trial was intention-to-treat, such that outcome data were collected from cases regardless of whether or not participants completed therapy.

4.2.1 Recruitment and screening

Participants for the IMPACT study were recruited from clinical referrals to fifteen Child and Adolescent Mental Health Services (CAMHS) in three UK regions: North London, East Anglia, and North West. Adolescents were screened by clinicians for suitability for the trial. If suitable, they were then referred to the research team, who carried out a baseline assessment to evaluate their eligibility for the RCT. The baseline assessment included a battery of interviews and questionnaires with the adolescent and, where possible, with their parents.

Inclusion criteria were: (a) a DSM-IV diagnosis of unipolar major depressive disorder (American Psychiatric Association (APA), 2000) as measured by the Kiddie-Schedule for Affective Disorders and Schizophrenia (K-SADS) (Kaufman et al., 1997), and (b) aged 11-17 years at referral.

Exclusion criteria were presence of (a) generalised learning difficulties, (b) pervasive developmental disorder, (c) eating disorder, (d) bipolar disorder, (e) schizophrenia, and (f) pregnancy.

More details about the procedure followed to recruit participants and randomisation are reported in Goodyer et al., 2011 and 2017.

4.4.2 Sample

In total, 470 adolescents were eligible and randomised into the trial. Five participants later withdrew consent, so their data was destroyed and excluded from the analysis. The final IMPACT sample consisted of 465 adolescents with a diagnosis of moderate to severe major depression (117 male, 348 female), who were randomly allocated to a treatment arm: 155 to BPI, 154 to CBT and 156 to STPP.

Of the overall IMPACT participants, this research included only adolescents who received treatment and had at least one rating of the alliance completed by the adolescent or their therapist. Details of the sample size, participants' characteristics, and selection criteria are reported for each study in their respective chapters.

4.4.3 Treatment types

The interventions in the IMPACT study were CBT, STPP and BPI, which are briefly described below. Therapists for all treatment arms were drawn from routine CAMHS clinics, and no demographic information was collected about them, therefore, only their training details are reported.

Cognitive-Behavioural Therapy (CBT) (IMPACT Study CBT Sub-Group., 2010) focused on identifying the behaviours and the cognitive biases that maintain the depressive symptoms. It aimed to amend these biases, through a process of collaborative empiricism between the therapist and patient. Sessions focused on working on explicit, tangible, and shared goals.

CBT was delivered over 20 sessions, typically consisting of 12 weekly sessions, followed by 8 bi-weekly sessions (IMPACT Study CBT Sub-Group., 2010). Parents

could be included in sessions where needed, but they were not offered any separate sessions. CBT therapists were NHS staff from different professional backgrounds, including clinical and counselling psychology, nursing, and occupational therapy. All had received specialist training in CBT.

Short-Term Psychoanalytic Psychotherapy (STPP) (Cregeen et al., 2016) aimed to promote better self-understanding of feelings and difficulties and to address the underlying dynamics of the symptoms, not only the symptoms per se. STPP therapists focused on a close observation of the therapeutic relationship and used supportive and expressive strategies to address difficulties in the context of the developmental tasks of adolescence.

STPP included 28 weekly sessions over 30 weeks. Parents were also offered up to 7 parent work sessions with a different clinician (Cregeen et al., 2016). STPP therapists were all qualified child and adolescent psychotherapists psychoanalytically trained and registered with the UK Association of Child Psychotherapists.

Brief Psychosocial Intervention (BPI) (Kelvin et al., 2010) is a generic, goal-oriented therapy focused on psychoeducation about depression, problem-solving, and encouraging increasing positive activities. It emerged from the treatment as usual in the Adolescent Depression Antidepressants and Psychotherapy Trial (Wilkinson et al., 2011).

BPI was designed to include 12 sessions delivered over a maximum of 20 weeks (Kelvin et al., 2010). Like in the CBT arm, parents could be included in sessions where needed. BPI therapists were intended to be drawn from different backgrounds (e.g. mental health nursing, clinical psychology, psychiatry, and mental health social work), however, more than 80% were psychiatrists in specialist CAMHS training or consultants.

In all treatment arms, if clinicians considered that adding some pharmaceutic treatment might accelerate the time to remission, alongside psychological treatment adolescents were also prescribed fluoxetine in accordance with the National Institute for Health and Clinical Excellence (NICE, 2005) guidelines. Methods of prescribing medications did not differ between treatment groups (Goodyer et al., 2017b), but

neither the reasons for prescribing nor medication compliance were controlled for over the course of the IMPACT trial.

All treatments were manualised and demonstrated to be delivered with fidelity to their respective treatment approach (Goodyer et al., 2017a; Midgley et al., 2018) and all therapists received supervision as per routine practice in CAMHS. Although the three treatments differed in the planned number of sessions offered, the actual length of treatment was equivalent across groups (Goodyer et al., 2017).

4. 3 The IMPACT-ME Study

The IMPACT-ME study (Midgley et al., 2014) is a qualitative, longitudinal study linked to the main IMPACT trial. It aimed to explore the subjective experience of adolescents, parents, and therapists involved in the trial to aid to the findings of the IMPACT study and better understand therapy process and outcomes. The IMPACT-ME study drew on the sample of young people, including their parents and therapists, taking part in the IMPACT trial in North London (N=80).

4.3.1 Sample

All adolescents who participated in the IMPACT study in the greater London area were invited to take part in the IMPACT-ME study. Of the 80 participants from North London, two did not complete the qualitative study because of time constraints, and one withdrew from the study, leading to a final sample of 77 adolescents recruited for the IMPACT-ME study (Midgley et al., 2014).

The research of this thesis includes only 1 participant from the IMAPACT-ME sample. See Chapter 8 for more details about this participant and the criteria used for his selection.

4.4 Ethical considerations

The IMPACT and IMPACT-ME study protocols were both approved by the Cambridgeshire 2 Research Ethics Committee (reference: 09/H0308/137; see Appendix E). Fully informed written consent was obtained from participants, or parents for those under the age of 16. During the consent process, young people and their parents were given the opportunity to ask any questions and to discuss any concerns that they had about participating in the studies. Participants were informed that they had the right to withdraw from the study at any time. Anna Freud National Centre for

Children and Families and University College London (UCL) data protection and confidentiality policies were followed.

4.5 Data from the IMPACT study:

4.5.1 Data collection

Demographic data and all outcome measures were collected during the baseline assessment. Following this, most outcome measures were collected after randomisation, at 6 and 12 weeks (during treatment), 36 weeks (completed treatment for >95%), and 52 and 86 weeks (long-term follow-ups).

The alliance was assessed from both therapist and patients at 6, 12 and 36 weeks after randomisation. These time points were pre-scheduled after randomisation and do not necessarily correspond to the same number of sessions for all participants. Information about how many sessions had been attended at each time-point was not available.

4.5.2 Measures

Below are reported all the measures used in this thesis, the full list of measures of the IMPACT study is reported in Goodyer et al., 2017. Alongside these measures, therapists were requested to audio-record all therapy sessions with participants, therefore audio-recordings of sessions were also available.

Demographics: Age, sex, and ethnicity were measured with a demographic questionnaire at baseline.

Depression Severity. Depression symptoms were assessed with the Mood and Feelings Questionnaire (MFQ) (Angold et al., 1987). The MFQ is a 33-item self-report measure of depressive symptoms. It consists of a series of descriptive phrases regarding how the young person has been feeling or behaving over the past two-week period. Total scores range from 0 to 66, with higher scores reflecting higher depression severity. The clinical cut-off for the presence of a major depressive episode is 27 (Wood et al., 1995). The MFQ has demonstrated good test–retest reliability over a two- to three-week period (Pearson's r= 0.78), good internal consistency (Cronbach's α= 0.82) and discriminant validity (α=0.89) for detecting an episode of depression in

adolescents (Kent et al., 1997; Wood et al., 1995). It also showed good construct validity as it is highly correlated with the Children's Depression Inventory (r= 0.7) (Sund et al., 2001). In the sample used for this research thesis the internal consistency was similarly high (Cronbach's α= 0.93).

Conduct problems. The Antisocial Behaviours Questionnaire (ABQ) (Goodyer et al., 2017a) is a self-report, 11-item checklist for symptoms of antisocial behaviour, based on the DSM-IV (APA, 1994) criteria for conduct disorder. Scores range from 0 to 22, with higher scores reflecting more severe antisocial behaviours. The ABQ has demonstrated adequate reliability and validity for assessing delinquency and antisocial conduct in adolescents in previous studies (Cronbach's α = 0.78) (Cousins et al., 2016; St Clair et al., 2017). In this sample the internal consistency was also good (Cronbach's α= 0.79). The ABQ used in this thesis was collected at baseline.

Alliance. The Working Alliance Inventory short-form (WAI-S) (Horvath & Greenberg, 1989; Tracey & Kokotovic, 1989) was used to assess the alliance in the IMPACT study. The WAI-S aims to measure Bordin's (1979) conceptualization of the working alliance. It consists of 12 items, 10 positively worded and 2 negatively worded, grouped in three 4-item subscales assessing: (a) agreement on Goals, (b) agreement on Tasks and (c) the emotional Bond between patient and therapist. All items are rated on a 7-point Likert-type scale (from 1=Occasionally to 7= Always) and yield scores for each subscale as well as an aggregate overall score, ranging from 12 to 84 with higher ratings reflecting a stronger alliance. The WAI-S includes parallel versions for patients (WAI-S), therapists (WAI-S-T), and observers (WAI-S-O).

The WAI-S has demonstrated good construct validity with other therapeutic alliance measures (ranging between r=0.74 and r= 0.80, Horvath & Greenberg, 1989; Tracey & Kokotovic, 1989) and internal consistency in both adult (Cronbach's α= 0.93, Horvath & Greenberg, 1989) and youth samples (Cronbach's α= 0.94, (Capaldi et al., 2016). In the sample used for this research thesis the internal consistency was high for both the adolescent (WAI-S) and therapist (WAI-S-T) versions (Cronbach's α= 0.95). Since the first empirical study of this PhD thesis focuses on this scale, more information about the WAI-S, including the history of its development, is reported in Chapter 5.

4.6 Data from the IMPACT-ME Study

As part of the IMPACT-ME study, interviews took place with young people (and their parents, where possible) at three time-points. The therapists were also interviewed once at the end of treatment with the young people's and parents' consent.

4.6.1 Data collection

The IMPACT-ME interviews were conducted at the following three-time points. Time 1 interviews (Expectations of therapy interview) were carried out at baseline, before the start of treatment. Time 2 interviews (Experience of therapy interview) were carried out separately with the adolescent and their therapist after the therapy had ended. Time 3 interviews (Thinking back about therapy interview) were carried out with the adolescent, approximately one year after their previous interview. These interviews were conducted by psychology graduate research assistants.

4.6.2 IMPACT-ME interviews

The IMPACT-ME interview schedules were developed specifically for the IMPACT-ME study, although drew on elements of Elliot's Change Interview (Elliott et al., 2001). There was a separate interview schedule for each time point, and separate schedules for adolescents, parents, and therapists. As this thesis makes use of the interviews conducted at post-treatment (Time 2) only, more information about these interviews is reported below. Information about the interviews conducted at the other time points, and the IMPACT-ME methodology and results can be found in Midgley et al., 2011 & Midgley et al., 2014.

Experience of Therapy Interview. These were semi-structured interviews using the Experience of Therapy Interview schedule (see Midgley et al., 2011 for more details) conducted at the end of therapy (Time 2) with adolescents and their therapist, separately. This interview schedule focused on the following main areas: (1) the difficulties that brought the young person to CAMHS and how he/she made sense of these difficulties, (2) any changes the young person might have experienced in his/her symptoms and/or feelings (both positive and negative) (3) the story of therapy, including the quality of the relationship with the therapist, (4) the young person's evaluation of therapy, including both helpful and hindering aspects (5) the experience of taking part in the IMPACT research study. The therapist version of the interview

schedule mirrored that of the adolescent and aimed to explore the story of therapy from the therapist's perspective. Time 2 interviews lasted approximately 60 minutes.

4.7 The empirical studies that comprise this thesis

The goal of this thesis is to seek a better understanding of the role of the alliance in youth psychotherapy. To do so, it includes the following four interrelated studies, each addressing different aspects of the alliance in youth psychotherapy for adolescent depression.

Study 1 (see Chapter 5). Research on the psychometric properties of the alliance measures for young people is underdeveloped (Elvins & Green, 2008; Karver et al., 2018; McLeod, 2011). The first study of this thesis attempts to address some of the methodological issues on the operationalisation of the alliance in youth psychotherapy. Specifically, it investigates the factor structure and measurement invariance of one of the most popular measures in the field, the WAI-S (Horvath & Greenberg, 1989;Tracey & Kokotovic, 1989). This study uses the IMPACT sample to test previous research findings and hypotheses regarding the factor structure of the WAI-S (see Chapter 5 for more details). Progress achieved in research regarding the methods used to assess the alliance is a crucial step towards a deeper understanding of the alliance concept and its role in the treatment of young people.

Study 2 (see Chapter 6). Although the alliance is usually considered a generic factor common to all therapies, there are theoretical reasons to suspect that the alliance may develop differently in various types of therapy. Yet, in youth psychotherapy, little is known about the relationship between alliance and treatment type. The second study of this thesis attempts to address this gap by investigating whether the mean strength of the alliance, as well as its trajectory over time, differ between three equally effective psychological treatments for adolescent depression. Given the limited prior literature on the relationship between alliance and treatment type and competing theories about it, no a priori hypothesis about this relationship is offered in this study.

Study 3 (see Chapter 7). The third study of this thesis examines the most researched question in the alliance research, the one concerning the link between

alliance and outcome, while addressing some of the methodological limitations of the current literature. Specifically, Study 3 explores the directions of effect between alliance and outcome by examining the associations between early alliance and subsequent outcome, while controlling for patients' baseline symptom severity and prior symptom change (i.e. change occurred between baseline and the time of alliance assessment). This study also examines potential moderators of the alliance–outcome association and whether the strength of this association varies based on the alliance reporter and the type of outcome. The hypotheses of this study are informed by the existing literature.

Study 4 (see Chapter 8). Study 4 is more explorative and builds on the findings of Studies 2 and 3. It attempts to describe and understand the alliance and its dynamics, including its ruptures and resolutions, in STPP. It also investigates patient's and therapist's views on the role of their relationships, and its dynamics, in the change process. To do so, this study employs a longitudinal, mixed-methods empirical approach to a single case of an adolescent from the IMPACT-ME study and draws upon various sources of information (e.g. self-report questionnaire on alliance and outcome, audio-recording of therapy sessions, post-therapy interviews).

4.8 The epistemological position underpinning this research

The research in this thesis uses a mixed-methods design and is approached from a critical realist epistemological position (Mcevoy & Richards, 2006). Mixed methods research involves a pluralistic methodology that integrates quantitative and qualitative data analyses (Creamer & Reeping, 2020). Critical realism, which is often seen as the middle ground between positivism and interpretivism (Zachariadis et al., 2013), fits well with mixed methods research. This is because it assumes that research data provide information about reality, but cannot provide direct access to this reality (Edgley et al., 2016). From this position, to gather a fuller understanding of the object of research, a combination of different types of observations and analyses are required. Like mixed methods research, critical realism emphasises the importance of multiple measures and observations, each of which can cause different types of error, but the combination of them may lead to a better understanding of reality and offset biases (Creamer & Reeping, 2020; Morse, 2003).

As a researcher, I identify with the critical realist perspective and the need for mixed methods research. I believe that this approach is especially relevant and helpful when studying a complex psychotherapy variable like the alliance. The alliance construct likely varies based on unique patient's and therapist's characteristics, the type of therapy, as well as the interaction between these variables throughout treatment. To understand the alliance construct and its role in youth psychotherapy, multiple methods and repeated observations from different perspectives are required.

The rich IMPACT database provides me with an important opportunity to use, combine, and learn from different sources of information. The studies of this thesis include multiple types of data (e.g. questionnaires, interviews, audio-recording of therapy sessions), sources of information (e.g. adolescent, therapist, observers) and data analyses (e.g. quantitative and qualitative). I will approach these data and their various analyses from a critical realist epistemological position, knowing that each piece of evidence would provide me with important information, but could not give me direct access to the reality of the alliance. Yet, taken together, the results of each study could provide a fuller picture of the alliance and its role in youth psychotherapy.

In the general discussion, I will bring together the findings of the four studies of this thesis and show how, and to what extent, each study contributes to knowledge about the phenomenon of the alliance with young people. Some methodological reflections on the fascinating exploration of this important psychotherapy variable will also be reported in the final chapter.

Chapter 5. The factor structure of the Working Alliance Inventory Short form in youth psychotherapy

*"Things should be made as simple as possible, but not any simpler" (*Albert Einstein)

5.1 Introduction

The alliance in child and adolescent psychotherapy has received extensive empirical attention in the past decades. Yet, research on the characteristic of the alliance measures for young people is underdeveloped (Elvins & Green, 2008; Karver et al., 2018; McLeod, 2011). Little is known about the factor structure of alliance scales for this age group. If alliance is a key ingredient of youth psychotherapy, the measurement of this construct and its components is crucial for a deep understanding of the therapeutic process and its results. The aim of the present study is to address this gap by examining the factor structure of one of the most commonly used alliance measure with adolescents, the Working Alliance Inventory short form (WAI-S; Horvath & Greenberg, 1989;Tracey & Kokotovic, 1989).

This chapter will firstly explore the empirical literature on the factor structure of the WAI, then present the current study. A version of this study has been published in Psychotherapy Research (see Cirasola et al., 2020).

5.2 Research background

In the last few decades attempts have been made to empirically test the theoretical components of the alliance in child and adolescent psychotherapy and identify if the available measures are able to capture the construct(s) that they aim to assess. In youth psychotherapy the majority of research on the factor structure of various alliance measures has found a general, single-factor alliance model and poor discrimination between subscales (DiGiuseppe et al., 1996; Faw et al., 2005; Fjermestad et al., 2012; Hogue et al., 2006; Shelef et al., 2005). This might suggest that the alliance features are less differentiated at younger ages or that current alliance scales do not discriminate between different aspects of the alliance (e.g., Zack et al., 2007). In the context of these findings, recent major reviews of the empirical literature on the alliance have called for further investigation of the dimensionality of the alliance measures (Gaston, 1990; Horvath, 2011; Horvath & Greenberg, 1994; Karver et al., 2018).

The Working Alliance Inventory and its factor structure

One of the most frequently used alliance measures in adult and adolescent psychotherapy is the Working Alliance Inventory (WAI; Horvath & Greenberg, 1989) and its short form (WAI-S; Tracey & Kokotovic, 1989). The WAI was originally designed for adult therapy and then adapted for use with young people. Two adapted versions of this scale have been developed: the WAI-Adolescent (WAI-A, DiGiuseppe et al., 1996) for use with adolescents aged between 11 and 18; and the WAI-Children and Adolescents (WAI-CA, Figueiredo, Dias, Lima, & Lamela, 2016) for children and adolescents aged between 7 and 17. Nonetheless, the original, and especially the short version of the WAI (WAI-S; Tracey & Kokotovic, 1989) have been employed most frequently with youths (Karver et al., 2018; McLeod, 2011; Shirk et al., 2011).

The WAI was developed from a theory-based approach with the aim to measure Bordin's (1979) alliance model (Horvath & Greenberg, 1989, 1994). The authors developed an initial pool of items for each of the three hypothesised alliance components (Bond, Task, and Goal). These items were then selected and grouped into different subscales by expert clinicians and researchers with varying theoretical backgrounds. While the correlations between the subscales were assessed, showing to be high (r from 0.69 to 0.92, especially between Goal and Task, r=92), no use was made of factor analysis methods in the development of the subscales (Horvath & Greenberg, 1989).

Tracey and Kokotovic (1989) were the first to examine the construct validity and factor structure of the WAI. They conducted a confirmatory factor analysis (CFA) of 84 patients' and 123 therapists' ratings of the WAI after the first session of adult counselling. Three alliance models were tested: (1) a model with only one general alliance factor, (2) Bordin's three-factor model, and (3) a bi-factor model with one common factor for all items and three separate factors for the three subscales. The authors found that the bi-factor structure fit the data best for both patients' and therapists' ratings and concluded that "*the WAI appears to be measuring one General Alliance factor as well as the three specific alliance factors of Task, Bond, and Goal posited by Bordin*" (Tracey and Kokotovic, 1989, p.209).

Based on the results of this CFA of the WAI, Tracey and Kokotovic (1989) selected the four highest loading items on each of the three dimensions (Task, Goals, and Bond) to develop a short version of the WAI (the WAI-S). A second set of CFAs was then conducted on these twelve items, which also supported the bi-factor

structure of the WAI-S. However, several interpretive and methodological issues temper Tracey and Kokotovic's (1989) CFA results and the development of the WAI-S. The sample size was small and the fit indexes for the bilevel solution were not within the currently accepted ranges. Further, the method of extracting the questions from the original CFA to form the WAI-S should ideally have been validated in a new sample. Finally, the WAI was collected after the first session, and it might take longer for the patient and therapist to develop each of the specific aspects of the alliance.

As researchers sought a more detailed understanding of the alliance components, more studies attempted to empirically investigate the factor structure of alliance measures. In 1996 Hatcher and colleagues conducted an exploratory factor analysis (EFA) of three alliance scales, including the WAI, in a sample of 231 adults in psychodynamic therapy. Their results suggested that the WAI, as rated by both patients and therapists, has two rather than three independent factors, with one factor including Goal and Task items together, and the other comprising Bond items. Similar results were found in another study using the observer-rated version of the WAI-S (Andrusyna et al., 2001).

Subsequent CFA studies also failed to support the three-factor structure of the WAI and WAI-S (Corbière et al., 2006; Hatcher & Gillaspy, 2006). In 2006, Corbiere and colleagues assessed the factor structure of a French version of the WAI-S in a sample of psychiatric patients in an intensive community programme. A one-factor and a three-factor model were tested on both clients' (n=150) and therapists' (n=150) ratings. Results showed strong correlations among the subscales (r from 0.71 to 0.86) and indicated a unidimensional solution as being the most valid from both rater perspectives (Corbière et al., 2006). Hatcher and Gillaspy (2006) also evaluated the factor structure of the WAI and WAI-S using CFA in two larger adult samples. The result of this study did not support the hypothesized three-factor structures in both samples.

In an attempt to improve the WAI so that it could better measure all three components of Bordin's theoretical model, Hatcher and Gillaspy (2006) developed a revised version of the WAI-S (the WAI-SR, Hatcher & Gillaspy, 2006). Building upon the result of their previous CFA on the WAI-S, they used Exploratory Principal Axis Factor Analysis to select the items for the WAI-SR. Since the negatively worded items formed a separate factor from the positively worded items, Hatcher and Gillaspy (2006) decided not to include any negatively worded items in the WAI-SR, and also

condensed the rating to a 3-point response scale from the original 7-point scale. The results of their CFA showed that the WAI-SR supported the hypothesised Bond-Task-Goal model (Hatcher & Gillaspy, 2006).

The tree-factor structure of the WAI-SR was supported by another CFA study on a German version of the WAI-SR in a sample of 88 adult outpatients and 243 inpatients (Munder et al., 2010). However, the Task and Goal subscales were highly correlated in both studies: r= .73 and .94 for Samples 1 and 2 in Hatcher and Gillaspy's (2006) study, and r = 0.75 in Munder and colleagues' (2010) study. In contrast, a more recent CFA of the WAI-SR in three large clinical samples (N = 235, 634, and 234) suggested that a two-factor structure, in which Task and Goal are collapsed into one factor, is more appropriate due to the high correlation between these two components (ranging from r=.82, to r=93) (Falkenström et al., 2015). In sum, empirical efforts to identify specific components of the alliance using various version of the WAI in adult psychotherapy have yielded mixed results.

Factor structure of the WAI and its short form in youth psychotherapy

Since the WAI was developed for adult psychotherapy, most of the research assessing its validity and structure has been conducted in adult samples and less research is available on the topic in adolescent psychotherapy. To date, only three studies have assessed the factor structure of different versions of the WAI with young people and none of them supported the hypothesised Goal-Task-Bond alliance model (Anderson et al., 2012; G. S. Diamond et al., 2006; DiGiuseppe et al., 1996).

DiGiuseppe and colleagues (1996) explored the factor structure of the WAI-A in a sample of 90 adolescents and their therapists. One large alliance factor was identified for the adolescent ratings, while therapists' ratings yielded one general factor and the three separate factors of Goal, Task, and Bond. These results seem to suggest that the WAI-A is unidimensional from the adolescent perspective, and that adolescents' and therapists' ratings of the alliance structure might differ. Similarly, principal component analysis of early adolescents' (n=356) and therapists' (n= 349) ratings of the WAI (Horvath & Greenberg, 1989, 1994), in the context of a large randomised controlled trial (RCT) of five treatments for cannabis dependence, yielded a one-factor solution for both perspectives (Dennis et al., 2002; Diamond et al., 2006).

A general one-factor model was also found in a study assessing the structure of an online version of the WAI-S in relation to therapist-assisted online cognitive

behavioural therapy (CBT) for children and adolescents with anxiety disorders (Anderson et al., 2012). In this study, the WAI-S was completed online by 137 young people and their parents, separately. CFA was used to test a one-factor model, a three correlated factors model, and a two correlated factor model (Bond and Task/Goal combined). The results showed that a single-factor alliance model best represented the data for the adolescent ratings. In contrast, the parents' ratings of their child's alliance with the therapist were well explained by the two-factor model.

Overall, empirical evidence seems to suggest that the WAI, its adolescent version, and its short form all measure a general, one-factor alliance when rated by young people. This is in line with the literature on the factor structure of a range of youth alliance measures, which also found a single, general alliance factor (Diamond et al., 1999; Faw et al., 2005; Fjermestad et al., 2012; Hogue et al., 2006; Meyer et al., 2002; Shelef & Diamond, 2008; Shelef et al., 2005). However, caution should be taken when interpreting these findings due to some common methodological limitations. Importantly, the majority of the studies on the factor structure of the WAI with adolescents had a relatively small sample size and their generalisability is limited due to the inclusion of specific target groups (e.g. hard-to-treat samples of primarily male, substance-abusing adolescents) or type of treatment (e.g. online therapy). This might result in factors that are specific to one data set, difficult to replicate, and not necessarily representative of a larger population (Lingard & Rowlinson, 2005).

Another limitation of the current literature on alliance measures is that the assessment of their measurement invariance has been neglected. Measurement invariance is a statistical property of measures that indicates that the same underlying construct is being evaluated across groups or time. As such, it is a crucial prerequisite for valid comparisons of test scores over time or between different groups. The full assessment of measurement invariance includes configural, metric, and scalar invariance. Configural invariance refers to a qualitatively invariant measurement pattern of latent constructs across groups and/or over time. Metric invariance refers to a quantitatively invariant measurement model of latent constructs across groups and/or over time. Scale invariance refers to invariant mean levels of latent constructs across groups and/or over time. The assessment of measurement invariance is particularly relevant in alliance research, since the WAI-S has increasingly been used in longitudinal research as well as across different types of treatment, rater perspectives, and client groups. Yet, to my knowledge, no research has investigated

whether the WAI-S structure differs across time, various psychotherapy modalities, or raters in youth psychotherapy.

Another critical aspect is related to the alliance measures in themselves. Although it is common for existing alliance scales, like the WAI, to include item worded in opposite direction (e.g. "My therapist does not understand what I am trying to accomplish in therapy." "My therapist and I are working towards mutually agreed upon goals." Horvath & Greenberg, 1989) this might result in response bias, difficulties in processing reverse-worded items, and therefore possible method effects. As such, in factor analytic studies positively and negatively worded items tend to load in separate factors, creating polarities (DeVellis, 2016). Yet, there is lack of research on the impact of item wording on the latent structure of the WAI-S in youth psychotherapy.

The above critiques suggest that the empirical literature on the factor structure of the WAI needs to be interpreted with caution and leaves a lot of unanswered questions.

5.3 The current study

Despite the popularity of the WAI-S (Horvath & Greenberg, 1989;Tracey & Kokotovic, 1989) in the adolescent literature, extensive construct support for this measure has yet to be demonstrated, and its factor structure has received minimal attention. To address this gap, this study has the following specific aims:

1) To investigate whether the hypothesised Bond-Task-Goal alliance model of the WAI-S is empirically supported, or whether a different alliance structure represents a better fit in three types of time-limited psychotherapy for adolescent depression.
2) To evaluate full measurement invariance of the WAI-S across (a) time, (b) rater groups (adolescents and therapists), and (c) different therapeutic approaches.
3) To examine the existence of method effects associated with the negatively worded items of the WAI-S.

5.4 Method

The setting for this study is the IMPACT trial (Goodyer et al., 2017, 2011). Full details of the procedure of the IMPACT study are reported in Chapter 4.

5.4.1 Participants

The present study included only participants from the IMPACT study who received treatment and had at least one rating of the alliance completed by the adolescent or their therapist at any time point. Sample sizes vary between different analyses due to missing values.

WAI-S sample. This sample consisted of 338 adolescents, i.e. all participants who completed one or more WAI-S over time. Adolescents in this sample were treated by 157 therapists. The median and mode number of patients treated by each therapist was 1, with only a few therapists treating more than one patient. Specifically, 64% of therapists had only 1 patient, 19% had 2 patients and 18% had 3 patients or more.

WAI-S-T sample. This sample consisted of 159 adolescents with at least one rating of the alliance completed by 72 therapists. The median and mode number of patients treated by each therapist was 1, with 61% of therapists reporting on the alliance with 1 patient, 15% reporting on the alliance with 2 patients and 24 % on 3 patients or more.

Table 1. Demographics for the WAI-S and WAI-S-T samples

	WAI-S sample (N=338)		WAI-S-T sample (N= 159)	
	Mean	**SD**	**Mean**	**SD**
Age	15.59	1.41	15.57	1.52
	N	**%**	**N**	**%**
Gender				
Female	247	73.1	110	69.2
Ethnicity 1				
White British	261	77.4	114	71.7
Any other group	69	20.3	43	27

1   8 missing in the WAIS sample; 2 missing in the WAI-S-T sample

Demographic information for the adolescents in both samples is displayed in Table 1. No demographic data was collected for the therapists. Information about the number of therapists and the patients treated by each therapist in both samples are provided in the Appendix 1 Table A8.

5.4.2 Measures:

Demographics. Age, sex, and ethnicity were assessed with a demographic questionnaire at baseline.

Therapeutic alliance. The therapist (WAI-S-T) and patient (WAI-S) short-version of the WAI (Horvath & Greenberg, 1989; Tracey & Kokotovic, 1989) were completed at 6, 12, and 36 weeks after randomisation. More details about the scale are reported in Chapter 4. The Appendix 1 Table A1 shows the WAI-S and WAI-S-T items.

5.4.3 Data analysis

Descriptive analyses were conducted using SPSS (IBM, 2016). All other analyses were conducted in R (R Core Team, 2018) using the lavaan package (Rosseel, 2012). Negatively worded items on the WAI-S were reverse-scored prior to conducting any statistical analyses. All sets of analyses were performed separately on the adolescents' and therapists' ratings of the WAI-S. Details of each of the analyses performed are reported below.

Factor structure of the WAI-S. To investigate the factor structure of WAI-S and WAI-S-T (i.e. adolescent and therapist versions), the following four most popular alliance models were tested and compared against each other using CFA. The hypothesised models are described graphically in Figure 1 to Figure 4.

Figure 1. WAI-S Three factor Model
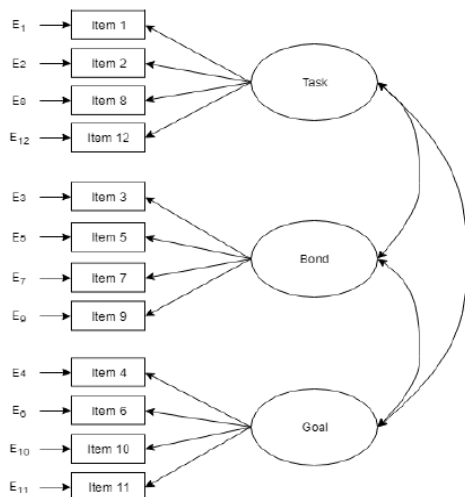
Figure 2 WAI-S one factor Model
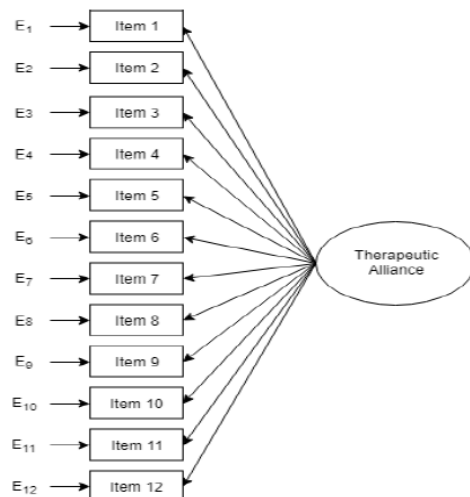
Figure 3 WAI-S bi-level Model
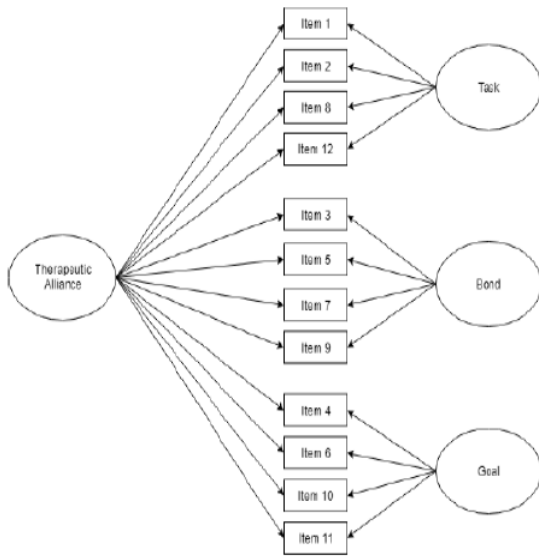
Figure 4 WAI-S Two-factor Model
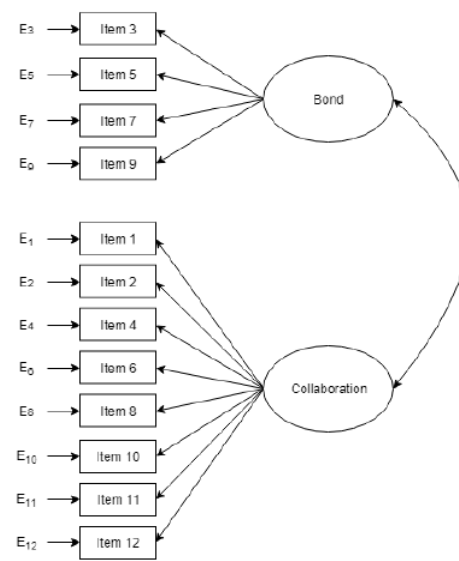
All CFAs were estimated using maximum likelihood estimation with robust standard errors and a Satorra-Bentler (S-B) scaled test statistic. Following guidelines from Kenny (2015) and Hu and Bentler (1999), model fit was evaluated assessing fit statistics from different categories, including the root mean square error of approximation (RMSEA), the standard root mean square residual (SRMR) as well as two incremental fit measures: the comparative fit index (CFI) and the Tucker-Lewis index (TLI). According to the most used conservative criteria, CFI and TLI values between 0.90 and 0.95 were considered an indication of acceptable fit, and values above 0.95 indicated good fit (Hu & Bentler, 1999; Kenny, 2015). SRMR values less than 0.08 were considered an indication of a good fit, as RMSEA values below .06; though RMSEA values between 0.06 and 0.08 were deemed acceptable, values in the 0.08 to 0.10 range were considered marginal fit, and values > 0.10 poor fit (Hu & Bentler, 1999; Kenny, 2015). A model was determined to be well-fitting if at least three of these four indices demonstrated good fit.

If there were problems with the model estimation, including model non-convergence, correlations between the latent variables over 1.0 (i.e. 'out of bound'), negative measurement error variances, or invalid values for path estimates the factor solution was considered 'improper' (Kyriazos, 2018). No post-hoc modifications were performed to improve model fit. Owing to the non-nested nature of the different hypothesised models, a statistical test of model comparison was not available and two

model-fit criteria, the Akaike information criterion (AIC) and the Expected cross-validation index (ECVI), were used to compare the quality of models. Smaller values on AIC and ECVI indicate better fit.

The amount of missing WAI-S items was very low across samples and ranged from 0 to 1.7%. Missing data were assumed to be missing at random (MAR) (Rubin, 1987) and were handled using full information maximum likelihood (FIML). In FIML procedure, missing values are not imputed, but coefficients (such as loadings and variances) are estimated using all available data rather than complete cases only.

Nesting within therapists. Although in both samples patients were nested within therapists, the majority of therapists treated only one patient. Therefore, this statistical dependency was not expected to be high. Nevertheless, multilevel CFA was attempted to estimate both within- and between-person variation in the assessment of the alliance structure. This failed to converge in both samples, likely because the median and mode number of cases per therapist was 1, limiting the model's ability to distinguish between case and therapist.

Method effect. To assess whether there WAI-S is affected by a method effect associated with the negatively worded items (item 4 and 10) within the Goal subscale, the performance of these two items was firstly explored looking at the correlation matrix of all WAI-S items in the raw data. A residual method effect was then investigated by allowing the errors of the two negatively worded items to be correlated in the CFA analyses. Each alliance model was tested twice: the first time with uncorrelated errors, the second time the model specification included the correlation between the error of the two negatively worded items (e.g. accounted for the method effect). These two nested models were then compared against each other using the chi-square difference test.

Measurement Invariance. Once the best fitting model(s) of the WAI-S was established in both samples at the first time-point assessment (6 weeks), a series of CFAs for each time point and for each treatment arm was conducted to assess configural invariance. If the same measurement model had the best fit in all groups, as well as having at least adequate fit (in terms of normative fit indices), this was considered as an indication of configural invariance.

Subsequently, to test for metric and scalar measurement invariance across raters and treatment arms multiple groups CFA with MLR was conducted on the best fitting model(s) using a series of increasingly stringent model comparisons: configural

(i.e. with no constraints) to metric (i.e. with factor loadings constrained to be equivalent across the groups) to scalar model (i.e. with both factor loadings and item intercepts constrained to be equivalent across the groups). This was done to assess whether constraining specified model parameters across groups resulted in a significant improvement or worsening of model fit.

To assess longitudinal measurement invariance, a longitudinal structural equation model was conducted. In this model the invariance constraints were progressively added by successively setting the equality of the parameters of the measurement model across time points. Correlations among residuals for the same items at different time-points were estimated freely.

Change in model fit was evaluated by differences in CFI and S-B scale-corrected chi-square difference tests. Following the most used guidelines, a difference in CFI (ΔCFI) less than .01 was considered indicative of no meaningful difference in model fit and, therefore, indicative of measurement invariance (Cheung & Rensvold, 2002). Since chi-square tests are sensitive to sample size, ΔCFI > 0.01 was the primary indication of violation of measurement invariance.

5.5 Results

5.5.1 Descriptive Statistics

The number of WAI-S completed by adolescents was 223 at 6 weeks, 247 at 12 weeks and 222 at 36 weeks. Therapists completed 139, 119 and 63 WAI-S-T at 6, 12, and 36 weeks respectively. Descriptive statistics and correlations matrix of WAI-S and WAI-S-T items for both samples at all time points can be found in the Appendix 1 Table A2-A7. Since the negatively worded items were reversed, all correlations were positive. In both samples, but especially in the WAI-S, the correlations involving the negatively worded items (item 4 and 10) were lower compared to those resulting from the associations of the positively worded items. This raised questions about the performance of the negatively worded items, which was further assessed using CFA.

5.5.2 Factor Structure of WAI-S

Table 2 provides an overview of the results from the CFAs conducted on the adolescents' ratings of the WAI-S at 6 weeks. Of all models investigated, the two-factor had the best fit, with all fit indices within the threshold for good model fit, and

the lowest values in both comparative indices (AIC and ECVI). The fit indices for the one-factor solution were almost as good, ranging between acceptable to good fit.

Despite its better fit, the two-factor model estimated a high correlation between its two factors (r=0.91), raising doubts on whether the WAI-S does meaningfully differentiate between Bond and Collaboration. In contrast, both the three-factor and the bi-factor models could not be reliably estimated in this sample and therefore are not reported. In particular, the three-factor solution, despite converging normally, it was considered unreliable due to out of bound correlation (r>1) between the Goal and Task scales. A correlation of >1 indicates the presence of problems with the model (called Heywood case), which renders the factor solution invalid or 'improper' (Kenny, 2015; Kyriazos, 2018).

The bi-factor model failed in this sample and at all time points due to identification problems given the covariance matrix could not be inverted. When a model is not identified, that generally means it is too complex given the amount of information in the covariance matrix. In such cases, it is advisable to reduce the complexity of the model or to increase the number of items (Gana & Broc, 2018). Information about factor loadings for the models tested are provided in the Appendix Table A9.

Table 2. CFAs of the WAI-S and WAI-S-T at 6 weeks: Model fit information using the Maximum Likelihood Estimator with Robust Standard Errors

Model	Robust Model Fit Indices								χ^2/df
WAI-S sample [a]	χ^2	df	CFI	TLI	RMSEA	SRMR	AIC	ECVI	
One-factor	147.39***	54	0.935	0.920	0.103	0.047	8757.58	1.23	13.13***
One-factor Method Effect	133.32***	53	0.944	0.939	0.096	0.040	8740.00	1.15	
Two- factor	108.77***	53	0.962	0.952	0.080	0.044	8705.0	0.99	12.71***
Two-Factor Method Effect	94.85***	52	0.971	0.963	0.071	0.037	8687.90	0.92	
WAI-S-T sample									
One-factor	135.77***	54	0.922	0.904	0.111	0.047	4328.7	1.63	13.75***
One-factor Method Effect	120.12***	53	0.936	0.920	0.102	0.040	4312.5	1.51	
Two- factor	132.12***	53	0.924	0.905	0.111	0.047	4327.3	1.62	14.11***
Two-Factor Method Effect	116.48***	52	0.938	0.921	0.101	0.040	4310.1	1.50	
Three-factor	133.01***	51	0.922	0.900	0.114	0.046	4329.8	1.64	15.96***
Three-factor Method Effect	117.46***	50	0.936	0.916	0.104	0.040	4314.4	1.53	

Note. Method effect= the model specification included the correlation between the error of the two negatively worded items. The bi-factor model was tested in both samples but could not be identified.

a= The three-factor solution was unreliable in this sample because the correlation between Task and Goal was >1.

***= $p < .001$

5.5.3 Factor Structure of WAI-S-T

The bi-factor model could not be identified in the WAI-S-T sample either, due to convergence problems. All other models showed an overall acceptable fit, with only minor differences in fit between models (see Table 2). Although the differences between the models were small, the two-factor solution had the lowest values for both the AIC and ECVI comparative indices, demonstrating a better fit compared to all rivalling models. The latent variable correlations were high in both multifactor models, especially in the three-factor solution where the correlation between the Goal and Task scales was 0.98, and those between the Bond scale and the Goal and Task scales were both 0.96. In the two-factor model, the correlation between Bond and Collaboration was also high (r=0.96). Information about factor loadings for all models are provided in the Appendix 1 Table A10. CFA results of the best fitting models (e.g. the one-factor and two-factor models) in both samples at all time points are reported in paragraph 5.5.4.

5.5.3 Method effect

As shown in the Table 2 (last row for each group), chi-square difference tests suggested that in both samples each model that accounted for the method effect showed a significantly better fit compared with the equivalent model with uncorrelated errors. This indicated the existence of a method effect associated with the negative item phrasing on the WAI-S. To account for this issue, all models tested with CFA included the correlation between the error of the two negatively worded items in their model specification.

5.5.4 Longitudinal measurement invariance

Tables 3 and 4 report the results of CFAs for the one-factor and two factor models conducted on the WAI-S and WAI-S-T samples separately for all three assessment time points. In both samples, the two-factor model consistently had the best fit for the data across time, as suggested by lower scores on the AIC and ECVI compared to the one-factor model. However, the estimated inter-factor correlation was consistently very high. Since in both samples each model demonstrated a similar model fit across time, longitudinal configural invariance was supported and a longitudinal structural equation model was conducted to test for metric and scalar invariance.

Table 3. CFAs of the WAI-S at 6, 12 and 36 weeks: Factor Intercorrelations and Model fit information using the Maximum Likelihood Estimator with Robust Standard Errors

Sample 6weeks a	Model	Robust Model Fit Indices								Factor correlations
		$\chi 2$	df	CFI	TLI	RMSEA	SRMR	AIC	ECVI	
	One-factor	133.32***	53	0.944	0.939	0.096	0.040	8740.00	1.15	\
	Two-factor	94.85***	52	0.971	0.963	0.071	0.037	8687.90	0.92	0.91***
12 weeks b										
	One-factor	167.30***	53	0.940	0.925	0.108	0.035	9374.8	1.198	\
	Two-factor	128.90***	52	0.960	0.949	0.088	0.032	9323.0	0.988	0.92***
36weeks c										
	One-factor	175.89***	53	0.960	0.951	0.094	0.028	8157.12	1.13	\
	Two-factor	118.61***	52	0.967	0.958	0.086	0.026	8138.30	1.04	0.96***

Note. All models include the correlation between the error of the two negatively worded items.

a N= 223; b N= 247; c N= 222; ***= p < .001.

Table 4. CFAs of the WAI-S-T at 6, 12 and 36 weeks: Factor Intercorrelations and Model fit information using the Maximum Likelihood Estimator with Robust Standard Errors

Sample	Model	Robust Model Fit Indices								Factor
6weeks a		$\chi 2$	df	CFI	TLI	RMSEA	SRMR	AIC	ECVI	correlations
	One-factor	120.12***	53	0.936	0.920	0.102	0.040	4312.47	1.51	\
	Two-factor	116.48***	52	0.938	0.921	0.101	0.040	4310.10	1.50	0.96***
12 weeks b										
	One-factor	90.36**	53	0.969	0.962	0.080	0.032	3470.60	1.45	\
	Two-factor	88.30***	52	0.971	0.963	0.079	0.035	3468.10	1.43	0.95***
36weeks c										
	One-factor	80.01**	53	0.953	0.942	0.093	0.053	1750.50	2.53	\
	Two-factor	73.05*	52	0.963	0.954	0.083	0.049	1745.60	2.45	0.91***

Note. All models include the correlation between the error of the two negatively worded items.

a N= 139; b N=119; N=63; ***= p < .001.; **= p < .01.; *= p < .05.

Fit statistics for the results of the longitudinal metric and scalar invariance tests in both samples are displayed in Table 5. In the WAI-S sample, for both the one-factor and two-factor WAI-S structures the ΔCFI criterion (ΔCFI<0.01) and the chi-square difference tests indicated no significant difference in model fit from the configural to the metric model and from the metric to the scalar model.

Similarly, in the WAI-S-T sample, both the chi-square difference test and ΔCFI criterion supported metric invariance of both the one and two-factor model. From metric to scalar invariance, although the chi-square difference tests yielded small p-values, the ΔCFI criterion supported scalar invariance. Since in both samples the differences in CFI across the increasingly constrained models did not indicate any meaningful difference in model fit (ΔCFI < 0.01) for the one-factor and two-factor WAI-S structure across time (Cheung & Rensvold, 2002), both scalar and metric longitudinal invariance were supported for both the adolescents' and therapists' ratings.

Table 5. Longitudinal measurement invariance for the one and two factor models in the WAI-S and WAI-T samples

	One-factor model			Two-factor model		
	Δχ2 (df)	p	CFI (ΔCFI)	Δχ2 (df)	p	CFI (ΔCFI)
WAI-S sample						
Configural			0.929			0.942
Metric	27.05 (22)	0.209	0.928 (0.001)	22.09 (20)	0.335	0.942 (0)
Scalar	24.38 (24)	0.439	0.928 (0)	23.74 (24)	0.476	0.942 (0)
WAI-S-T sample						
Configural			0.852			0.858
Metric	30.63 (22)	0.104	0.851 (0.001)	21.63 (20)	0.361	0.858 (0)
Scalar	64.29 (24)	<0.001	0.842 (0.009)	71.31 (24)	<0.001	0.850 (0.008)

5.5.5 Measurement invariance across raters

As shown in Tables 3 and 4, there was a high level of convergence between the therapist-reported and adolescent-reported alliance structure, with the two- factor model showing the best fit for the data in both samples. As such, configural invariance between rater groups was also supported. To assess for metric and scalar invariance across adolescents' and therapists' ratings multiple group CFA was conducted. Table 6 displays the results of the measurement invariance analyses across the WAI-S and WAI-S-T samples at 6 weeks. When adolescents' and therapists' ratings were compared on the one-factor model, metric and scalar invariance did not hold, as

indicated by both a significant chi-square difference test and a difference in CFI larger than .01 (Cheung & Rensvold, 2002). For the two-factor model, instead, metric invariance passed the ΔCFI criterion (ΔCFI = .008) and only scalar invariance did not hold. Therefore, across raters there was no support for full measurement invariance of the WAI-S, but configural and metric invariance were found (weak invariance) for the two-factor model only.

Table 6. Measurement Invariance across raters for the one and two factor models at 6 weeks

	One-factor model			Two-factor model		
	Δχ2 (df)	p	CFI (ΔCFI)	Δχ2 (df)	p	CFI (ΔCFI)
Configural			0.935			0.952
Metric	47.5 (11)	<0.001	0.923 (0.012)	35.3 (10)	<0.001	0.944 (0.008)
Scalar	191.2 (11)	<0.001	0.865 (0.058)	169.0 (10)	<0.001	0.893 (0.051)

5.5.6 Measurement Invariance across treatments

The WAI-S-T sample was deemed too small to be divided into subgroups, therefore, measurement invariance was tested in the WAI-S sample only. Table 7 shows the results of the CFA conducted on the adolescents' ratings for each type of treatment at 6 weeks (BPI: N=72; CBT: N=78; STPP: N=73). In line with previous results, the two-factor model consistently had a better fit compared to the one-factor model across therapeutic approaches. This finding supported configural invariance across treatment groups and full measurement invariance was then assessed.

Table 7. CFAs of the WAI-S at 6 weeks for each treatment arm: Factor Intercorrelations and Model fit information using the Maximum Likelihood Estimator with Robust Standard Errors

Treatment	Model	Robust Model Fit Indices								Factor correlations
BPI a		χ^2	df	CFI	TLI	RMSEA	SRMR	AIC	ECVI	
	One-factor	99.59**	53	0.895	0.870	0.110	0.068	2791.84	2.63	\
	Two-factor	86.87**	52	0.923	0.902	0.096	0.064	2777.46	2.43	0.87***
CBT b										
	One-factor	94.39***	53	0.867	0.834	0.110	0.076	3067.38	2.42	\
	Two-factor	71.30*	52	0.939	0.922	0.075	0.073	3040.15	2.07	0.77***
STPP c										
	One-factor	93.16***	53	0.947	0.934	0.107	0.041	2878.97	2.42	\
	Two-Factor	82.85**	52	0.961	0.949	0.094	0.041	2868.95	2.28	0.94***

Note: All models include the correlation between the error of the two negatively worded items.

a N= 72; b N= 78; c N= 73; ***= p < .001. ; **= p < .01; *= p < .05.

As displayed in Table 8, for the one-factor structure of the WAI-S, although the scalar model failed the chi-square difference test, according to the ΔCFI criterion both metric and scalar invariance held. Metric and scalar invariance were also found for the two-factor structure according to both the chi-square difference test and the ΔCFI criterion.

Table 8. Measurement Invariance across treatment types for the one and two factor models in the WAI-S sample at 6 weeks

	One-factor model			Two-factor model		
	$\Delta\chi^2$ (df)	p	CFI (ΔCFI)	$\Delta\chi^2$ (df)	p	CFI (ΔCFI)
Configural			0.909			0.939
Metric	22.8 (22)	0.413	0.909 (0)	28.3 (20)	0.105	0.935 (0.005)
Scalar	34.7 (22)	0.042	0.902 (0.007)	26.7 (20)	0.142	0.931 (0.004)

5.6 Discussion

Structure of the WAI-S

Although the WAI-S was designed to measure Bordin's (1979) definition of the alliance, and therefore structured in three subscales (Task, Bond and Goal), the results of this study did not provide empirical support for this model in adolescent psychotherapy. Of the four alliance models tested, the two-factor and the general, one-factor model seemed to represent more adequately the WAI-S structure for both the adolescent's and therapist's ratings. In contrast, the three-factor and the bi-factor models failed to be supported empirically in this sample.

Specifically, in this sample the two-factor model fitted better than the simpler, one-factor model. This might suggest that a general alliance factor on its own does not sufficiently represent the data and provides some support for the Bond-Collaboration structure of the WAI-S. However, despite the better fit, the two-factor model yielded high correlation between factors, which raised questions about the practical and statistical distinction between the two latent variables. Since the one-factor model also revealed an overall good fit, it could be argued that this parsimonious structure is psychometrically more valid. This would be in line with the majority of the empirical literature on the structure of the WAI-S, as well as of other alliance

measures, which supports the acceptance and further use of a single, general alliance factor in adolescent psychotherapy (G. S. Diamond et al., 2006; DiGiuseppe et al., 1996; Faw et al., 2005; Fjermestad et al., 2012; Hogue et al., 2006). Accordingly, DiGiuseppe and colleagues (1996) have argued that the alliance for adolescents is a one-factor phenomenon and failure to establish one of its aspects might results in failure to establish it entirely.

The overall poor fit of the three-factor and the bi-factor models of the WAI-S, as well as the high levels of correlation between the subscales, are common findings in youth alliance research (Anderson et al., 2012; Diamond et al., 2006; DiGiuseppe et al., 1996). Developmental issues might be responsible for the failure to support Bordin's (1979) definition of the alliance with youths. For instance, it has been argued that young people might not be able to discriminate between different aspects of the alliance (DiGiuseppe et al., 1996; Zack et al., 2007). This could be not only because the ability to differentiate tasks and goals of therapy might require complex cognitive skills (e.g. the ability to think hypothetically), but also because adolescents might not be familiar with the activities expected in therapy. Moreover, young people are often referred to treatment rather than seeking therapy themselves, which might further complicate the establishment of an agreement on therapy goals. This being said, factor analytic research on the WAI in adult samples has also failed to support the distinction between the Goal and Task subscales (Andrusyna et al., 2001; Corbière et al., 2006; Falkenström et al., 2015; Hatcher et al., 1996; Hatcher & Gillaspy, 2006). It might thus be that the poor distinction between the WAI subscales is due to the measure itself.

There are several ways of interpreting these findings. On the one hand, the strong association between the proposed alliance components might not be sufficient to demonstrate that youth alliance is a one-factor phenomenon. Bond and Collaboration have strong face validity as being indicative of two distinct, but mutually dependent, aspects of the alliance (Hougaard, 1994; Shirk & Saiz, 1992). Collaboration comprises patient and therapist negotiation and agreement on the work of therapy, while the bond refers to the affective aspects of the relationship. Despite being unique in their content, they are supposed to be linked: positive emotional bonding heightens the patient's motivation and involvement in therapy, similarly high levels of collaboration foster the development of a strong bond. On the other hand, the high correlation between Bond and Collaboration might imply that these factors cannot

be meaningfully differentiated in adolescent and therapist ratings. This could be either because they are poorly represented as distinct in this measure (i.e. the WAI-S items are designed in a way that does not allow for this subtler distinction); or because youth alliance is an integrated phenomenon, i.e. each alliance component cannot be achieved without the other. Ultimately, while the distinction between Bond and Collaboration is conceptually and clinically interesting, at an empirical level these two aspects of the alliance are strongly correlated. As such, statistically the most valid way to represent the WAI-S structure might be with one, general alliance score for both adolescents' and therapists' ratings.

Measurement invariance

The results of this study provided evidence for the WAI-S longitudinal measurement invariance from both rater groups. This suggests that the way adolescents and therapists understand and rate the scale items does not change over the course of treatment. This finding is in line with the result of a previous study assessing longitudinal measurement invariance of a revised version of the WAI in adult counselling/psychotherapy (Falkenström, Hatcher, et al., 2014). Similarly, from the adolescent perspective, both the one- and especially the two-factor structure of the WAI-S also showed measurement invariance across treatments. This might suggest that adolescents undertaking different types of therapy interpret the WAI-S items in a conceptually similar way (Lee, 2018). It would be important for future research to assess whether this is the case from the therapist perspective too.

This study did not find support for metric and scalar invariance across raters (i.e. adolescents and therapists) for the one-factor structure of the WAI-S; while the two-factor model showed configural and metric invariance, but not scalar invariance. Since scalar invariance was not attained, there might be differences in the way adolescents and therapists interpret the items of the WAI-S; thus, mean ratings of adolescents and therapists cannot strictly be compared. Notably, the WAI-S was originally created as a patient-report measure and subsequently adapted for therapists, so perhaps caution should be taken in the future when developing measures for different raters.

Given the dearth of research on the full measurement invariance of the WAI-S, future research is needed to confirm these findings. Testing for measurement invariance plays an important role in psychological research, ensuring that

comparisons across various groups of participants are both meaningful and valid (Lee, 2018).

Method effect

This study also provided evidence for the presence of a method effect associated with the two negatively worded items of the WAI-S when rated by both adolescents and therapists. This is an important issue when developing alliance measures and assessing their factor structure, since method effects can affect the results of EFA, creating polarities (DeVellis, 2016). For instance, a few factor analytic studies of adolescent alliance ratings (Accurso et al., 2013; Ormhaug et al., 2015) showed that items grouped in factors that represented item valence (i.e. whether they were positively or negatively worded) rather than the hypothesises latent dimensions. Results of this kind might be due to a method effect, rather than reflect the real structure of the scale. This highlights the importance to pay more attention to the wording of the items in alliance scales.

The existence of a method effect associated with the negative items of the WAI-S extends previous results on the distinctive performance of the negatively worded items in both the WAI and WAI-S (Hatcher & Gillaspy, 2006). Importantly, this issue led to the decision to include only positively worded items in the latest revised version of the scale (WAI-SR, Hatcher & Gillaspy, 2006). However, while the absence of negatively worded items appeared to improve model fit (Hatcher & Gillaspy, 2006); it might, on the other hand, hide the presence of acquiescence effect and neglect to capture any tension/disagreement in the alliance, resulting in the loss of relevant information. Yet, this aspect has not received much empirical attention. Further research should investigate whether any aspect of the alliance might be lost when excluding negatively worded items from the Task and Bond subscales. It would also be interesting to investigate what causes such method effects in the alliance assessment.

Strengths, limitations, and future research directions

This study had several strengths, including being the first to carry out an in-depth exploration of the factor structure of WAI-S and its full measurement invariance in psychotherapy for adolescent depression. This is an important research area given the alliance is one of the most investigated variables in psychotherapy and the WAI-S

is the most used alliance scale. Other advantages of this study regard the inclusion of three distinct treatment modalities, and alliance ratings at different time points. Previous studies have conducted research either on one single treatment or on heterogeneous clinic samples, and the alliance was measured only at one time point, usually early in therapy (G. M. Diamond et al., 1999; Faw et al., 2005; Fjermestad et al., 2012; Hogue et al., 2006; Meyer et al., 2002; Shelef et al., 2005; Shelef & Diamond, 2008). Moreover, the current study included both adolescents' and therapists' alliance ratings, which allowed the evaluation of the WAI-S factor structure across both perspectives. This study is also the first to report on the method effect of the WAI-S. This addresses a neglected area in the literature, as little is known about the bias resulting from the inclusion of negatively worded items within alliance measures.

Nevertheless, important considerations need to be kept in mind when interpreting the results of this study. One limitation concerns the relatively small sample size of the therapists' ratings of the alliance. Consequently, the results of the measurement invariance across treatment arms were limited to adolescents' ratings of the WAI-S. Further research using larger samples across different therapeutic approaches is needed to replicate this finding and to also test for measurement invariance across treatments from the therapist perspective. Additionally, in this study it was not possible to control for the clustering within therapists. This was likely to be the result of there being too many therapists with a single case. In this regard, recent research on the factor structure of the patient and therapist version of the WAI-SR in adult psychotherapy showed that the model fit did not improve significantly when testing a model that separated variance due to therapists from variance due to patients (Falkenström et al., 2015); while a therapist effect was found for the therapist versions (Hatcher et al., 2019). Future research should endeavour to control for therapist effect, especially when using therapists' ratings of the alliance as they might be influenced by the therapist's rating style. Finally, another limitation might come from making the decision of which factor solution is the most appropriate based on small differences in the model fit, which can be somewhat of an arbitrary process. To address this concern each alliance model was carefully evaluated considering both theoretical and statistical considerations, hence, every attempt was made to select the alliance structure based on both theoretical and statistical grounds.

There are several important conceptual and empirical questions that should be addressed in future research. While the current study might indicate that empirically it

is difficult to disentangle the specific alliance components using the WAI-S, there is enough theoretical justification for the existence of Bond and Collaboration. Future research is needed to confirm these findings in youth psychotherapy and investigate if meaningful differences between these constructs could be found. One way of testing this might be to assess whether the Bond or the Collaboration component is more relevant to some forms of therapy than to others. Qualitative research strategies might also be necessary to grasp the unique, holistic constellations of alliance components across different therapeutic approaches for adolescents. In-depth interviews with therapists and patients after therapy or audio-recordings of the therapy sessions might be a fruitful way to throw new light on the therapeutic alliance.

Conclusion

This study did not confirm the original Task-Goal-Bond structure of the WAI-S for therapy with depressed adolescents but supported the use of the WAI-S total, general score. Ultimately, these results support the view of the measure's authors that '*one overriding alliance factor appears to be the most salient dimension measured by the WAI*' (Tracey & Kokotovic, 1989, p. 209). Nevertheless, a two-factor structure, in which Task and Goal are collapsed into one overall 'Collaboration' factor might also provide useful information and warrant further investigation. This study also provided evidence of the WAI-S longitudinal measurement invariance and of the existence of a method effect associated with the negatively worded items of the WAI-S. Measurement invariance across therapeutic approaches was also found from the adolescent perspective, but there was no evidence of full measurement invariance across adolescent and therapist ratings. As the alliance is often used across different types of treatment, rater perspectives, and client group the assessment of measurement invariance is an important research question for future research. A deeper understanding of the therapeutic alliance and its components is necessary to measure and study a complex construct, that perhaps has been oversimplified in its operationalization.

Chapter 6. The relationship between treatment type and alliance change over time in psychotherapy for adolescent depression

"I leave this seeming anomaly to future investigators." Bordin, 1979, p258

6.1 Introduction

The overall aim of this thesis is to seek to understand the role of the alliance in psychotherapy for adolescent depression. As such, an important step is to evaluate the strength of the phenomenon across time in different youth psychological treatments. This study reports on the mean alliance ratings in the IMPACT sample across time and treatment types from both adolescent and therapist perspectives, separately. Since Study 1 (see Chapter 5) found ambiguous evidence regarding whether the one or two-factor structure of the WAI-S and WAI-S-T more appropriately reflect the nature of youth alliance, this study also examines whether findings from an investigation into relationships between treatment modality and alliance are different depending on which alliance structure is adopted. A version of this study has been accepted for publication in the Journal of Psychotherapy Integration (see Cirasola et al., in press).

6.2 Research background

One of the main strengths and attractions of the alliance is the fact that it is considered to be a 'common factor' (Horvath, 2018). Common factors refer to generic psychotherapy variables which are assumed to have an important role across all types of therapy (Zilcha-Mano et al., 2019). By contrast, specific factors refer to therapeutic techniques that are particular to a psychotherapeutic orientation (e.g. cognitive restructuring in cognitive therapies, or interpretations in psychodynamic therapies) and are assumed to differ across therapy types (Zilcha-Mano et al., 2019). The challenging finding that different types of psychotherapy often show similar effects (Hartmann et al., 2015) has made clinicians and researchers interested in understanding whether across different therapy types there are common factors that might be responsible for their similar success. The alliance, concerning the relationship between patient and therapist, a universal aspect of all therapy types, has become the most investigated common variable in psychotherapy research (Horvath, 2018).

Although the alliance is usually considered an important element of all therapies, this does not mean that the alliance strength is the same across various types of therapy. Since different therapeutic approaches use distinct techniques to promote change, it is likely that they might also adopt different strategies to foster and use the alliance in treatment (Bordin, 1979; Hatcher, 2010b; Horvath, 2018). From a theoretical perspective, even Bordin (1979), who developed the first a-theoretical definition of the alliance, acknowledged that the degree to which each type of therapy might rely on the different alliance components can differ. Several authors have supported this idea (Hatcher, 2010b; Hatcher & Gillaspy, 2006; Webb et al., 2011). Specifically, it has been argued that cognitive-behavioural therapies (CBT) might place more emphasis on collaboration on tasks and goals (Bordin, 1979; Castonguay et al., 2006; Muran & Barber, 2010; Raue & Goldfried, 1994; Webb et al., 2011) compared to psychodynamic and humanistic therapies, which might focus more on the bond, i.e. the emotional connection between therapist and patient (Bordin, 1979; A. Freud, 1946; Muran & Barber, 2010; Webb et al., 2011). Yet, these hypotheses have not been empirically investigated. This is often because, although alliance measures include different subscales, most studies do not differentiate between the specific alliance components due to the high correlations among the subscales (see Chapter 5; Falkenström et al., 2015).

To gain further insight into the role of the alliance in the treatment of young people, we need to learn more about what influences its development, and treatment approach is an important factor to consider. It might be that certain types of treatment facilitate or hinder the development of a strong overall alliance (or of some of its specific components) with young people. Yet, to date, little attention has been paid to the relationship between alliance and treatment type. In youth psychotherapy, the few studies reporting on the differences in average alliance ratings between various treatment types have yielded mixed results. For instance, an RCT examining the alliance-outcome link in manualised trauma-focused CBT versus treatment as usual found that youth-rated average alliance didn't differ significantly between treatment types (Ormhaug et al., 2014). Similarly, Langer and colleagues (2011) found that early in treatment observational ratings of the alliance were significantly higher in manual-guided CBT than in non-manualized treatment delivered in community-based service settings. However, these differences were less marked in the middle and final phase

of therapy, and overall mean observer- and youth-reported alliance did not significantly differ by treatment condition (Langer et al., 2011).

In contrast, a few studies found differences in the alliance strengths across treatments. In particular, Hogue and colleagues (2006) found that early observational ratings of the alliance were significantly higher in family-therapy than in CBT for adolescents with substance abuse issues (Hogue et al., 2006). McLeod and colleagues (2016) also found differences in the strength of the alliance across both treatment types and treatment settings (Mcleod et al., 2016). Specifically, mean alliance ratings from both observers and adolescents' perspectives were found to be significantly higher in CBT in research setting compared to both CBT and usual care (UC) in practice settings (McLeod et al., 2016). Although these findings are based on a limited number of studies, they might suggest the existence of differences in the mean alliance strength depending on the type of treatment delivered.

There might not only be differences in the mean alliance strengths across treatment types or in the way each treatment emphasises different alliance components, but also in the way the alliance changes over time across treatment types. Hatcher and Barends (2006) maintained that various therapy types put different emphasis on the alliance over the course of treatment depending on the tasks, commitments, and degree of personal involvement that is expected of the patient. For instance, if a therapy approach considers the alliance a prerequisite for the use of certain therapeutic techniques, like first generation CBT or psychiatrist treatments, it might focus more on fostering the alliance in the earlier phases of the therapy and give less attention to it once the initial phase of therapy has been completed. In contrast, therapy approaches that consider the alliance as a mechanism of change, like humanistic or relational psychodynamic therapy, might keep the same focus on the alliance throughout treatment. In other words, the alliance trajectory (or at least the trajectory of emphasis given by therapists to building an alliance) may vary as a function of therapeutic orientation. Therefore, another way of understanding the relation between alliance and treatment type could be to look at the alliance pattern over the course of treatment. Yet, this has been difficult to assess in youth psychotherapy since research has focused predominantly on alliance measurement at discrete time points and for only one type of treatment (McLeod, 2011).

The small amount of research available on the alliance trajectories in youth psychotherapy yielded mixed results. Some studies found no changes in the average

alliance strength over time (Accurso et al., 2015; Chu et al., 2014); others identified patterns of slight average change (Bickman et al., 2012; A. E. Kazdin et al., 2006; Kendall et al., 2009; Mcleod et al., 2016). For instance, in family-focused CBT for children and adolescent anxiety average therapist-, child/youth-, and caregiver-rated alliance initially increased then levelled off over time (Kendall et al., 2009). Similarly, in CBT for youth anxiety, while therapist-reported average alliance ratings increased then flattened over time, the average of youth-rated alliance was stable (Chu et al., 2014). In contrast, others found slight decreases over time for the average alliance in CBT for youth anxiety disorders when using observer-rated measures (Hudson et al., 2014; Liber et al., 2010; Mcleod et al., 2016). In the context of different home- and community-based mental health services, one study found a small increase in the average alliance over time across adolescents', therapists', and caregivers' ratings (Bickman et al., 2012); while another found that therapists mean alliance ratings decreased over time, but children's and caregivers' average alliance ratings were stable (Accurso & Garland, 2015). In psychodynamic therapy only one study investigated the trajectory of observer-rated mean alliance with children with internalising and externalising problems and found a quadratic trend (high–low–high) over the course of therapy (Halfon et al., 2019).

Overall, based on existing evidence, it is difficult to draw conclusions on whether the average alliance follows a different trajectory of change in various treatment types due to several methodological limitations. Firstly, most studies included only one type of treatment, mostly CBT or non-specific treatments. Secondly, various studies measured the alliance from different perspectives (e.g. adolescents, therapists, observers) and research findings might differ based on whose perspective the alliance has been rated from. Further research is needed to understand whether the overall average alliance strength and the way it changes over time differ across various types of treatment.

6.3 The current study

Using data from the IMPACT trial, the current study attempts to clarify the relationship between alliance and treatment modalities and has the following main aims:

1. To assess whether the mean strength of adolescent- and therapist-rated alliance differed across three psychological treatments for adolescent depression with similar effectiveness.

2. To examine the mean trajectory of alliance change over time and explore whether there were differences in the alliance trajectories across treatment types.

3. To investigate whether the findings from aim (1) and (2) regarding the overall alliance hold when looking at the alliance components of Bond and Collaboration separately.

Given the limited prior literature on the relationship between alliance and treatment type and competing theories about the impact of treatment type on the alliance, no a priori hypotheses were offered about this relationship.

6.4 Method

The setting for this study is the IMPACT trial (Goodyer et al., 2017, 2011). Full details of the procedure of the IMPACT study are reported in Chapter 4.

6.4.1 Participants

To maximize the number of participants, the present study included all IMPACT participants who received treatment and had at least one rating of the alliance completed by the adolescent or the therapist at any time in treatment. As participants' views of the alliance might differ, it is important not to combine alliance ratings from different raters. Therefore, participants in the study were divided into two samples based on whether the alliance was assessed by adolescents (Sample 1) or therapists (Sample 2). This study used the same samples of Study 1 (see Chapter 5). Sample characteristics and comparisons across treatment groups are displayed in Table 9 and described below.

Table 9. Samples characteristics by treatment type

	Sample 1 (N=338)							
	BPI (n=114)		CBT (n=114)		STPP (n=110)			
	N	%	N	%	N	%	Chi2	p
Gender							0.59	0.744
Male	31	27.2	28	24.6	32	29.1		
Female	83	72.8	86	75.4	78	70.1		
Ethnicity							0.35	0.841
White British	85	74.6	90	78.9	86	78.2		
Other	25	21.9	23	20	21	19.1		
	Mean	SD	Mean	SD	Mean	SD	F	p
Age	15.56	1.37	15.63	1.39	15.6	1.48	0.09	0.918
Depression Severity								
MFQ at baseline	47.19	9.96	46.16	10.3	44.3	10.7	2.19	0.916
MFQ at 86 weeks	22.64	16.18	21.53	15.3	20.8	14.7	0.35	0.705
Weeks in treatment	28.89	21.09	26.54	17.3	29.7	16.8	0.99	0.371
	Sample 2 (N=159)							
	BPI (n=41)		CBT (n=49)		STPP (n=69)			
	N	%	N	%	N	%	Chi2	p
Gender							1.82	0.401
Male	16	39.0	13	26.5	20	29		
Female	25	61.0	36	73.5	49	71		
Ethnicity							2.16	0.339
White British	30	73.2	32	65.3	52	74.5		
Other	11	26.8	17	34.7	15	21.7		
	Mean	SD	Mean	SD	Mean	SD	F	p
Age	15.6	1.4	15.6	1.39	15.6	1.5	2.11	0.125
Depression Severity								
MFQ at baseline	46.3	11.5	46.8	11.3	45.8	10.0	0.13	0.878
MFQ at 86 weeks	22.6	15.2	21.8	14.1	19.6	14.2	0.55	0.576
Weeks in treatment	28.8	14.8	26.8	13.7	30.4	14.5	3.00	0.055

Note: MFQ=The Mood and Feelings Questionnaire

Sample 1 (adolescents' alliance ratings). This sample consisted of 338 adolescents, 72.7% of the overall IMPACT sample, and included all participants who completed one or more self-ratings of the alliance over time. 114 adolescents received brief psychological intervention (BPI), 114 received cognitive-behavioural therapy (CBT), and 110 received short-term psychoanalytic psychotherapy (STPP).

Participants in this sample were treated by 157 therapists (BPI: N= 69; CBT: N= 49; STPP: N= 39).

Sample 2 (therapists' alliance ratings). This sample consisted of 159 adolescents, 34.2% of the overall IMPACT sample, and included participants with at least one rating of the alliance completed by 72 therapists (BPI: N= 25; CBT: N= 23; STPP: N=24). In this sample, 41 received BPI, 49 received CBT and 69 received STPP.

Therapists. No demographic information was collected for the therapists. The median and mode number of patients treated by each therapist was 1 in both samples with only 36.3% and 37.5% of therapists treating more than 1 patient in Sample 1 and in Sample 2, respectively. Nesting of participants within therapists was controlled for in the analyses, as described below.

Information about each treatment arm is reported in Chapter 4

6.4.2 Measures

Demographics. Age, sex, and ethnicity were assessed with a demographic questionnaire at baseline.

Alliance measure. The Alliance was assessed using the WAI- S (described in chapters 4 and 5). Both therapist (WAI-S-T) and patient (WAI-S) versions of the scale at all time points (6, 12 and 36 weeks after randomisation) were used in this study. Since Study 1 (see Chapter 5) found a lack of empirical evidence for the differentiation between Task and Goal, in this study these two subscales were combined in an overall Collaboration subscale. Therefore, the overall alliance score and the two subscales of Bond and Collaboration were used.

Depression severity. *The Mood and Feelings Questionnaire* (MFQ) (Angold et al., 1987) collected at baseline and at the last follow-up assessment (86 weeks after randomisation) were used in this study. Details of this scale are reported in Chapter 4.

6.4.3 Data analysis

The analyses of the effect of treatment condition on the mean alliance trajectory were conducted using multilevel modelling (MLM) with the "nlme" package (Pinheiro et al., 2019) of the R software (R Core Team, 2018). All models had a three-level structure with repeated alliance ratings (i.e. within-patient differences) at level 1, nested within participants (i.e. between-patient differences) at level 2, which in turn were nested within therapists (i.e. between-therapist differences) at level 3. The intercept and the slope of time was allowed to vary randomly between both adolescents and therapists, and an unstructured covariance matrix for correlations between random effects was used. In contrast with the analyses of Chapter 5, this time it was possible to control for the nesting within therapists as the model was estimable despite the large number of therapists with only 1 patient.

Group differences in mean alliance and change over time were modelled via the level 3-fixed effect predictor treatment arm, and the level 2 fixed effects predictor time, respectively. Since there were no differences in either demographic characteristics or depression severity at baseline across treatment arms, these variables were not controlled for in the analyses to keep the models as parsimonious as possible. Treatment arm was treated as a categorical variable with STPP as reference group in the main model. Additionally, to allow for all pairwise comparisons across treatment groups, the same model was run again entering treatment arm with BPI as the reference group.

For the time predictor, firstly the best way of modelling the time variable was identified, then the interaction between the alliance trajectory and treatment type was assessed. To identify the shape of the mean alliance change over time two models were tested: (1) a discrete-time model of early, midpoint, and end of treatment assessment, where time was used as a categorical variable (6-, 12- and 36-weeks); and (2) a linear change model with time measured in weeks and centred at 6 weeks. Once optimal fit was determined for the time variable (discrete vs linear), a two-way interaction term between time and arm (Model 2) was added to the best fitting model. This model was then compared with the equivalent model without the interaction term (Model 1) to assess whether the mean alliance change over time was dependent on treatment type.

For model comparisons the following indices were used: the likelihood ratio (LR) tests, and the Akaike's Information Criterion (AIC), and Bayesian Information

Criterion (BIC). Information criteria are indicators of model quality that take account of both model fit and model complexity, by penalising larger models. Smaller values for AIC and BIC indicate a better model. All models were estimated separately for (1) adolescent and therapist ratings, and (2) each alliance subscales (e.g. Bond, Collaboration, and the Overall score).

Missing data. Missing data at the WAI-S and WAI-S-T item level was handled using person-mean substitution when at least 9 out of 12 items of the scale were completed. If more than 3 items of the measure were missing, the data point (entire scale) was considered missing. With regards to missing data at each time-point, within Sample 1 (n=338), 78.5 % of the adolescents rated the alliance at 2 or all 3 time points. The rate of missing WAI-S was 34.0% at 6 weeks, 26.9% at 12 weeks and 34.3% at 36 weeks. Similar to other self-report data collected as part of the IMPACT trial, the cause of missing data was likely due to research attrition, time constraints in the assessments, and questionnaire fatigue (Goodyer et al., 2017). Therefore, missing data were assumed to be missing at random (Rubin, 1987) and handled using maximum likelihood (ML) estimation within the multilevel models (Gallop & Tasca, 2009). This procedure takes into account information from all individuals in the sample when calculating parameter estimates, retaining patients in the longitudinal analysis who had at least one WAI-S score.

Within Sample 2 (n=159), 75.5 % of therapists had rated the alliance at 2 or all 3 time points. The rate of missing therapist ratings (WAI-S-T) was 12.6% at 6 weeks, 25% at 12 weeks, and 60% at 36 weeks. Like in Sample 1, the amount of missing data in Sample 2 was due to research attrition, but also treatment termination. While adolescents continued to be involved in the IMPACT research up until 86 weeks post randomisation, 36 weeks was the last research assessment for all therapist-rated measures. As such, in cases where therapy had ended before the 36-week mark, therapists were more difficult to contact as they were no longer involved in the trial. This might explain the higher percentage of missing ratings at 36 weeks in Sample 2 compared to Sample 1. Although an advantage of the multilevel analyses lies in the flexibility in handling missing data (Gallop & Tasca, 2009), the high amount of missing data at 36 weeks makes the estimates of the tail end of trajectories in this sample less reliable. Therefore, to assess whether missing data affected the results, a sensitivity

analysis was conducted by undertaking the same analyses but including only complete cases in both samples.

6.5 Results

The observed mean alliance ratings for each treatment arm across time are presented in Table 10 and plotted in Figure 5 for both samples separately.

Table 10. Mean WAI-S and WAI-S-T scores at each time point, for both samples in each treatment arm

Sample 1 (WAI-S)	Time week	BPI (n=114)			CBT (n=114)			STPP (n=110)		
		N	Mean	SD	N	Mean	SD	N	Mean	SD
Collaboration	6	72	39.93	9.52	78	42.83	8.17	73	32.44	12.32
	12	84	37.88	8.98	82	42.71	8.95	81	32.07	12.48
	36	70	39.99	11.17	78	41.32	10.41	74	36.11	13.22
Bond	6	72	19.60	5.25	78	20.47	4.89	73	15.90	7.19
	12	84	18.79	5.50	82	20.73	5.69	81	15.73	6.82
	36	70	19.28	6.64	78	20.29	6.14	74	17.78	6.75
Overall Alliance	6	72	59.54	13.84	78	63.30	11.97	73	48.34	19.04
	12	84	56.67	13.72	82	63.44	14.06	81	47.80	18.71
	36	70	59.27	17.25	78	61.61	16.07	74	53.89	19.49
Sample 2 (WAI-S-T)		BPI (n=41)			CBT (n=49)			STPP (n=69)		
Collaboration	6	32	41.59	7.77	46	38.11	8.07	61	32.99	6.98
	12	32	38.34	9.25	34	41.56	8.41	53	34.04	8.25
	36	18	43.44	8.62	17	43.29	6.77	28	39.33	7.77
Bond	6	32	21.69	3.61	46	20.80	3.30	61	18.21	3.23
	12	32	20.28	4.07	34	22.12	3.17	53	19.03	3.41
	36	18	21.94	3.02	17	23.92	1.56	28	21.13	3.41
Overall Alliance	6	32	63.28	10.97	46	58.91	11.06	61	51.19	9.65
	12	32	58.63	13.11	34	63.68	11.22	53	53.07	11.20
	36	18	65.39	11.14	17	67.22	8.03	28	60.46	10.72

Figure 5. Boxplot to show the distribution of the adolescent (WAI-S) and therapists (WAI-S-T) rated overall alliance for each treatment arm across time
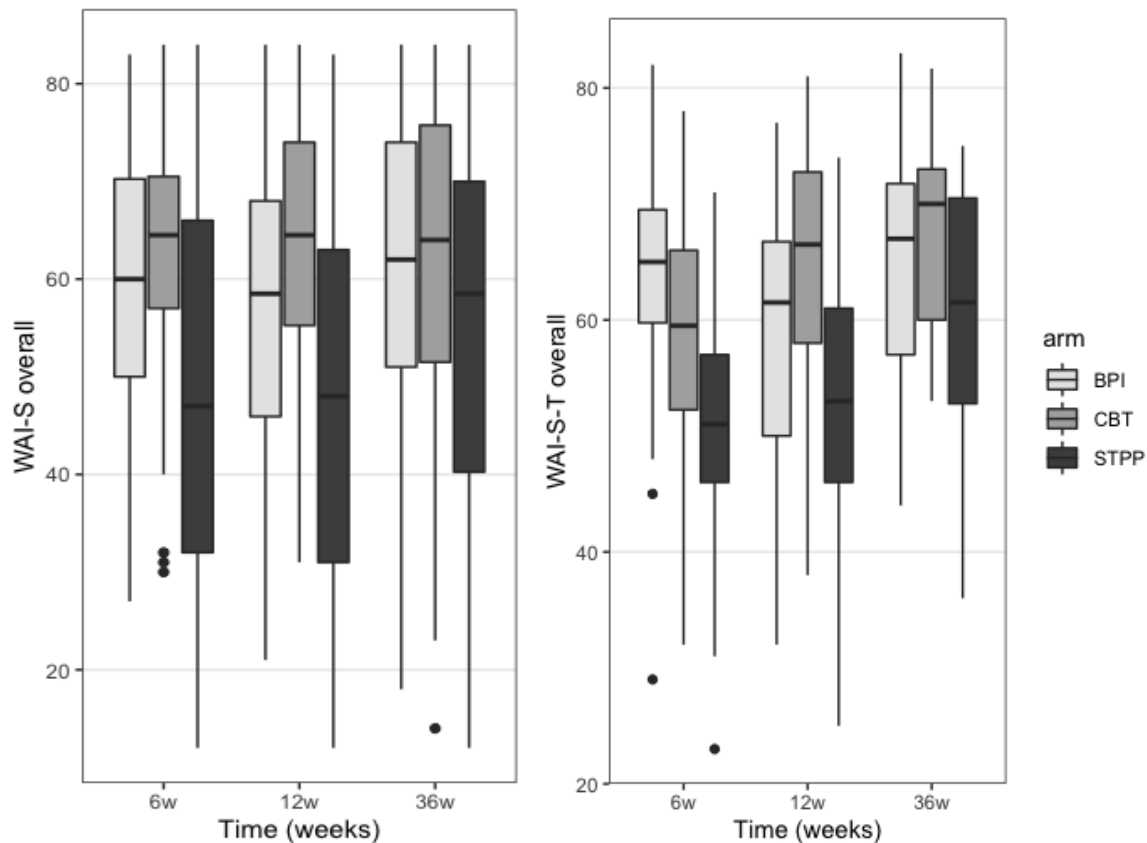
6.5.1 Mean alliance trajectory

Table B1 in Appendix B presents the comparison of the discrete-time model and the linear model in both samples for all three WAI-S and WAI-S-T scales, separately. According to the fit indices and the LR test, the linear model should be preferred to the discrete-time model in both samples for all alliance scales. This suggests that the overall alliance, as well the Bond and Collaboration subscales, showed a slight linear change over time, if they changed at all, from both the adolescent and therapist perspectives. Therefore, time was treated as linear in the subsequent analyses. The observed trajectories of youth- and therapist- rated alliance are displayed in Figures 6 for the alliance mean WAI-S and WAI-S-T overall score. Figures B1 & B2 in Appendix B display the observed trajectories of youth- and therapist- Collaboration and Bond mean scores, respectively.

Figure 6. Spaghetti plot of the observed trajectory of youth-rated and therapist-rated alliance mean overall score
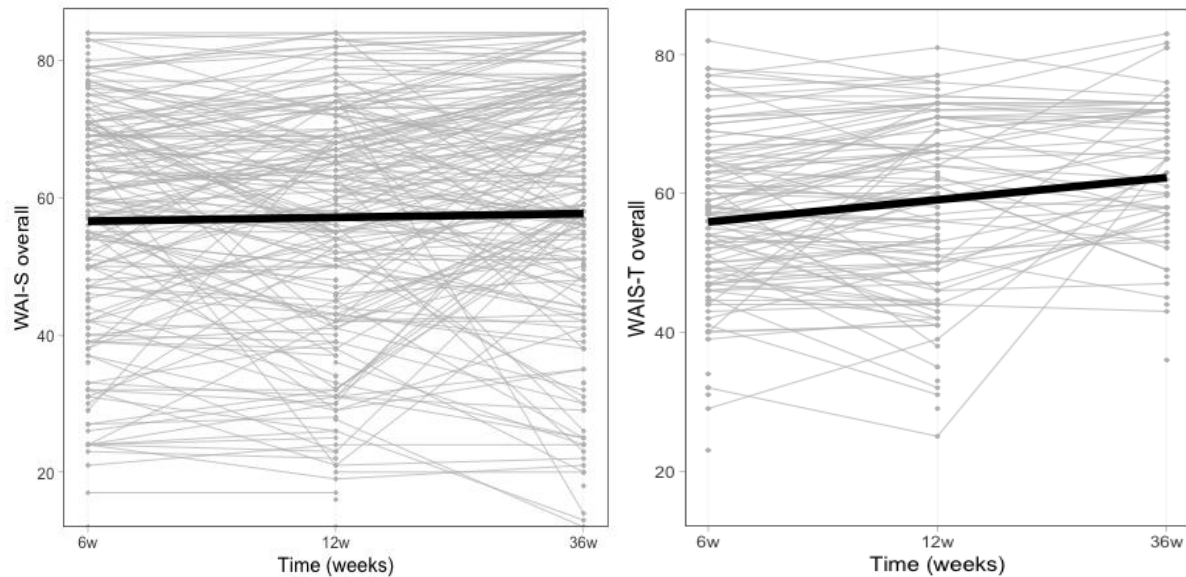
6.5.2 Effect of treatment condition on alliance mean trajectory

Table B2 in Appendix B shows the results of the comparison between the model including the interaction term between alliance and time (Model 2) and the simpler model that included time and arm as independent predictors of the alliance ratings (Model 1). For the adolescents' alliance ratings (Sample 1), according to the LR tests (p=0.030), as well as the AIC and BIC indices, the models including the interaction showed a better fit to the data compared with the competing model. This was true for all alliance ratings but was less marked for the Bond subscale. In contrast, for the therapists' alliance ratings (Sample 2) adding the interaction term did not improve model fit according to the LR tests (p=0.966) and all fit indices for all alliance scales. As there was some evidence for the existence of different alliance trajectories across treatment arms for the adolescents', but not the therapists', alliance ratings, the below results present the model including the interaction term for Sample 1, and the simple linear model for Sample 2.

Adolescent ratings

As displayed in Table 11, there were significant differences in the overall alliance ratings across therapy groups. The mean alliance in STPP at 6 weeks was lower than in both BPI and CBT. CBT showed the highest mean alliance ratings. Further, on average the alliance showed to be relatively stable over time in both BPI and CBT, while in STPP there was statistical evidence of a slight increase in the mean

alliance from week 6 to week 36 (unstandardised b=0.15 points on the WAI-S scale per week). The left-hand side of Figure 7 shows the observed means and model predictions for the WAI-S overall alliance.

Similar results were found for the Collaboration and Bond subscales, which on average were rated considerably higher in CBT and BPI than in STPP. There also was a greater increase in the mean alliance over time in STPP compared with the other treatment groups, although this was less marked for the Bond subscale.

Table 11. Estimates from multilevel models predicting adolescent ratings of the WAI-S: Total score, Collaboration Subscale, and Bond Subscale.

Variables	WAI-S overall			WAI-S Collaboration			WAI-S Bond		
	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p
Fixed effect									
Intercept	48.44	1.54	0.000	32.31	0.99	0.000	16.08	0.60	0.000
Time	0.15	0.06	0.017	0.11	0.04	0.010	0.04	0.02	0.069
Arm (ref: STPP)									
Arm: BPI	8.94	2.14	0.000	6.11	1.40	0.000	2.90	0.83	0.001
Arm: CBT	14.72	2.13	0.000	10.31	1.39	0.000	4.45	0.83	0.000
Time*BPI	-0.14	0.09	0.104	-0.10	0.06	0.860	-0.04	0.03	0.205
Time*CBT	-0.23	0.08	0.007	-0.17	0.06	0.003	-0.06	0.03	0.062
Random effect (level 3)	SD			SD			SD		
intercept	1.97			0.71			0.91		
time	0.06			0.04			0.01		
Random effect (level 2)	SD			SD			SD		
Intercept	12.84			8.47			4.81		
Time	0.32			0.23			0.09		
Residual (level 1)	7.86			5.42			3.18		

Note: time is measured in weeks

Figure 7. Observed means and model predictions of the WAI-S and WAI-S-T overall score
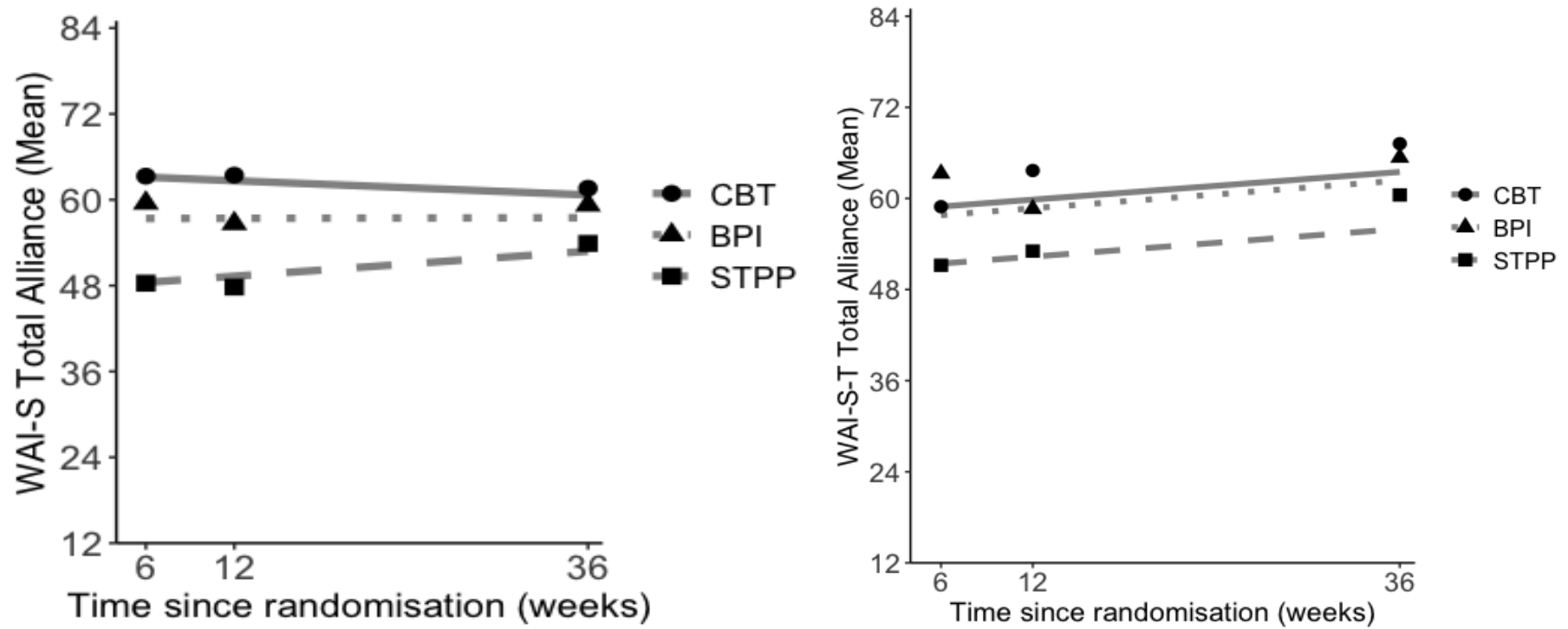
Therapist ratings

As displayed in Table 12, on average the overall alliance showed a linear increase over time. Mean alliance ratings differed between treatment types, being highest in CBT and lowest in STPP. The difference between BPI and CBT at 6 weeks was small (b=1.14) and not statistically significant. The right-hand side of Figure 7 shows the observed means and model predictions for the WAI-S-T overall alliance. The observed ratings display a similar 'fanning in' effect to that observed in the adolescent ratings, whereby the difference between STPP and the other treatments is much smaller at 36 weeks than at 6 weeks. The differences between the observed means and the predicted trajectories might be due to the large variability around the observed means and the larger proportion of missing values at 36 weeks compared to earlier time points (see Table 10).

Table 12. Estimates from multilevel models predicting adolescent ratings of the WAI-S-T: Total score, Collaboration Subscale, and Bond Subscale.

Variables	WAI-S-T overall			WAI-S-T Collaboration			WAI-S-T Bond		
	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p
Fixed effect									
Intercept	51.42	1.72	0.000	33.01	1.23	0.000	18.48	0.54	0.000
Time	0.15	0.04	0.001	0.10	0.03	0.003	0.06	0.01	0.000
Arm (ref: STPP)									
Arm: BPI	6.37	2.50	0.013	4.90	1.80	0.008	1.29	0.75	0.913
Arm: CBT	7.51	2.48	0.003	5.12	1.78	0.005	2.40	0.75	0.002
Random effect (level 3)		SD			SD			SD	
intercept		5.57			6.04			2.04	
time		0.11			0.19			0.05	
Random effect (level 2)		SD			SD			SD	
Intercept		8.19			3.79			2.04	
Time		0.22			0.05			0.05	
Residual (level 1)		5.44			4.03			1.74	

Note: time is measured in weeks

Similar results were found for both the Bond and Collaboration subscales. Mean alliance ratings in both subscales were considerably lower in STPP than in both BPI and CBT, and showed a slight but statistically significant increase over time in all therapies. The differences in the mean scores of both Collaboration and Bond between BPI and CBT were small and not statistically significant (b=0.21 for Collaboration and b=1.11 for the Bond subscale).

6.5.3 Sensitivity analyses

The same analyses were repeated in both samples but using only those cases that had alliance assessments at all three time points, i.e. excluding cases with missing alliance assessments. The sensitivity analyses found much the same results as were obtained using the overall samples for both therapists' and adolescents' alliance ratings. Details of the results of the sensitivity analyses for both samples are showed in Tables B3-B6 in Appendix B.

6.6 Discussion

This study examined the relationship between alliance and treatment type in youth psychotherapy by investigating whether the mean alliance strength and its trajectory over the course of treatment differed between three therapeutic approaches for adolescent depression. While showing similar effectiveness (Goodyer et al., 2017a) the three treatments were associated with different mean alliance levels across time. Both adolescents' and therapists' average alliance ratings were significantly lower in STPP when compared to BPI and especially CBT, which showed the highest alliance average ratings.

Although the average alliance was relatively stable over time for all treatments, there was some evidence that the adolescent-rated mean alliance trajectory might change differently over time depending on the treatment delivered. Specifically, the STPP group showed a greater increase in the average alliance over time compared to the other two treatment groups, which showed an approximately stable average alliance trajectory. Hence, the differences in the mean alliance ratings across the three treatments were more evident in the earlier phases of treatment and decreased slightly at the end of treatment. From the therapist perspective, although the observed increase in the mean alliance over time was more pronounced in STPP than in CBT and BPI, there was no strong evidence of the existence of differences in the mean alliance trajectory across treatment types. This result might be due to the lack of statistical power in this sample given its small sample size and the higher proportion of missing data compared with the sample including adolescent alliance ratings.

Since this is the first study to compare the alliance between psychodynamic therapies and both CBT and BPI, it is not possible to directly relate these results to previous studies. Therefore, methodological considerations and the theoretical literature on the alliance will be considered in the discussion of these findings. On a

theoretical level, the overall differences in the average alliance strength across therapy types might support the idea that the quality of the alliance differs across therapeutic approaches (Bordin, 1979; Hatcher & Barends, 2006; Wampold & Budge, 2012). In this study, CBT was associated with higher mean alliance ratings (overall, as well as Bond and Collaboration) compared to BPI and especially STPP. This fits with the emphasis that CBT places on reaching a collaborative agreement about goals and therapy tasks throughout therapy (Tee & Kazantzis, 2011), which, in turn, might foster a strong alliance from the onset of therapy. Like CBT, BPI involves some discussion and shared understanding of therapy goals and tasks, which might also help to foster the collaborative aspect of the alliance. In contrast, the STPP manual (Cregeen et al., 2016) makes no reference to jointly agreed tasks or goals. Based on these considerations, it might be that since in psychodynamic therapies tasks and goals are not explicitly discussed during sessions, the evaluation of this aspect of the alliance is compromised.

STPP showed the lowest average ratings on the alliance bond subscale too. This might be because although the STPP manual focuses on the importance of establishing trust and a secure base, it also gives considerable attention to allowing more negative feelings to enter the relationship, via the negative transference. Working with the negative transference refers to the therapist's capacity to acknowledge and facilitate the emotional expression of the young person's negative feelings in relation to the therapist, and to be able to tolerate them. Accordingly, the STPP Manual highlights how *"'resistance' and the 'negative transference' are key elements of STPP and should not be considered as contrary to a good therapeutic alliance but may even be seen as an aspect of it"* (Cregeen et al., 2016, p. 44). However, working through painful and hostile feelings could be difficult and frustrating for the young person and "*may appear to indicate a breakdown in the 'therapeutic alliance'*" (Cregeen et al., 2016; p. 53). It is therefore possible that the alliance, as assessed by the WAI-S, might be rated lower in psychodynamic therapies when angry or hostile relationship patterns are encouraged to be brought into the patient-therapist relationship. This might explain the lower average alliance rating found in STPP on the Bond alliance component too.

The results of this study might also be due to the type of measure used to assess the alliance. Importantly, the WAI-S draws upon Bordin's definition of the alliance, therefore its items might capture better the way the alliance is described and

used in CBT and BPI compared to psychodynamic therapies. Not surprisingly, it has been argued that Bordin's (1979) alliance concept, which was the conceptual basis for the WAI, does not fully address the complexities of the emotional relationship between patient and therapist in psychodynamic treatments (Castonguay et al., 2006). For instance, it might be that the WAI is not designed to distinguish between 'negative transference' that can beneficial therapeutically and 'poor alliance'. Accordingly, STPP does not refer to Bordin's (1979) alliance definition but to Luborsky's (1976), which emerged within the psychodynamic tradition. Luborsky (1976) described the alliance in two sequential phases: the first phase is characterised by the creation of a secure holding relationship, building on this, in the second phase, the alliance is characterised by the feeling of joint work towards overcoming the patient's distress (Luborsky, 1976). More attention should be paid to the operationalization of the alliance to ensure that the measures selected have a conceptual 'fit' with the treatments being investigated. Furthermore, as poor alliance ratings might reflect strains or rupture in the alliance, which, if resolved, are not necessarily a symptom of unsuccessful therapy (Safran & Kraus, 2014), research should also be conducted on the alliance rupture and resolution patterns across therapy types.

Effect of treatment condition on alliance mean trajectory

The findings of this study contribute to a growing body of research that suggests that the average alliance strength in youth psychotherapy remains more or less stable over time, especially from the adolescent perspective. A linear alliance model best represented the mean alliance trajectory for both adolescents and therapists, although the magnitude of the linear change over time was quite small, especially from the adolescent perspective. These results are in line with previous research showing that average youths' alliance ratings tend to be stable (Chu et al., 2014; Accurso et al, 2015) or to show a slight increase over time (Kendall et al, 2009; Bickman et al., 2012).

This study also provided some evidence for the existence of an interaction between treatment type and alliance trajectory of change from the adolescents, but not the therapists', perspective. A significant interaction effect means that the change in average alliance ratings through treatment was different depending on what treatment was delivered. Specifically, in STPP the average alliance increased over time, whereas in CBT, where the alliance started significantly higher than in STPP, the alliance did not change significantly but showed a slight decrease. There was no

statistically significant difference in the alliance average pattern between STPP and BPI. Similar results were found for the Collaboration sub-scale, but not the Bond subscale, which on average did not show a significant change over time, nor a significant interaction between time and treatment arm. This could either reflect the actual absence of significant changes in the alliance bond through treatment or it might be due to methodological issues. The WAI-S Bond subscale includes only 4 items and might not have enough statistical power to detect a significant longitudinal change or interaction between alliance and treatment group. From the therapist perspective, instead, although the increase in the alliance over time was more pronounced in STPP than in CBT and BPI, there was no evidence of the existence of an interaction between type of treatment and average alliance change over time.

Overall, these findings might suggest that adolescent ratings of the overall alliance may follow a different trajectory across various treatments. For instance, it might be that the low alliance ratings found early in treatment in STPP are related to the lack of focus on agreement on tasks and goals in this treatment, which might, in turn, cause a delay in the establishment of a strong alliance. However, over the course of treatment, through the repeated experience that the therapist can understand and tolerate the young person's feelings, the adolescent might progressively increase his/her trust in the therapist and the treatment (Cregeen et al., 2016), with this leading to increases in the alliance. In contrast, in CBT and BPI the explicit and constant focus on developing a shared understanding of therapy goals and tasks might facilitate the establishment of a stronger alliance early in treatment and, having been established, the alliance remains high and stable through treatment.

The available literature on the relationship between alliance trajectory and treatment type presents mixed findings. Some showed that the alliance in psychodynamic therapy with children (Halfon et al., 2019) and adults (Kivlighan & Shaughnessy, 2000) has a quadratic pattern, which might imply that the alliance trajectory in this type of treatment is different from the one found in CBT or treatment as usual, where the alliance has predominantly shown a linear shape (Bickman et al., 2012) or a gradual increase and a levelling off (Chu et al., 2014; Kendall et al., 2009). Other studies have instead found stable alliance patterns in psychodynamic therapy with adults (Kivlighan & Shaughnessy, 2000; Kramer et al., 2009; Stiles et al., 2004) comparable to the ones found in CBT. More research is needed to clarify whether the alliance trajectory differs across different therapeutic modalities.

Alliance components and treatment type

In this study there was no clear difference in the mean strength of the Bond and Collaboration subscales across time, treatment arms, and rater perspective. One explanation for this could be that the specific alliance components follow a similar pattern across time and treatment type and therefore cannot be disentangled. This might be because it is difficult to establish a good collaboration without a strong bond and vice-versa. Alternatively, this result could be due to methodological issues related to the alliance measure used in this study. It could be argued that the WAI is not able to meaningfully differentiate between these two alliance components due to the high intercorrelation between the subscales (see Chapter 5; Falkenström et al., 2015). Therefore, it might be recommendable to use the WAI-S overall score only.

Strengths and limitations

This study has several strengths including being the first to evaluate whether on average the alliance strength differs across three treatments for adolescent depression, and to examine whether alliance trajectory changed differently over time depending on what treatment was delivered. Furthermore, data were derived from a randomised controlled trial in which the adherence to treatments was closely monitored for integrity. Randomisation means that treatment selection bias and other confounding variables can be ruled out as explanations for the findings. Other strengths of this study were the inclusion of both adolescents' and therapists' alliance ratings and the differentiation between the specific alliance components of bond and collaboration.

One of the limitations of this study was that the alliance assessment was restricted to three time points rather than after each therapy session. This did not allow the assessment of more complex alliance trajectories/patterns (Chu et al., 2014; Kivlighan & Shaughnessy, 1995). Additionally, alliance ratings were not completed after a specific treatment session, but at scheduled time-points post-randomisation as part of the overall IMPACT trial. These time points do not correspond precisely to the same number of sessions for all participants, and at the last assessment most participants had completed therapy. Another limitation was that the number of therapists' ratings of the alliance was small and there was a greater proportion of missing data toward the end of therapy, which made the estimates of the tail end of

the alliance trajectory less reliable and precise. Although the sensitivity analysis confirmed the results of the overall sample, a larger sample size may have given greater power to detect alliance trajectories or interaction effects for the therapists' ratings.

Conclusion

The results of the present study provide evidence for the existence of differences in the mean alliance strength across three therapy types, which were shown to be equally effective for treating adolescent depression in the clinical trial from which these data were taken. This seems to support the assumption that the techniques used by different therapeutic approaches with young people are "*intrinsically bound to the relationship context in which they are applied*" (Norcross & Lambert, 2014, p. 399). Therefore, reference to the alliance as a common factor may be misleading in the sense that the alliance strength and the manner in which it interacts with the specific treatment type to achieve benefits may not be the same across various types of therapy for adolescent depression.

It is also possible that widely used measures of the therapeutic alliance, such as the WAI, have a better conceptual fit with some types of therapy than others. Understanding how treatment type might relate to the alliance is important to gain further insight into what influences the alliance development in treatment. Future research should seek to understand what factors contribute to certain treatments achieving better alliance ratings than others and whether the alliance-outcome relationship is also influenced by treatment type. Accordingly, Study 3 of this thesis (see Chapter 7) attempts to understand whether the relationship between early alliance and outcomes differs across treatment types. Moreover, Study 4 (see Chapter 8) explores what might cause the lower alliance ratings in STPP, especially in the initial phase of treatment.

Chapter 7. The Alliance–Outcome Association in the Treatment of Adolescent Depression

"The complexities of cause and effect defy analysis." Douglas Adams

7.1 Introduction

This chapter starts with a brief outline of the major limitations of the empirical literature on the association between alliance and outcome in youth psychotherapy (see Chapter 2 for more details on the literature on the alliance-outcome relationship). It then presents the third study of this thesis. This study examines the alliance-outcome association while controlling for prior symptoms change and baseline severity in psychotherapy for adolescent depression. Additionally, it explores potential moderators of this association. A version of this study has been published in Psychotherapy (see Cirasola et al., 2021).

7.2 Research background

Temporal relationships between alliance and symptomatic change

As discussed in Chapter 2, there is growing evidence of an association between alliance and outcomes in youth psychotherapy (Karver et al., 2018). However, due to methodological limitations in the available research, uncertainty remains about whether a good alliance precedes or is a result of early symptomatic change. The most noteworthy challenge to the interpretation of the alliance-outcome association refers to the impact of temporal confounds and early treatment gains (Strunk et al., 2010). Most youth alliance research has examined the relationship between alliance, assessed at some specific time-point (often late in treatment), and outcome measured at posttreatment (McLeod, 2011; Simpson et al., 2013). Although this design highlights covariation of alliance and outcome, it cannot establish whether the alliance has a causal effect on treatment outcome. It is possible that change in psychotherapy drives the quality of the therapeutic alliance rather than the alliance being responsible for therapeutic change. To establish that alliance quality promotes improvement and it is not a by-product of it, researchers have called for more stringent analyses that employ greater statistical control over prior improvement (Falkenström et al., 2013; Zilcha-Mano et al., 2014). One method for dealing with this is to examine early alliance ratings

as a predictor of subsequent change on outcome while controlling for change in outcome that occurred prior to the point at which the alliance was measured.

In youth psychotherapy, only a handful of studies has controlled for either pre-treatment symptom severity or prior symptom change in the estimation of the alliance-outcome association, and none of them controlled for both. The few studies that controlled for initial severity, all found evidence for an association between early alliance and subsequent improvement at mid-treatment in cognitive-behavioural therapy (CBT) for young people with depression (Labouliere, Reyes, Shirk, & Karver, 2017) and anxiety disorders (Chiu et al., 2009). The empirical evidence on the alliance-outcome relationship while controlling for prior symptom change is scant and presents mixed results. Reyes and colleagues (2014) found a relationship between alliance and subsequent symptom improvement even after controlling for prior symptom change in modified CBT and treatment as usual for adolescents with depression and interpersonal trauma (Reyes, 2014). However, in a previous study, not only did observed alliance not predict subsequent change, it also failed to predict symptom change without controlling for early change in CBT for adolescent depression (Reyes, 2008).

Moderators of the alliance-outcome association in youth psychotherapy

As discussed in Chapter 2, differently from the adult literature, the alliance–outcome relationship in youth psychotherapy was found to be moderated by a variety of factors (Karver et al., 2018; McLeod, 2011). Specifically, being female and younger were associated with a stronger alliance-outcome relationship (Accurso & Garland, 2015; McLeod, 2011; Shirk et al., 2011). This might suggest that the alliance is more instrumental in achieving change for younger and female patients than their older and male counterpart. The alliance–outcome association was also found to be stronger for externalising samples than for internalising samples (Shirk & Kraver, 2003; McLeod, 2011; Shirk et al, 2011; Karver, et al., 2018). It might be that, because of the greater challenge in engaging oppositional and disruptive youths, the alliance has a key role in promoting change with this population. With regards to symptom severity, some have found that higher baseline symptom severity predicted stronger alliance (Chu et al., 2014), but less is known on whether this might, in turn, affect the alliance-outcome relationship. Additionally, in youth psychotherapy, the association between alliance and outcomes was found to be stronger when outcome was global

psychopathology/functioning rather than specific symptoms (McLeod, 2011). This finding could suggest that the alliance promotes change at a more broad-spectrum level. This is particularly relevant since in recent years there has been a move towards a transdiagnostic understanding of metal heath issues in terms of general psychopathology - sometimes labelled the p factor - rather than specific symptoms (Aitken et al., 2020; Constantinou et al., 2019).

Treatment type has also emerged as a possible moderator variable of the alliance-outcome association in youth psychotherapy, with stronger associations in behavioural versus nonbehavioral therapies (Shirk et al., 2011; Karver et al., 2018). It might be that the role of the alliance differs across therapy types. For instance, some therapies might consider the alliance as a pre-condition for change, while others as a mechanism for change (Horvath, 2018). Another factor to consider in the examination of an alliance-outcome relationship is the reporter. In youth psychotherapy the association between alliance and outcomes was found to be stronger when the alliance was rated by therapists or parents than when assessed by young people (Shirk & Karver, 2003; McLeod, 2011; Karver et al, 2018).

Overall, the literature on moderators of the alliance-outcome association in youth psychotherapy seems to suggest the existence of differences in its strength depending on some patients' baseline characteristics and the type of treatment delivered. Future research should seek to better understand the role of such moderating variables to address the vital question of for whom the alliance is important for the success of treatment.

7.3 The current study

The current study aimed to address some of the gaps in the current literature on the alliance-outcome association in youth psychotherapy and had the following aims:

1. To investigate the relationship between early alliance and subsequent change in depression while controlling for the effect of prior symptom change and baseline symptom severity among depressed adolescents who received one of three types of short-term psychological therapy.

2. To examine whether this association differed as a function of patient characteristics (sex, age, baseline symptom severity, conduct problems) or type of therapy.

3. To explore whether the strength of the alliance-outcome association differed based on (a) the alliance rater (therapists vs adolescents), and (b) the type of outcome measured, e.g. depression severity vs overall psychopathology (i.e. the p factor).

Based on existing evidence, it was hypothesised that:

- Higher alliance ratings would be associated with subsequent decreases in depressive symptoms even after controlling for both prior symptom change and baseline symptom severity.

- The alliance-outcome association would be higher for adolescents who
    a) were younger and female
    b) reported greater baseline symptom severity
    c) showed more baseline conduct problems
    d) who attended CBT or brief psychological intervention (BPI) rather than short-term psychoanalytic psychotherapy (STPP)

7.4 Method

Data were obtained from the IMPACT trial (Goodyer et al., 2017, 2011). Full details of the method and procedure of the IMPACT study are reported in Goodyer and colleagues 2011 and Chapter 4.

7.4.1 Participants

The present study included all IMPACT participants who received treatment and had adolescents' and/or therapists' alliance ratings at 6 weeks after randomisation. Like in Chapters 5 & 6, participants in this study were divided into two samples based on whether the alliance was assessed from the adolescents' (WAI-S sample) or the therapists' perspective (WAI-S-T sample). However, this study used different samples from Studies 2 & 3, as excluded participants that did not have alliance ratings at 6 weeks. Samples characteristics and comparisons across treatment groups in each sample are displayed in Table 13.

WAI-S sample. This sample consisted of 223 adolescents, i.e. all participants who completed the WAI-S at 6 weeks after randomisation and started treatment.

WAI-S-T sample. This sample consisted of 139 adolescents, i.e. all participants who completed the WAI-S-T at 6 weeks after randomisation and started treatment.

Table 13. Sample descriptive and comparison across treatment groups

	BPI (n=72)		CBT (n=78)		STPP (n=73)		Chi2	p
	N	**%**	**N**	**%**	**N**	**%**		
Gender							1.03	0.597
Male	18	25	18	23.1	22	30.1		
Female	54	75	60	76.9	51	69.9		
Ethnicity								
White British	58	82.9	61	79.2	54	75	1.32	0.516
Other	12	17.1	16	20.8	18	25		
Region								
East Anglia	29	40.3	31	39.7	28	38.4	0.31	0.989
North London	20	27.8	24	30.8	21	28.8		
North West	23	31.9	23	29.5	24	32.9		
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**	**F**	**p**
Age	15.57	1.44	15.61	1.34	15.43	1.49	0.39	0.720
MFQ baseline	47.13	9.72	46.6	10.21	43.28	10.83	3.02	0.520

WAI-S sample (N=223)

	BPI (n=32)		CBT (n=46)		STPP (n=61)		Chi2	p
	N	**%**	**N**	**%**	**N**	**%**		
Gender							0.62	0.732
Male	11	34.4	12	26.1	18	29.5		
Female	21	65.6	34	73.9	43	70.5		
Ethnicity								
White British	22	68.8	30	65.2	44	76.6	1.14	0.573
Other	10	31.3	16	34.8	15	25.4		
Region								
East Anglia	14	43.8	14	30.4	32	52.5	8.35	0.080
North London	18	56.3	28	60.9	24	34.3		
North West	0	0	4	8.7	5	8.2		
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**	**F**	**p**
Age	15.27	1.52	15.74	1.4	15.77	1.46	1.38	0.254
MFQ baseline	45.73	11.62	46.8	11.12	46.3	9.53	0.09	0.162

WAI-S-T sample (N=139)

Note: BPI = brief psychosocial intervention; CBT = cognitive-behavioural therapy; STPP = short-term psychoanalytic psychotherapy; MFQ = The Mood and Feelings Questionnaire.

Excluding participants without alliance ratings at 6 weeks after randomisation did not introduce bias into the between arm randomisation in both samples (see Table 13). Adolescents in both subsamples showed comparable characteristics to the remaining IMPACT participants in relation to baseline characteristics, symptom severity, outcome, and treatment length (see Tables C1-C2 in Appendix C).

7.4.1 Measures

7.4.1. 1 Outcomes

Outcome assessments took place at baseline and after randomisation at 6 and 12 weeks (during treatment), as well as 36 weeks (completed treatment for >70%) and 52 and 86 weeks (after treatment follow-ups).

Depression severity. In line with the IMPACT study, the primary outcome was self-reported depression symptoms as measured with the Mood and Feelings Questionnaire (MFQ) (Angold et al., 1987). Details of this scale are reported in Chapter 4.

General psychopathology (p factor). The secondary outcome measure was general psychopathology (p factor). The p factor is a concept introduced by Caspi and colleagues (2014) that represents one's general proneness to suffer from common mental health disorders. It is dimensional and empirically derived using bifactor modeling and captures shared variance in symptoms across a wide spectrum of psychopathology (Krueger et al., 2018). In the IMPACT trial the p factor was calculated using five measures assessing different symptoms domains including melancholic features, depressive cognitions, anxiety, obsession-compulsion and conduct problems. Details about the measures used and the methodology to estimate the p factor in the IMPACT study is reported elsewhere (Aitken et al., 2020; Fiornini et al., unpublished manuscript).

7.4.1. 2 Alliance

The alliance was assessed using the WAI-S (Horvath & Greenberg, 1989; Tracey & Kokotovic, 1989). Details about this scale are reported in Chapters 4 & 5. Both adolescent (WAI-S) and therapist (WAI-S-T) versions of the scale collected at 6-weeks post-randomisation (within the first 4 sessions of treatment) were used in this

study. Since Study 1 and 2 (see Chapter 5 & 6) found a lack of empirical evidence for the differentiation between the WAI-S subscales, this study used the overall alliance score only.

7.4.1.3 Moderators

Baseline symptom severity.
Depression. MFQ described in Chapter 4.
General psychopathology. P factor described above.

Baseline conduct problems. The Antisocial Behaviours Questionnaire (ABQ) (Goodyer et al., 2017a) was used to asses conduct problems at baseline. Details about this scale are described in Chapter 4.

Treatment Conditions. Adolescents in the study were randomised to receive cognitive-behavioural therapy (CBT), short-term psychoanalytic psychotherapy (STPP), or brief psycho- social intervention (BPI). Details about each treatment arms are reported in Chapter 4.

7.4.3 Data analysis

Data were analysed using multilevel modeling (MLM) with the "nlme" package (Pinheiro et al., 2019) of the R software (R Core Team, 2018). Firstly, prior symptom change and baseline symptom severity were estimated. These were subsequently used in the estimation of the alliance-outcome association for both outcomes considered. Finally, the moderation analyses were conducted for the primary outcome only. Details of each of the analyses performed are reported below.

Prior symptom change and baseline symptom severity. Prior symptom change and baseline symptom severity were estimated using a 3-level model with repeated outcomes measures (i.e. within-patient differences) at level 1, nested within participants (i.e. between-patient differences) at level 2, who in turn were nested within therapists (level 3). The intercept was allowed to vary randomly for participants and therapists, and random slopes were allowed for participants. This model included outcomes from the baseline and 6-weeks assessments as dependent variable and time as predictor. Separate models were estimated for the MFQ (depression severity)

and the p-factor (general psychopathology). MLM accounts for data dependency in repeated measurement; therefore, it provides more accurate estimates of each participant's prior symptom change and baseline symptoms severity. The resulting best linear unbiased predictions of both (a) the participant-specific intercept and (b) the participant-specific slope were used in the analyses of the alliance-outcome association outlined below. Using these model-based estimates of baseline severity and early symptom change, rather than using observed values without modeling, has the advantage of accounting for regression to the mean.

Alliance-outcome association. The alliance-outcome association was assessed using a 3-level model with outcomes subsequent to the alliance measurement (e.g. MFQ and p factor from week 12 to week 86, in separate models) as a dependent variable, and the following predictors: (a) early alliance (as assessed by the WAI-S at 6 weeks), (b) type of treatment, and (c) time. This model (Model 0) assessed the unadjusted relationship between alliance and subsequent outcome. To address the primary research question, a separate model, estimated as outlined above, additionally controlled for baseline symptom severity and prior symptom change (Model 1). In both models, the intercept was allowed to vary randomly between adolescents and therapists, and an unstructured covariance matrix for correlations between random effects was used. Participant-level random slopes for the time variable were also included to allow for variation in the rate of symptom change between adolescents. Time was log-transformed in these analyses, in line with previous research, which demonstrated that mean outcome scores in the IMPACT sample changed in a logarithmic way (e.g. the rate of improvement slowed as time went by) (O'Keeffe et al., 2019). This was also confirmed in the samples used for this study where the logarithmic model fitted the data better than the linear model for both outcome variables (see Table C3 in Appendix C).

Association between alliance and rate of outcome change. To assess whether the average outcome rate of change over time was dependent on the alliance, a two-way interaction term between time and alliance was added to Model 1. This new model (Model 2) was then compared to Model 1 to assess whether adding the interaction term led to an improvement in model fit.

Effect size. To estimate the standardised coefficient of the alliance-outcome relationship in each model (Beta), a standardised measure of the effect of the alliance on outcome was calculated by standardising both the WAI-S and WAI-S-T score and

the outcome, and by re-running the analyses with these standardised variables. The WAI-S score was standardised by subtracting the mean and dividing it by the standard deviation. The MFQ and p factor score from 12 to 36 weeks were standardised by dividing each score by the baseline standard deviation.

Moderators of the alliance-outcome association for the primary outcome (MFQ). The effect of moderators on the alliance-outcome relationship was tested by examining in separate models subsequent depression change as a function of each alliance by moderator interaction, while controlling for prior change, baseline severity, and treatment arm. All continuous moderators were mean-centered. Alliance and outcome were both standardised in these analyses. As treatment arm was already a predictor in the main model, to assess whether adding the interaction improved model fit, a comparison was made between the model including treatment arm as an independent predictor (Model 1) and the equivalent model that included the interaction between alliance and treatment arm.

Model comparison. Models were compared using the Akaike's Information Criterion (AIC), the Bayesian Information Criterion (BIC), and the likelihood ratio (LR) tests. Information criteria are indicators of model quality that take account of both model fit and model complexity, by penalising larger models. Smaller AIC and BIC indicate a better model. The same sets of analysis were conducted using the adolescents' (WAI-S) and therapists' (WAI-S-T) ratings of the alliance, separately.

Missing data. There were no missing data for both the predictor and moderator variables. With regards to the outcome variables (MFQ and p factor from 12 to 86 weeks), missing data-point increased in the later assessment times (see Table 14), likely due to research attrition and questionnaire fatigue. Little's missing completely at random (MCAR) test suggested that there was little evidence against the MCAR assumption (WAI-S sample: Chi-Square= 30.18, p =0.279; WAI-S sample: Chi-Square = 23.98, p= 0.632). Accordingly, missing data were handled using MLM (Rubin, 1987). MLM considers information from all individuals in the sample when calculating parameter estimates, retaining patients in the longitudinal analysis who had at least one MFQ score from week 12 to post-treatment.

7.5 Results

Descriptive statistics for all variables in both samples are displayed in Table 14.

Table 14. Descriptive statistics for both samples

Variable	Time	WAI-S sample (n=223)			WAI-S-T sample (n=139)		
		N	Mean	SD	N	Mean	SD
MFQ	0 w	223	45.68	10.36	139	46.34	10.51
	6 w	223	36.00	12.92	139	35.61	12.82
	12 w	192	33.33	13.64	113	34.14	12.84
	36 w	181	26.38	15.07	109	26.65	15.74
	52 w	182	23.43	16.48	110	24.65	17.34
	86 w	191	21.53	15.35	116	21.12	14.08
Prior change	0-6 w	223	-0.01	1.41	139	-0.06	1.27
p factor	0 w	223	0.94	0.71	139	1.03	0.69
	6 w	223	0.40	0.80	139	0.41	0.86
	12 w	223	0.13	0.90	139	0.22	0.88
	36 w	223	-0.30	1.06	139	-0.25	1.01
	52 w	223	-0.58	1.20	139	-0.47	1.19
	86 w	223	-0.76	1.14	139	-0.80	1.08
Prior change	0-6 w	223	0.01	0.09	139	0.00	0.11
ABQ	0 w	223	2.96	2.86	139	3.19	3.05
WAI-S	6 w	223	57.19	16.40	139	56.53	11.51

Note: 0 = baseline assessment; w= weeks after randomisation; prior change= changed occurred between 0 and 6 weeks.

7.5.1 Association between alliance and subsequent change, controlling for prior change and baseline symptom severity

As shown in Table C4 in Appendix C, the model using alliance and time as independent predictors of outcomes showed lower estimates in both the AIC and BIC indices compared to the equivalent model including the interaction between alliance and time. This was the case for (a) both outcomes and (b) adolescents and therapists' ratings of the alliance. In other words, there was no evidence that the logarithmic rate of change in outcome over time was influenced by the alliance. Therefore, the below results report on the model using alliance and time as independent predictors of subsequent outcome.

Tables 15 & 16 show the results of the models assessing the early alliance-outcome association in the WAI-S sample for both the primary outcome (MFQ-rated

depression change, Table 15) and overall psychopathology (p factor, Table 16) with (Model 1) and without (Model 0) controlling for prior symptom change and baseline severity. Model 0 yielded moderate associations between early alliance and both outcomes (Beta=-0.39 for the MFQ and Beta=-0.36 for the p factor). As hypothesised, when controlling for baseline symptoms and prior symptoms change (Model 1) the early alliance-outcome association was still statistically significant, but smaller (Beta=0.14 for the MFQ & Beta=0.20 for the p factor) than the one yielded by the simpler model (Model 0) for both outcomes.

Similar results were found in the WAI-S-T sample (see Tables 17-18). The effect sizes of the alliance-outcome associations were found to be stronger in the simpler model (Model 0: Beta=-0.30 for the MFQ and Beta=-0.19 for the p factor) than in the model where prior symptom change and baseline severity were controlled for in the analyses for both outcomes (Model 1: Beta=-0.24 for the MFQ and Beta=-0.14 for the p factor).

Table 15. Change in Depression (MFQ) and P factor as Predicted by the Alliance in the WAI-S sample with (Model 1) and without (Model 0) controlling for Prior symptom change and Baseline severity (N=223)

Outcome: MFQ	Model 0				Model 1			
Predictors	**Estimate**	**SE**	**p**	**95% CI**	**Estimate**	**SE**	**p**	**95% CI**
Fixed effect								
Intercept	57.75	3.89	0.000	50.12;65.37	47.26	3.12	0.000	41.16;53.35
WAI-S: unstandardised	-0.25	0.05	0.000	-0.35; -0.14	-0.09	0.04	0.035	-0.17; -0.09
(WAI-S: Effect size)[a]	*(-0.39)*	*(0.08)*	*(0.000)*	*(-0.56; -0.23)*	*(-0.14)*	*(0.06)*	*(0.035)*	*(-0.20 ;-0.01)*
Log Time	-4.57	0.49	0.000	-5.52; -3.61	-4.43	0.48	0.000	-5.36; -3.48
CBT vs BPI	1.22	1.98	0.540	-2.68; 5.11	0.86	1.52	0.574	-2.14; 3.86
CBT vs STPP	-4.58	2.12	0.033	-8.76; -0.39	-0.89	1.66	0.592	-4.16; 2.38
Baseline severity					0.72	0.07	0.000	0.57;0.86
Prior symptom change					4.26	0.45	0.000	3.36;5.14
Random effect for level 2 (adolesc.)		**SD**				**SD**		
Intercept		15.47				8.96		
Log Time		4.79				4.80		
Residual		8.27				8.33		
Random effect for level 3 (therap.)		**SD**				**SD**		
intercept		0.37				0.94		

Table 16. Change in P factor as Predicted by the Alliance in the WAI-S sample with (Model 1) and without (Model 0) controlling for Prior symptom change and Baseline severity (N=223)

Outcome: P factor	Model 0				Model 1			
Predictors	**Estimate**	**SE**	**p**	**95% CI**	**Estimate**	**SE**	**p**	**95% CI**
Fixed effect								
Intercept	1.79	0.24	0.000	1.31;2.26	1.34	0.22	0.000	0.90;1.78
WAI-S: unstandardised	-0.02	0.00	0.000	-0.02; -0.01	-0.01	0.00	0.00385	-0.01; -0.00
(WAI-S: Effect size)[a]	*(-0.36)*	*(0.07)*	*(0.000)*	*(-0.02; -0.01)*	*(-0.20)*	*(0.07)*	*(0.004)*	*(-0.30 ;-0.06)*
Log Time	-0.37	0.03	0.000	-0.43; -0.30	-0.37	0.03	0.000	-0.43; -0.30
CBT vs BPI	0.14	0.12	0.257	-0.10;0.37	0.12	0.11	0.263	-0.09;0.33
CBT vs STPP	-0.15	0.13	0.247	-0.40;0.10	0.00	0.12	0.970	-0.22;0.23
Baseline severity					0.57	0.08	0.000	0.41;0.72
Prior symptom change					2.69	0.50	0.000	1.70;3.66
Random effect for level 2 (adolesc.)		**SD**				**SD**		
Intercept		0.81				0.31		
Log Time		0.35				0.26		
Residual		1.08				0.77		
Random effect for level 3 (therap.)		**SD**				**SD**		
intercept		0.01				0.00		

Table 17. Change in depression (MFQ) as predicted by the Alliance in the WAI-S-T sample with (Model 1) and without (Model 0) controlling for prior symptoms change and baseline severity (N=139)

Outcome: MFQ	Model 0				Model 1			
Predictors	**Estimate**	**SE**	**p**	**95% CI**	**Estimate**	**SE**	**p**	**95% CI**
Fixed effect								
Intercept	60.18	6.47	0.000	47.52;72.83	58.98	5.84	0.000	45.84;67.34
WAI-S-T: unstandardised	-0.27	0.10	0.010	-0.46; -0.07	-0.21	0.08	0.014	-0.38; -0.04
(WAI-S-T: Effect size)[a]	*(-0.30)*	*(0.11)*	*(0.010)*	*(-0.52; -0.08)*	*(-0.24)*	*(0.09)*	*(0.000)*	*(-0.42; -0.05)*
Log Time	-5.17	0.57	0.000	-6.27; -4.05	-5.00	0.57	0.000	-6.10; -3.89
CBT vs BPI	2.61	2.93	0.376	-3.21;8.44	2.38	2.52	0.349	-2.62;7.38
CBT vs STPP	-1.43	2.63	0.590	-6.65;3.80	-0.93	2.28	0.684	-5.46;3.59
Baseline severity					0.61	0.10	0.000	0.41;0.81
Prior symptom change					3.70	0.69	0.000	2.33;5.06
Random effect for level 2 (adolesc.)	**SD**				**SD**			
Intercept	11.68				4.69			
Log Time	3.53				3.61			
Residual	8.50				8.54			
Random effect for level 3 (therap.)	**SD**				**SD**			
intercept	2.07				0.94			

Table 18. Change in P factor as predicted by the alliance in the WAI-S-T sample with (Model 1) and without (Model 0) controlling for prior symptoms change and baseline severity (N=139)

Outcome: P factor	Model 0				Model 1			
Predictors	**Estimate**	**SE**	**p**	**95% CI**	**Estimate**	**SE**	**p**	**95% CI**
Fixed effect								
Intercept	1.67	0.37	0.000	0.94;2.39	1.45	0.36	0.000	0.75 ;2.15
WAI-S-T: unstandardised	-0.01	0.01	0.052	-0.02;2.54	-0.01	0.01	0.125	-0.49; -0.32
(WAI-S-T: Effect size)[a]	*(-0.18)*	*(0.09)*	*(0.052)*	*(-0.36;0.00)*	*(-0.14)*	*(0.09)*	*(0.125)*	*(-0.31 ;0.03)*
Log Time	-0.40	0.04	0.000	-0.48; -3.21	-0.41	0.04	0.000	-0.48; -0.32
CBT vs BPI	0.19	0.16	0.235	-0.12;5.13	0.25	0.15	0.114	-0.05;0.55
CBT vs STPP	-0.03	0.14	0.844	-0.31;2.55	0.03	0.14	0.835	-0.24;0.29
Baseline severity					0.46	0.11	0.000	0.25;0.66
Prior symptom change					0.98	0.53	0.068	-0.06;2.03
Random effect for level 2 (adolesc.)		**SD**				**SD**		
Intercept		0.30				0.41		
Log Time		0.22				0.24		
Residual		0.80				0.79		
Random effect for level 3 (therap.)		**SD**				**SD**		
intercept		0.02				0.00		

7.5.2 Moderators of the alliance–primary outcome association

Table 19 shows the estimates of the treatment by moderator effect for each of the five moderators hypothesised. In contrast with the initial hypotheses, in both samples there was no evidence of moderation for any of the four patient baseline characteristics considered (age, gender, baseline symptom severity or conduct problems).

Table 19. Treatment moderator analyses for the primary outcome (MFQ) as Predicted by Prior Depression Change, Baseline severity, treatment type and Alliance by Moderators Interactions

Moderator	WAI-S sample			
Gender	Estimate	SE	p	95% CI
WAI-S X male vs female a	-0.01	0.15	0.931	-0.30;0.28
Age				
WAI-S X Age	-0.07	0.05	0.158	-0.15;0.02
Baseline MFQ				
WAI-S X Baseline severity	0.00	0.00	0.930	-0.01;0.01
ABQ				
WAI-S X ABQ	-0.02	0.00	0.930	-0.06;0.02
Treatment Arm				
WAI-S X BPI vs CBT b	0.45	0.19	0.018	0.07;0.81
WAI-S X STPP vs CBT b	0.16	0.16	0.326	-0.15;0.48
WAI-S X BPI vs STPP c	0.29	0.15	0.064	-0.01;0.58
Moderator	WAI-S-T sample			
Gender	Estimate	SE	p	95% CI
WAI-S X male vs female a	0.04	0.17	0.800	-0.28; 0.37
Age				
WAI-S X Age	-0.06	0.07	0.392	-0.19; 0.07
Baseline MFQ				
WAI-S X Baseline severity	0.00	0.01	0.878	-0.02; 0.02
ABQ				
WAI-S X ABQ	0.02	0.02	0.394	-0.02; 0.06
Treatment Arm				
WAI-S X BPI vs CBT b	0.49	0.24	0.041	0.02; 0.96
WAI-S X STPP vs CBT b	0.22	0.21	0.302	-0.19;0.64
WAI-S X BPI vs STPP c	0.27	0.23	0.247	-0.18;0.73

a(Ref: female) b(Ref: CBT); c(Ref: STPP)

Treatment arm demonstrated to be the only significant moderator of the alliance-outcome association in both samples. As showed in Table C5 in Appendix C,

the AIC and likelihood ratio test in both samples were lower in the model including the interaction between alliance and treatment than in Model 1. Specifically, the alliance-outcome relationship was significantly stronger in CBT compared to BPI. There were small and not statistically significant differences in the effect of the alliance between CBT and STPP, and between STPP and BPI (see Table 19). Accordingly, the alliance-outcome association was higher in CBT than in STPP and there was little evidence for an alliance-outcome relationship in BPI (see Table 20).

Table 20. MFQ as Predicted by Prior Depression Change, Baseline severity, treatment type and Alliance by each Treatment Arm Interactions

Moderator	WAI-S sample			
Arm	**Beta**	**SE**	**p**	**95% CI**
WAI-S X CBT	-0.35	0.14	0.014	-0.62; -0.07
WAI-S X STPP	-0.19	0.09	0.039	-0.36; -0.01
WAI-S X BPI	0.10	0.13	0.430	-0.15; 0.35
	WAI-S-T sample			
WAI-S X CBT	-0.44	0.15	0.004	-0.74; 0.14
WAI-S X STPP	-0.22	0.15	0.136	-0.51; 0.06
WAI-S X BPI	0.05	0.18	0.786	-0.31; 0.41

7.6 Discussion

Alliance effect on outcome

In this study both adolescent and therapist early ratings of the alliance were found to be significantly associated with subsequent symptom change, even after controlling for prior symptom change and baseline severity. The strength of this association ranged between 0.14 and 0.24. This range depended on whether the alliance was rated by adolescents or therapists and whether the assessment of outcome was specific symptom (depression severity) or overall psychopathology (p factor). These findings are in line with a few studies which supported the existence of a relationship between alliance and outcome while controlling for baseline symptom severity only (Chiu et al., 2009; Labouliere et al., 2017) or prior symptom change only (Reyes, 2014). Given the lack of research on the alliance-outcome relationship controlling for both baseline symptom severity and prior symptom change in youth psychotherapy, more research is needed to confirm the results of this study.

Importantly, when prior symptom change and baseline severity were not controlled for in the analyses, the estimated association between early alliance and outcomes were stronger, ranging from 0.18 to 0.39. This suggests that the association between alliance and outcome is partly confounded by early symptomatic improvement. Analyses that do not control for baseline symptom severity and prior symptom change may, therefore, overestimate the strength of the alliance-outcome relationship. Furthermore, in this study the alliance did not influence how rapidly depression and general psychopathology symptoms declined over time. This does not mean that the effect of the alliance is short-term but suggests that any long-term effect of the early alliance on symptoms is mediated by the early alliance's short-term impact.

In line with previous research, this study also found small differences in the association between alliance and outcome across alliance raters (adolescents vs therapists) and types of outcomes (depression vs general psychopathology). Specifically, when the alliance was rated by adolescents, the early alliance-outcome association was stronger when outcome assessed general psychopathology than depression. The opposite trend was found from the therapist perspective: therapists' ratings of early alliance were more strongly associated with reduction in subsequent depression than in overall psychopathology. This might suggest that the felt experience of alliance, from the young person's perspective, is associated with greater improvement in overall psychopathology rather than the specific symptoms targeted by the treatments. In contrast, the therapist's view of alliance seems more strongly associated with symptom-specific improvement, which may be the domain that therapists are more directly focused on, especially in research trials when they know what the primary outcome is. However, these differences were small, therefore, it is difficult to draw solid conclusion based on these findings. In earlier research, overall functioning and therapists' report of the alliance generated larger effects than measures that assessed specific symptoms and adolescents' reports on the alliance (McLeod, 2011). More attention should be paid to these variables in future studies.

Moderators of the alliance–subsequent change association

Contrary to the hypothesis of this study, none of the patients' baseline characteristics investigated had a statistically significant effect on the alliance-outcome association. This is inconsistent with previous research suggesting that the alliance-outcome link is stronger for female and younger patients (Accurso & Garland,

2015; McLeod, 2011; Shirk et al., 2011) and for adolescents who presented more externalising than internalising problems (Shirk and Kraver, 2003; McLeod, 2011; Shirk et al, 2011; Karver, 2018). These findings are, however, consistent with those in the adult literature where the alliance-outcome relationship resulted independent of a range of patient characteristics (Flückiger, et al., 2018). It might be that, when controlling for prior symptom change and baseline symptom severity, the early alliance-outcome association with youths follows the same pattern as for adults, and it is not significantly influenced by patients' age, gender, and symptom severity.

In line with previous research (Shirk et al., 2011; Karver et al., 2018), treatment arm showed a significant moderator effect on the early alliance-outcome association. Specifically, CBT demonstrated a stronger early alliance–outcome relationship than STPP, and there was no evidence of a significant association between early alliance and outcome in BPI. This might suggest that a strong alliance early in treatment is more instrumental in driving change in CBT than in STPP and especially BPI. It might be that within CBT, where explicit collaboration is an essential part of how technical aspects of the therapy are delivered from the start, the alliance has a more significant impact on outcomes. Although collaborative behaviours might occur in other therapies, their frequency, as well as the context in which they arise, might be different to CBT. In STPP, the alliance-outcome relationship was significant but weaker than in CBT. It might be that, in this treatment type, while some elements of the alliance promote better outcomes, other therapy specific interventions might be more responsible for outcomes. In contrast, in BPI, the alliance early in treatment did not seem to contribute to outcome, and perhaps other treatment variables such as psychoeducation or goal-oriented activities might be more responsible for symptom change. Additionally, since the alliance was assessed relatively early in therapy, the results of the moderating impact of treatment type on the alliance might be due to the timing of the alliance assessment. It could be that the role that the alliance assumes in therapy varies not only across types of therapy, but also across stages of therapy.

Strengths, limitations, and future directions

This study has several strengths including being the first to evaluate the strength of the early alliance-outcome association while controlling for prior symptom change and baseline symptom severity, and to assess possible moderators of this relationship using such stringent analyses. Furthermore, data were derived from a

RCT in which the adherence to treatments was closely monitored for integrity (Goodyer et al., 2017a; Midgley et al., 2018). Other strengths of this study were the inclusion of both adolescents' and therapists' ratings of the early alliance and the assessment of both specific symptom and general psychopathology.

The present study also has several limitations. First, although it controlled for baseline symptom severity and previous symptom change to account for reverse causality between early alliance and outcomes, causality cannot be inferred based on the current findings since it is not possible to experimentally manipulate alliance levels. Conversely, controlling for early symptom change might lead to a downward bias in the estimate of the alliance-outcome association, since there could be a reciprocal effect between early alliance and early symptom change, where better alliance leads to improved symptoms and vice versa. Second, there may be unmeasured confounders that are responsible for the observed association. Since the alliance is inherently a relational process, patients' and therapists' interpersonal skills, attachment style, or reflective capacities are also likely to impact on the alliance; thereby affecting the alliance-outcome relationship. Third, the alliance was not rated after a specific session, but at a pre-scheduled time-point after randomisation (approximately 6 weeks). A such, the alliance assessments did not happen precisely after the same number of sessions for all participants.

Conclusion

Overall, the findings of this study suggest that, although small, there is evidence of an effect of early alliance on subsequent outcomes in youth psychotherapy, even after controlling for baseline symptoms severity and early symptom change. This provides some support to the assumption that early alliance drives symptom changes rather than being purely the product of prior improvement. Therefore, developing a strong therapeutic alliance early in treatment is important for outcome in youth psychotherapy, at least in CBT and STPP. However, these findings do not preclude the possibility of reciprocal effects between early alliance and symptomatology. Furthermore, this study found that the alliance effect on outcomes can vary across therapy types. This might question the idea of the alliance as a common, generic factor associated with outcome in all psychological treatments. Further research is needed to shed more light on the alliance-outcome link within and across psychological treatments for young people.

Chapter 8. Alliance ruptures and resolutions in short-term psychoanalytic psychotherapy for adolescent depression: a case study

"Peace is not the absence of conflict but the ability to cope with it." Mahatma Gandhi

8.1 Introduction

Chapter 6 showed that, in the IMPACT sample, average alliance ratings from both therapists and adolescents differed between treatment types, being lowest in short-term psychoanalytic psychotherapy (STPP) compared to both brief psychosocial intervention (BPI) and especially to cognitive-behavioural therapy (CBT) at all time points. However, the alliance increased over time in STPP only. Additionally, in Chapter 7, treatment type was found to moderate the alliance-outcome association in the prediction of subsequent depression severity, with the alliance being a stronger predictor of outcome in CBT compared to STPP and BPI. This made me curious to better understand the role of the alliance and its relationship with the change process in STPP. Therefore, in this chapter I attempt to dig deep into the alliance dynamics and their impact on the change process in a STPP case from the IMPACT-ME sample.

8.2 Research background

As discussed in Chapter 3, there is a small but growing body of evidence identifying a relationship between positive resolution of alliance ruptures and good outcomes in youth psychotherapy (Daly et al., 2009; Gersh et al., 2017; Halfon et al., 2019; O'Keeffe et al., 2020; Schenk et al., 2019). This might suggest that repairing alliance ruptures is a critical treatment process. Accordingly, in adult psychotherapy, Safran and Muran (2000a) developed the first and most influential model of how ruptures could be successfully repaired in Brief Relational Therapy (BRT) (Muran et al., 2005). According to this model successful resolution or productive exploration of ruptures is expected to involve one or more of the following: (a) the therapist recognises the rupture (though not necessarily explicitly) and addresses it by drawing the patient's attention to it, (b) the therapist invites the patient to explore the rupture and the negative feelings associated with it, (c) patient and therapist explore the patient's potential avoidance manoeuvres, (d) the therapist focuses on clarifying the patient's core relational need/wish that underlies the initial rupture (Lipner et al., 2019; Safran & Muran, 2000a). Although this model was developed in the context of BRT,

its elements can be applied to any treatment type. Building on Safran and Muran's (2000a) work, other researchers developed rupture resolution models in various adult therapy types. As discussed in Chapter 3, in most types of therapy the resolution process begins with the acknowledgement of the rupture, but each therapy type differs in the following steps to explore ruptures. Therapists can, therefore, attempt to repair ruptures in various ways.

Based on both empirical and clinical data, Eubanks and colleagues (2018) identified two main categories of resolution strategies: immediate and exploratory. Immediate repair strategies include the therapist's efforts to promptly address a rupture and get treatment back on track. These might involve the therapist's attempts to (a) clarify misunderstanding, (b) renegotiate therapy tasks or goals, and/or (c) provide a rationale for the treatment approach. Exploratory repair strategies involve a deeper exploration of the rupture experience and aim to uncover the core relational themes potentially underlying the rupture. To do so, the therapist could invite the patient to share their thoughts and feelings about the impasse. Alternatively, therapists could disclose their own experience of the therapeutic relationship and/or acknowledge their possible contribution to the difficulties they are facing in the relationship (Eubanks et al., 2018). Therapists might choose an immediate strategy over an exploratory one if it is early in treatment and they do not feel the bond is strong enough, and/or if they feel the patient is not yet ready for further exploration of a rupture (Eubanks et al., 2018). Therapists' choice of the type of resolution strategies might also be influenced by their therapeutic approaches. For instance, psychodynamic therapists might be more inclined to use exploratory strategies (e.g. interpretations) as those are more in line with their way of working, than cognitive therapists, who might be more prone to use immediate strategies (e.g. changing therapy tasks and/or goals).

While there is research on the handling of alliance ruptures with adult patients, the literature offers less assistance with young people (DiGiuseppe et al., 1996; Nof et al., 2019). To date, there are only two models of how to repair ruptures in youth psychotherapy. Specifically, Daly and colleagues (2009) adapted and validated for use with young people Bennett and colleagues' (2006) model to repair ruptures in the context of adult Cognitive Analytic Therapy (CAT). In 2019, Nof and colleagues (2019) adapted Safran and Muran's (2000a) original rupture-repair model for child psychotherapy and developed the child alliance focused approach (CAFA). However,

CAFA has not been empirically validated yet. Furthermore, with emotionally and cognitively mature young people, aged 12-16 and above, Nof and colleagues (2019) recommend the use of Safran and Muran's (2000a) original rupture model. As the type of ruptures and the way to address them might be different in youth psychotherapy compared to adult psychotherapy, more research in needed on the alliance rupture repair processes with youths. This is especially relevant in youth psychodynamic psychotherapy, since the few studies available on the topic have so far shown that, in this therapeutic approach, the alliance tends to falter in some moments of treatment and might be characterised by frequent alliance ruptures (Halfon et al., 2019; Schenk et al., 2019; see Chapter 6-7).

Alliance rupture-repair in youth psychodynamic psychotherapy

The few studies assessing the alliance and its fluctuations in youth psychodynamic psychotherapy have thus far found frequent ruptures and seem to indicate the existence of a relationship between the resolution of ruptures and good outcomes. However, existing research is scarce and hampered by methodological limitations. For instance, Halfon and colleagues (2019) investigated the trajectory of the observer-rated alliance in psychodynamic therapy with young people with internalising and externalising problems. They found a quadratic trend (high–low–high) in the alliance throughout therapy, which predicted positive outcomes (Halfon et al., 2019). This might suggest that in the middle phase of therapy alliance ruptures occurred, which were subsequently resolved, as the alliance increased in the final phase of treatment. However, as alliance ruptures and resolutions were not measured directly, it is not possible to make firm conclusions about this relationship. Similar results were found by Schenk and colleagues (2019), who assessed alliance ruptures and resolutions in a sample of ten adolescents (aged 14 to 18) with borderline personality symptoms undertaking psychodynamic treatment. Findings indicated that alliance ruptures occurred frequently and showed a U shape pattern (i.e. more alliance ruptures appearing in the middle phases of treatments). This pattern was associated with a significant reduction in psychopathology and an improvement in psychosocial functioning over time. However, the authors reported on the frequency of resolution attempts and not on whether alliance ruptures were resolved, it is therefore difficult to draw conclusions about the relationship between alliance rupture resolutions and outcomes.

As shown in Chapter 6, within the IMPACT sample, the average strength of the alliance with adolescents was found to be lower in STPP compared with both BPI and especially CBT, although the treatments were found to be equally effective. However, in the STPP group, the alliance increased more over time compared to BPI and CBT. The lower alliance ratings in STPP might suggest that this treatment type is characterised by more alliance ruptures than BPI and STPP, without this impacting outcome. This might be because the alliance improved in the later phases of treatments, which might suggest that ruptures were repaired. Furthermore, in the same sample, the early alliance-subsequent outcome association was found to be weaker in STPP compared to CBT (see Chapter 7 for more details). This result might raise questions about the strength of the relationship between alliance and outcome in STPP and warrant further investigation.

Overall, existing research on the alliance fluctuations in youth psychodynamic treatments might suggest that in this treatment type the alliance tends to decline in certain moments where ruptures might occur. This might be the case when patients' core issues surface in the therapy relationship and old patterns are challenged. Notably, such alliance patterns were found in the context of good outcome therapy, which might suggest that lower alliance ratings in certain moment of treatment are not necessarily an indication of unsuccessful therapy. However, based on the current evidence, it not possible to draw any conclusion on the relationship between alliance fluctuations, including its ruptures and resolutions, and outcomes in psychodynamic psychotherapy.

8.3 The current study

The goal of this study was to gain further insight into the dynamics and role of the alliance in good-outcome STPP for adolescent depression. Accordingly, this study has the following three main aims.

1. To describe the alliance and its dynamics, including the type and frequency of alliance ruptures and resolutions, in a case of STPP with good outcome, as assessed by a standard quantified measure of depression.

2. To explore and understand how alliance rupture and resolution events are managed in the context of good-outcome STPP.

3. To investigate the patient's and therapist's views on the role of their relationships and its dynamics on the change process.

8.4 Method

This research employed a longitudinal, mixed-methods, empirical single-case approach. It drew on data from the IMPACT (Goodyer et al., 2017b), and IMPACT-ME (Midgley, et al., 2014) studies. Full details of the method and procedure of these studies are reported in Chapter 4.

8.4.1 Selection criteria

Amongst all available STPP cases within the IMPACT-ME sample (N=27), a case was selected based on the following criteria:

1) Indication of a 'good' outcome to assess whether there was any relationship between the positive change and the alliance dynamics. Good outcome was measured by (a) a shift from the clinical range (27 or above) to the non-clinical range on the primary outcome measure of the IMPACT trial, the Moods and Feelings Questionnaire (MFQ), and (b) a decline of at least five points in MFQ score between baseline and follow-up, which has been considered as a minimum clinically significant difference (Goodyer et al., 2011).

2) Fluctuations in adolescent's self-reported rating of the alliance, as measured by the Working Alliance Inventory Short-form (WAI-S), from low to high (as found in Study 2), as this pattern might indicate the presence of alliance strains that were later resolved.

3) Presence of audio recordings of therapy sessions enabling the in-depth assessment of the alliance fluctuation, including its ruptures and resolutions, within and across sessions.

4) Presence of semi-structured interviews with adolescent and therapist, separately, at the end of treatment to explore their perspectives on their relationship, therapy process, and outcome.

Of the 27 STPP cases included in the overall IMPACT-ME sample, only one case met all the above inclusion criteria.

8.4.2 Participants

Details about the backgrounds of the patient and therapist have not been reported and some information has been changed to preserve anonymity.

Patient. The selected case was assigned the pseudonym 'Lewis'. Lewis was 14 years old at the start of treatment and had an MFQ score of 41, suggesting high levels of depression. He was the youngest of a large and loving family, who had recently gone through a traumatic event affecting one of Lewis's aunts, to whom he was close. Following this traumatic event, Lewis started experiencing low mood and his school performance deteriorated. Firstly, he was referred to community-based counselling, which he attended on a drop-in basis for about 5-6 months until he was referred to Child and Adolescent Mental Health Service (CAMHS) where he consented to take part in the IMPACT study and was randomised to STPP.

Therapist. The therapist (pseudonym: Dr Tim) was a male, qualified child and adolescent psychotherapist, psychoanalytically trained and registered with the UK Association of Child Psychotherapists.

Details about the STPP treatment are provided in Chapter 4.

8.4.3 Case study data

A rich case record, including multiple sources of evidence from various perspectives (i.e. adolescent, therapist, observer), was assembled and analysed. The different data sources are outlined below.

8.4.3.1 Self-report measures

Outcome. In line with the IMPACT study, the primary outcome was self-reported depression symptoms as measured with the MFQ (Angold et al., 1987). Details of this scale are reported in Chapter 4. Outcome assessments took place at baseline and, after randomisation at 6 and 12 weeks (during treatment), as well as at 36 weeks (completed treatment) and 52 and 86 weeks (after treatment follow-ups).

Alliance. The WAI-S (Horvath & Greenberg, 1989; Tracey & Kokotovic, 1989) was used to measure the alliance from the adolescent perspective at 6, 12, and 36 weeks post-randomisation. Details of this scale are reported in Chapter 4. Therapist ratings of the alliance were missing.

8.4.3.2 Observer rated measures applied on session recordings

The following measures were applied to the audio recordings of therapy sessions. Although therapy comprised 25 sessions, due to technical errors the audio-recording of the last session included only the first 12 minutes and was, therefore, excluded from the analysis.

Alliance. The observer version of the WAI-S, the Working Alliance Inventory Shortened Observer-rated (WAI-O-S) (Tichenor & Hill, 1989), was used to assess the alliance in each session. The WAI-O-S is composed of 12 items analogous to the therapist and self-rated version (e.g. 'There is a mutual liking between the client and therapist', 'the participant and therapist are working on mutually agreed upon goals'). Responses are rated on a seven-point scale from 'very strong evidence against' to 'very strong evidence for' (see Appendix D Figure D1). The WAI-O-S provides a global assessment of the alliance across the whole session and demonstrated adequate reliability and validity (Santirso et al., 2018).

Alliance rupture and resolutions. Ruptures in the alliance were identified using the observer-based Rupture Resolution Rating System (3RS) (Eubanks et al., 2015b, 2019). While listening to a therapy session recording, raters watch for a lack of collaboration or presence of tension between the client and therapist. Ratings are made of 5-*minute* segments*,* permitting the micro-analytic identification of ruptures and resolution strategies through a session*.* Ruptures are classified as either being confrontation or withdrawal types. The coding system includes (a) seven markers of withdrawal ruptures, (b) seven markers of confrontation ruptures, and (c) ten markers of resolution strategies. Ruptures are defined in terms of observable patient behaviours, while resolution strategies are defined in terms of observable therapist behaviours. Tables 22-24 display a brief description of the 3RS rupture and resolution markers.

For each rupture and resolution markers, the 3RS yields (1) a frequency score (i.e. the number of times a marker occurred), and (2) a significance score, which addresses the extent to which the rupture or resolution markers impact the alliance (rated on a 5-point scale, from 1 = no impact to 5 = significant impact). The 3RS also yields an overall significance score of (3) withdrawal and (4) confrontation markers as two separate groups (rated on a five-point scale, from 1 = no impact on the alliance to 5 =

significant impact), and (5) a global resolution score assessing the extent to which ruptures were resolved during the session. The resolution score is rated on a five-point scale with higher scores reflecting greater resolution of ruptures (1 = poor, 2 = below average, 3 = average, 4 = good, above average, 5 = very good). A resolution score of 3 is used in both (a) sessions that were at least partially addressed and resolved, (b) sessions with minor ruptures that have no significant impact on the work of therapy. The 3RS coding sheet is shown in Appendix D, Figure D2.

The 3RS has demonstrated good to excellent interrater reliability (intraclass correlation coefficients [ICC] ranging from .73 to .98) for both the frequency ratings and the summary ratings (Coutinho et al., 2014; Eubanks et al., 2019). It has also been found to be able to identify more ruptures than self-report measures (Coutinho et al., 2014).

Information about the raters and interrater reliability. I rated all sessions using the 3RS and the WAI-S-O, and a proportion of them (33.3%, n=8) was also rated by an independent researcher, who was blind to therapy outcome and self-rating of the alliance. Both raters were doctoral students who had been trained on the 3RS by the measure developers and became reliable in the use of the measure. Good reliability between the two raters was established on the WAI-O-S (ICC=0.81) and on the 3RS for confrontation rupture frequency (ICC=0.76), confrontation rupture significance (ICC=0.81), withdrawal rupture frequency (ICC=0.75), withdrawal rupture significance (ICC=0.76), resolution attempts frequency (ICC=0.80) and resolution of ruptures (ICC=0.86).

8.4.3.3 Post-therapy interviews

Semi-structured interviews were carried out by an independent research psychologist with the adolescent and his therapist, separately, after therapy had ended using the Experience of Therapy Interviews (Midgley et al., 2011). The interview with the adolescent sought to explore his experiences of therapy and his view on therapy process and outcome. The interview with the therapist explored the therapy from the clinician's perspective. More details of this interview are reported in Chapter 4. The interview schedule can be found in Appendix D, p.246.

8.5 Data analysis

Firstly, each therapy session was scored using the 3RS and the WAI-O-S. Raters did not have access to the post-session interviews until these ratings were completed to avoid confirmation bias.

Secondly, to assess the patient and the therapist's views on the quality of their relationship and its impact on the change process, the transcripts of the post-therapy interviews were analysed using framework analysis (Parkinson et al., 2016). Framework analysis is a qualitative way of analysing data in which a priori research question and emergent data-driven themes guide the development of an analytic framework. The framework is then used to select data, which is thematically analysed and interpreted (see Appendix D, Table D1 for the framework developed and used in this study).

Thirdly, to develop a model of repairing ruptures in STPP based on both empirical and theoretical data, a selection of rupture and resolution episodes were identified and analysed using some elements of the discovery-oriented phase of task analysis (Greenberg, 2007; Pascual-Leone et al., 2009). Task analysis is a research method to describe the steps in the successful completion of a task, such as repairing alliance ruptures. Its discovery-oriented phase involves the construction and description of an initial model based on the consistency and differences between some theoretical ideas on the phenomenon object of research and the evaluation of multiple empirical observations of the phenomenon. A total of about 9 to 12 events of interest have been suggested as being sufficient for the first phase of task analysis (Greenberg, 2007; Pascual-Leone et al., 2009). For this study, 10 rupture and resolution episodes were selected using a combination of theoretical and purposive sampling (Straus & Glaser, 1967). Specifically, ruptures were selected from sessions that contained moments mentioned by the patient and therapist as difficult and that were also identified as ruptures events by the 3RS raters. These were transcribed and evaluated in relation to Safran & Muran's (2000) model of repairing ruptures in adult psychotherapy. Based on this analysis an initial model of repairing ruptures in STPP was developed and described.

Finally, the evidence provided by each of the above-mentioned sources of information, alongside the quantitative data on the alliance and outcome, were integrated to provide a more comprehensive answer to each of the research questions of this study.

8.6 Results

This section firstly provides an overview of the case, based on both the session recordings and the post-therapy interviews, then it presents the results organised by study aims. Certain details have been changed to protect confidentiality.

8.6.1 Overview of the case

Lewis was referred to CAMHS by his counsellor due to his low mood, difficulties in sleeping and concentrating, suicidal ideation, and episodes of self-harm. However, he had developed a positive and helpful relationship with his counsellor and was reluctant to end that work to engage in a new therapy. As such, when, at their first meeting, Dr Tim suggested that if Lewis was to engage in STPP, it would be better for him to end his community-based counselling, this created great tension in their relationship. Despite his initial resistance, Lewis ended counselling and, over time, became committed to his new treatment with Dr Tim.

The main themes discussed during therapy were Lewis's sense of identity and his contradictory feelings towards himself, his relationship with his family and friends, school exams, and future academic choices. Lewis's struggle to end the relationship with his counsellor and his ambivalence about engaging with Dr Tim was another important topic through treatment. Much of the treatment was also spent talking about the therapeutic relationship itself and the upcoming ending of therapy.

Lewis attended 25 of the 28 sessions offered. Therapy took place weekly over a period of 35 weeks with 8 breaks (6 of 1-week, and 2 of 2-weeks). Two therapy breaks were due to the adolescent not being available, and six were initiated by the therapist. Of the 6 breaks due to the therapist's absence, 2 were sudden and not communicated in advance to the adolescent. Breaks revealed important moments with respect to alliance ruptures.

8.6.2 Aim 1: The alliance dynamics, including its rupture and resolutions

To describe the alliance dynamics in this case, data from different perspectives were analysed. This included (1) Lewis's alliance ratings at 3 time points (WAI-S), (2) session by session observer ratings of the alliance (WAI-O-S), (3) session by session observer ratings of alliance ruptures and resolutions (3RS), (4) patient's and therapist's description of their relationship in the post-therapy interviews. The findings from each of these data sources are reported below and integrated.

8.6.2.1 The alliance dynamics

As mentioned in the selection criteria, Lewis's self-report of the alliance, using the WAI-S, showed a linear increase over time (see Table 25). In the early phase of therapy, he rated the alliance quite low (WAI-S=38 after the first 4 sessions). However, fifteen weeks after he started treatment (after his 7th session) Lewis reported an increase in his alliance rating (WAI-S=54), which was followed by a similar increase reported after his final session (36 weeks since he started treatment, WAI-S=70).

Session by session observer ratings of the alliance, using the WAI-O-S, also reflected an overall increase in the alliance over time, despite showing some fluctuations through treatment (see Figure 8). The major fluctuations in the alliance happened in the first part of the treatment (within the first 8 sessions) when the majority (n=5) of breaks occurred. In the middle and especially the final stage of therapy most therapy sessions were characterised by a sense of warmth and mutual collaboration, reflected by a steadier and relatively high alliance (see Figure 8).

The lowest ratings of the alliance were found at session 1 and session 8. Session 1 is the session in which Dr Tim suggested ending the community-based counselling, something Lewis was not happy about. Session 8 followed a two-week unplanned break when, due to a misunderstanding about the session date, the therapist missed a session. Both sessions were mentioned in the post-therapy interviews as difficult and more details about this are reported below. According to the WAI-O-S ratings, the alliance improved after both strains, suggesting that a good collaboration was re-established. Small fluctuations in the alliance were observed even in the final phase of therapy (especially at session 21), although they were in the context of an overall high alliance. More details of what happened in session 1, 8 and 21 are reported in paragraph 8.6.3.1.

Figure 8. Session by session WAI-S-0 total score and therapy breaks

Sessions	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
WAI-S-O Total	42	54	59	63	55	58	55	40	64	65	69	71	67	68	71	66	67	65	63	66	62	69	72	72

▽ breaks due to adolescent's unavailability
▽ planed breaks
▽ unplanned breaks
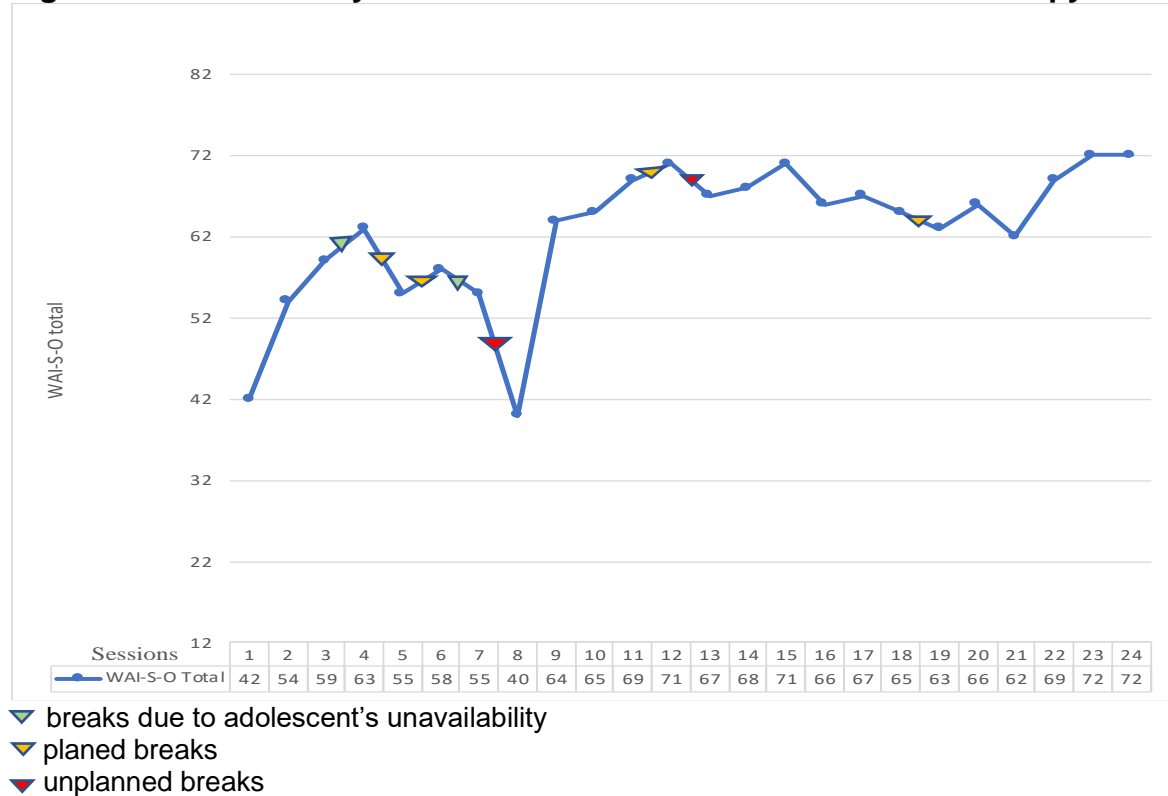
8.6.2.2 Frequency and type of alliance rupture and resolutions

Across the 24 sessions used in the analyses, 274 ruptures were identified. Of the overall number of ruptures, 83.2% (n=228) were withdrawal ruptures and 16.8% (N=45) were confrontation ruptures. Withdrawal rupture markers were present at least once in all sessions. Confrontation rupture markers were present in 62.5% of sessions (n=15). The average frequency and significance ratings for confrontation and withdrawal ruptures, as well as for resolution markers, are shown in Table 21 and described below.

Table 21. Average frequency and significance ratings for withdrawal, confrontation ruptures, resolutions attempts.

3RS scores		Mean	SD	Median	Mode
Withdrawal Rupture	Frequency	9.50	4.04	9.5	9
	Significance	3.13	0.94	3	3
Confrontation Rupture	Frequency	1.91	2.24	1.5	0
	Significance	1.63	0.77	1	1
Resolution Attempts	Frequency	9.08	4.16	9	8
	Overall resolution	3.08	0.65	3	3

Figures 9 and 10 display the frequency and significance of ruptures and resolutions markers for each session, respectively. The sessions that showed the highest frequency and significance of ruptures were sessions 1, 8 and 21. While ruptures were poorly repaired in session 1, they were at least partially repaired in session 8 and generally resolved well in session 21. This was also reflected in the WAI-O-S scoring reported above, where session 1 and 8 showed the lowest alliance scores while session 21 showed a minor decrease but an overall good alliance.

Figure 9. Frequency of Alliance Rupture and Resolutions Attempts Session by Session

Treatment session	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Withdrawal Markers Freq.	16	12	12	11	13	7	10	21	4	9	9	7	6	7	9	8	5	9	8	10	15	9	2	9
Confrontation Markers Freq.	3	0	1	1	6	2	4	6	0	0	2	2	1	0	3	0	0	0	3	3	8	0	0	1
Resolution Markers Freq.	13	9	8	12	16	8	11	20	3	7	10	6	7	7	8	4	8	8	10	11	16	6	1	9
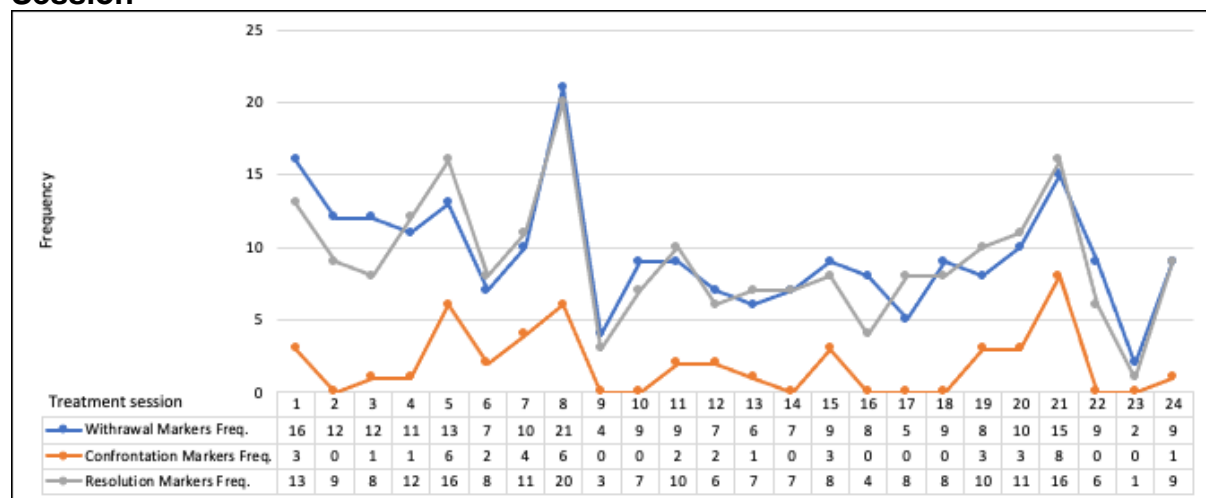
Figure 10. Significance of Alliance Rupture and Resolutions events session by session

Treatment session	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Withdrawal Sig. a	5	4	4	4	4	3	4	5	2	2	3	3	2	2	3	3	2	3	3	3	4	2	2	3
Confrontation Sign. a	2	1	1	2	3	2	3	3	1	1	2	1	1	1	2	1	1	1	2	2	3	1	1	1
Overall Resolution b	2	3	2	3	2	2	3	3	3	3	4	3	3	3	3	4	3	3	4	3	4	3	4	4
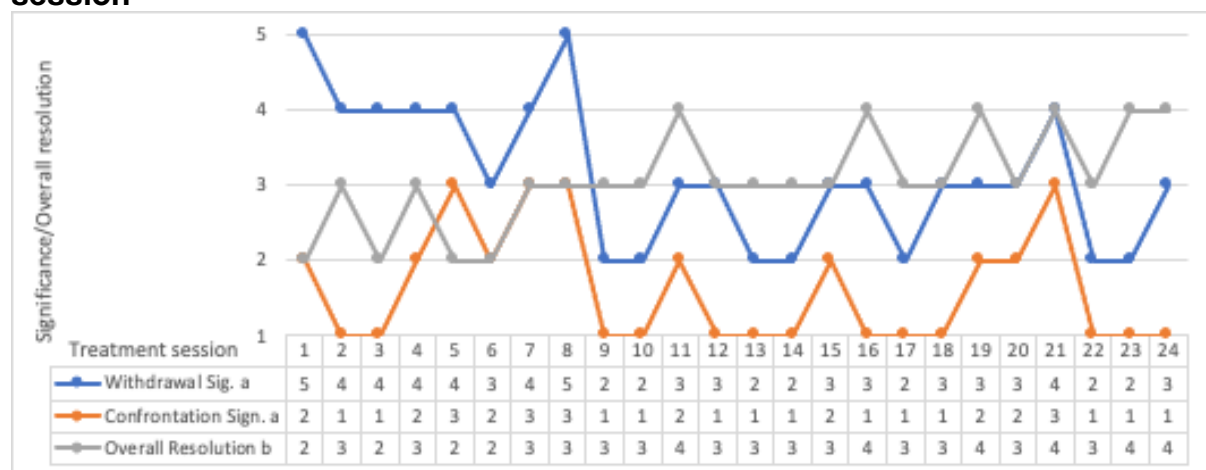
Note: a=Significance rating refer to the impact of the rupture/resolution marker impacts on the alliance; b= the overall resolution rating is a global assessment of the extent to which resolution occurred across all the ruptures in the session.

Withdrawal ruptures. Over treatment withdrawal ruptures were more frequent and showed an average higher significance on the alliance than confrontation ruptures (see Table 21). As shown in Figures 9 and 10, Lewis's level of withdrawal and its impact on the alliance fluctuated over time. According to the 3RS significance ratings, in the initial phase of treatment there were more withdrawal ruptures with higher impact on the alliance (especially sessions 1 and 8), compared to the middle and final phase of therapy. In the final phase of treatment, ruptures showed a lower impact on the alliance and only for session 21 were rated as having an overall moderate significance (more details of what happened in session 1, 8 and 21 are reported in paragraph 8.6.3.1). The description, frequency, and average significance of each withdrawal rupture marker per session are displayed in descending order of frequency in Table 22.

Minimal response' and 'deferential/appeasing' were the most commonly occurring and significant withdrawal markers. On average they had some impact on the alliance according to the 3RS significance ratings. This suggests that the patient tended to withdraw from the therapist and/or the work of therapy by going silent or by giving minimal responses; and/or by being overly compliant in a deferential manner. While the patient's minimal responses aim to shut down the therapist's attempts to engage the patient in the work of therapy, the patient's deferential behaviour functions to avoid conflicts and makes it harder for the therapist to know what the patient really feels or thinks. Other commonly occurring withdrawal markers were 'content-affect split', 'abstract communication' and 'denial', which were rated to have on average some to minor significance. Whether it was in the form of exhibiting affect that did not match the content of the patient narrative, or denying such affect, and/or by using abstract or vague language, these withdrawal markers all reflected the young person's tendency to keep the therapist (and himself) at a distance from his true feelings, concerns, or issues.

Table 22. Overall Frequency, average significance, and percentage of withdrawal rupture markers per session

Withdrawal Markers		Freq.	Mean Sign.	Session %
Min Response	Patient withdraws from the therapist and/or the work of therapy by going silent or by giving minimal responses to questions or statements that are intended to initiate or continue discussion.	55	3.3	87.5
Deferential and appeasing	Patient withdraws from the therapist and/or the work of therapy by being overly compliant and submitting to the therapist in a deferential manner	49	3.18	91.6
Content/Affect Split	Patient withdraws from the therapist and/or the work of therapy by exhibiting affect that does not match the content of his/her narrative	34	2.8	75
Abstract Communication	Patient avoids the work of therapy by using vague or abstract language.	31	2.57	79.2
Denial	Patient withdraws from the therapist and/or work of therapy by denying a feeling state that is manifestly evident or denying the importance of interpersonal relationships or events that seem important and relevant to the work of therapy.	30	2.7	70.8
Avoidant Story/Shift topic	Patient tells stories and/or shifts the topic in a manner that functions to avoid the work of therapy	15	2.55	62.5
Self-critical/hopeless	Patient withdraws from the therapist and/or the work of therapy by becoming absorbed in a depressive process of self-criticism and/or hopelessness that seems to shut out the therapist and to close off any possibility that the therapist or the treatment can help the patient	14	2.4	58.3

'

Confrontation ruptures. Confrontation ruptures were less frequent than withdrawal ruptures, but overall followed a similar pattern (see Figure 9). This lower frequency might be because Lewis seemed to struggle to directly express his negative feelings about the therapist. For instance, he frequently expressed his complaints/concerns in a subtle, polite way, often in conjunction with a withdrawal rupture (e.g. concern expressed with an apology, see extract below and on paragraph 8.6.3.1 for some examples).

As shown in Table 23, 'reject intervention' was the most observed confrontation marker followed by the marker 'the patient defends self'. Both markers were often seen in repose to therapist's interpretations: in the first case the patient would disagree with the therapist's view/suggestion, in the second case the young person would try to defend his feelings, thoughts, and/or behaviours from the (perceived) criticism from the therapist, by providing a justification for them. These confrontation markers on average had some to minor impact on the alliance. Other confrontational markers like 'complaint about therapist', 'complaint about activity', and 'patient attempts to pressure/control the therapist', each appeared only once with some impact on the alliance.

As a group, confrontation ruptures had on average only minor or some impact on the alliance as rated on the 3RS significance score (see Table 21). This may be because the few instances in which Lewis contradicted and/or disagreed with the therapist were seen by the therapist as positive, rather than a threat to the alliance and encouraged, as demonstrated by the following session extract, where Dr Tim was supportive of Lewis's timid rejection.

> *T: I think that could be an important theme, really, for the work, it's how to help you to be your own person, you know, very friendly and very warm and close to other people, fine… but yourself. And that's a tricky one. Do you think that's kind of an important area?*
>
> *L: Mmm… [silence] no, I don't know [laughs]* **(rejects intervention, minimal response & content-affect split)**
>
> *T: Mmm... well… I think that's very good that you said that you don't know, you didn't agree with me straight away and if you don't agree with me sometimes that's fine as well because, you know, you have got the right to have your own opinion* **(therapist validates the patient)**
>
> [Session 1 extract]

Table 23. Overall frequency, average, significance, and percentage of confrontation rupture markers per session

Confrontation Markers		Freq.	Mean Sign.	Session %
Reject intervention	Patient rejects or dismisses the therapist's intervention	22	2.69	58.3
Defend self	Patient defends his/her thoughts, feelings, or behaviour against what he/she perceives to be the therapist's criticism or judgment of the patient	20	2.3	50
Complaints about therapist	Patient expresses negative feelings about the therapist	1	3	4.2
Complaints about progress	Patient expresses complaints, concerns, or doubts about the progress that can be made or has been made in therapy	1	3	4.2
Control/pressure therapist	Patient attempts to control the therapist and/or the session, or the patient puts pressure on the therapist to fix the patient's problems quickly	1	3	4.2
Complaints about activity	Patient expresses dissatisfaction, discomfort, or disagreement with specific tasks or activities of therapy	1	3	4.2
Complaints about parameter	Patient expresses concerns or complaints about the parameters of treatment, such as the therapy schedule or the research contract	0	1	0

Rupture resolution. Resolution attempts happened almost as regularly as ruptures themselves, mostly with high levels of resolution (see Table 21). In 83.3% of sessions (n=20) ruptures were at least partially addressed and resolved (scored 3 or above on the 3RS overall resolution scale). As shown in Figure 10, while at the beginning of treatment the resolution score tended to be at the low end of the scale, it increased over time and became stable in the middle and final phases of treatment, when the majority of ruptures had minor impact on the alliance and/or were at least partially resolved (resolution rating = 3). The description, frequency, and significance

of each resolution strategy the therapist used are displayed in descending order of frequency in Table 24.

Table 24. Overall frequency, average, significance, and percentage of resolution markers per session

Resolution Markers		Freq.	Mean Sign.	Session %
Invite thoughts and feelings	The therapist invites the patient to discuss thoughts or feelings with respect to the therapist or some aspect of therapy	55	3.58	95.8
Link other relationship	Therapist links the rupture to larger interpersonal patterns in the patient's other relationships	46	3.45	91.6
Validate defence	Therapist responds to a rupture by validating the patient's defensive posture	43	3.17	91.6
Change task/goals	Therapist responds to a rupture by changing tasks or goals	21	3.08	54.2
Acknowledge contribution	Therapist acknowledges his/her contribution to a rupture	20	3.02	54.2
Disclose internal experience	The therapist discloses his/her internal experience of the patient-therapist interaction	10	2.76	37.5
Clarify misunderstanding	Therapist responds to a rupture by clarifying a misunderstanding	9	2.92	33.3
Illustrate task/ration	Therapist responds to a rupture by illustrating tasks or providing a rationale for treatment	9	2.5	33.3
Redirect	Therapist responds to a rupture by redirecting or refocusing the patient	4	1.8	16.6
Link between patient-therapist pattern	Therapist links the rupture to larger interpersonal patterns between the patient and the therapist	1	2	4.2

Dr Tim addressed alliance ruptures most often with the resolution strategies to 'invite the patient to discuss thoughts and feelings' and to 'make links between the

ruptures and larger interpersonal patterns in the patient's life'. These strategies were rated as having some to moderate impact on the alliance. Other frequently used resolution strategies were 'validating the patient's defence', 'changing task' and 'acknowledging contribution to the ruptures', which were also rated as having some impact on the alliance. More details about how ruptures were repaired in this case, as well as examples of both withdrawal and confrontational markers, are reported in paragraph 8.6.3.1.

8.6.2.3 Adolescent and therapist's perspective on their relationship

In the post-therapy interviews, conducted separately with each of them, Lewis and Dr Tim largely confirmed the WAI-O and 3RS results. They both described a positive evolution in their relationship, from a difficult start to the development of an authentic and helpful relationship, which was, nonetheless, characterised by some strains through treatment. For instance, they both reported having experienced and resolved a few difficult moments including (a) Lewis's initial resistance to engage; (b) some therapy breaks, especially a sudden one due to a misunderstanding on the part of the therapist (which happened before session 8); and (c) a few moments in therapy when Dr Tim challenged Lewis to acknowledge difficult thoughts and feelings. The specific themes that emerged from the qualitative analysis focusing on the therapeutic relationship and its evolution are reported below.

"I didn't like him…but then I started to trust him…and it all changed"

With regards to the difficult start in their relationship, both Lewis and Dr Tim linked it with Lewis's initial reluctance to disengage from his community-based counselling, as recommended by Dr Tim, and engage in the new treatment. Further, Lewis's initial impression of Dr Tim was negative: "*I didn't like him, I really didn't umm the first time I met him um... I think all I wanted to do was to leave*" [p. 14, lines 325-326]. He also added: "*my first thought was that I'm never going to get comfortable talking to him [..]but then yeah it all changed*" [p. 15, lines 348-351]. Lewis explained that despite his initial negative feelings, encouraged by his parents, he gave this new therapy a go until he felt differently about it: "*it must have been about after 5 weeks, like, I was finally like getting used to going to seeing him [Dr Tim] and I don't know […] I think I began to trust him and um… like I would tell him things and then, like, he'd give me advice and […] some of the things he said were really helpful*" [p. 20, lines

451-461]. According to Lewis, what facilitated this positive shift in their relationship was the development of a certain level of trust towards the therapist, which was based on (a) the therapist's statements that were experienced as helpful, (b) the therapist's clarity about the confidentiality of treatment, (c) and a sense that the therapist "*genuinely cared*" and "*wouldn't judge*". Lewis also reported that once he started trusting Dr Tim, things changed in treatment too: he felt more comfortable and able to open up.

Similarly, Dr Tim explained that his relationship with Lewis was not straightforward and there was ongoing work on it over the course of therapy. Dr Tim seemed to be aware of Lewis's initial negative feelings towards him: "*I do remember that he was quite ambivalent, really, about engaging in the work […] he wasn't sure about me at all*" [p. 2, lines 25-32]. According to Dr Tim, the positive change in their relationship "*unfolded over time*" and was paralleled by a more general shift in Lewis, which enabled them to develop an "*authentic*", positive relationship that allowed them to work collaboratively. More details about how, according to Dr Tim, working on their relationship enabled change in their relationship and in Lewis are reported in paragraph 8.6.4.2.

Even once they had developed a more positive relationship, both Lewis and Dr Tim reported experiencing and overcoming a few more difficult moments and misunderstandings. These were not called ruptures by either of the participants but reflect and match well with the fluctuations in alliance and the presence of rupture-repair patterns found with the WAI-O-S and 3RS.

"It wasn't like he did this just because he didn't want to see me."

Both Lewis and Dr Tim reported feeling that therapy breaks were not easy. Specifically, Lewis referred to an unplanned break as one of the most difficult misunderstandings in his therapy. This refers to the break between sessions 7 and 8, when the therapist missed a session mistakenly thinking that Lewis would be away that week. Talking about this event, Lewis reported feeling not only disappointed and angry, but also rejected by the therapist. He explained that he was eventually able to overcome these negative feelings because Dr Tim called him as soon as he realised his mistake and made an effort to apologise and reassure Lewis that his absence was due to a genuine mistake, rather than suggesting that Dr Tim did not want to see him:

"*I would have had angry feelings for ages, but, I don't know, just that he'd called me to like explain that, like, it wasn't like he did this just because he didn't want to see me. I don't know, I think it just made everything better, yeah*" [p.32, lines 751-757]. This misunderstanding was discussed at length in the following session (session 8) in which Lewis was able to express his angry feelings, as shown by the low WAI-O-S rating and high number of ruptures that took place in this session (see Figures 8-10 and paragraph 8.6.3.1 below for an extract from session 8). As Lewis said, he was then able to trust the therapist's explanation and resolve this misunderstanding. Accordingly, ruptures in session 8 were at least partially addressed and resolved (see Figures 10) and the alliance increased after this session (see Figure 8).

While the therapist did not refer to this specific episode in the interview, he acknowledged that, throughout the whole duration of treatment - even when they had established a solid bond - he had to be mindful of breaks and "*take up his [Lewis's] negative feelings about the breaks*" [p.24, lines 552]. This was because Lewis "*was in constant fear that people would dessert him, or not stick with him, or abandon him, um… and [he felt] that that was what he deserved. So, when it came to holidays, there was a lot of grist to the mill... really.. Was he too much for me? Is that why I was having a holiday? [..] and would I, you know, want to see him again kind of thing?*" [p.24, lines 557-563]. Therefore, Dr Tim felt that he had to reassure Lewis that he would keep him in mind between sessions.

"It kind of hurt"

In the post-therapy interviews, Lewis explained that even if ultimately helpful, some of the things Dr Tim told him over the course of therapy were not easy to acknowledge at first: "*it kind of hurt, because it was kind of... it was the truth, but I didn't wanna accept that[..] like, in a way, I felt like he was telling me off*" [p.24, lines 584-586]. However, over time Lewis had learnt he could trust Dr Tim not only as someone professional and knowledgeable, but also as someone helpful and genuinely caring. This, over time, enabled Lewis to make use of what Dr Tim said, even if painful: "*I got to the point where I was coming home and just sitting there and realising that, like, Dr Tim is a professional, like, he knows what he's talking about, and I realised that he's only there to help me, like, he's not there to make me upset or hurt me, but he's there for my benefit umm..[..] and so after that I began to get, to like understanding what he was saying, and accepting that*" [p.26, lines 602-615]. The resolutions of such

tensions seem to have taken place over time, between sessions: "*I'd come home, and I'd think about like what he [Dr Tim] said and I'd think about what I had to do*" [p.25, lines 587-588].

Similarly, the therapist explained that allowing negative feelings to enter the relationship created some tensions between them because Lewis was not always ready or willing to recognise "*something of his negative and manipulative points*" [p.12, lines 272]. Nonetheless, over time, they worked on this in their relationship and Lewis "*was then able to acknowledge some of his less than perfect characteristics, and for it be OK.*" [p.12, lines 281-282]. Overall, the therapist felt that working on painful truths and their acceptance, even if difficult, was important and beneficial in improving Lewis's sense of self, and his mood. This was also explained to Lewis in a session with the following metaphor: "*You cannot make an omelette without cracking eggs*" (Session 21). An example of the way in which the therapist confronted Lewis's thoughts and behaviours, which was mentioned by the therapist in the post-therapy interview, is reported below (see paragraph 8.6.3.1, session 21 extract).

8.6.3 Aim 2: How alliance ruptures and resolution events were managed in this case

The alliance rupture-repair model that emerged from the analyses of the selected 10 rupture events in relation to Safran and Muran's (2000a) model of repairing ruptures is presented below. This is followed by three illustrative session extracts.

The resolution of ruptures in this case was found to involve one or more of the following steps:

- The therapist recognises some indication of a rupture (but does not necessarily explicitly express it to the adolescent), pauses on it, and attempts to draw the patient's attention to it. To do so, the therapist might use gentle questioning to help the young person elaborate what he/she is saying and/or to clarify aspects on the emerging issue (see extracts from sessions 1 and 8 in paragraph 8.6.3.1, for some examples).
- The therapist shows empathy and validation of the patient's difficulties and might also acknowledge his/her contribution to the rupture (see extracts from sessions 8 and 21 in paragraph 8.6.3.1 for some examples).

- The therapist explores further the meaning of the rupture. This is often done by inviting the patient to express thoughts and feelings about the rupture, and/or by presenting the therapist's hypotheses on the emerging issues. The latter is done using interpretations, e.g. when the therapist talks about the meaning of an event, and/or connects a theme to another or to a recurrent pattern.

- Based on the adolescent's response to the initial exploration of the rupture, the therapist would:

  o Use immediate resolution strategies, such as change tasks (or topics) and/or provide a rationale for the treatment in an effort to re-establish collaboration and positive rapport (see below extract from session 1 in paragraph 8.6.3.1). This tends to be the case when (a) patient and therapist have not yet established a solid alliance (e.g. in the early stage of therapy), (b) there is too much tension in the therapeutic relationship and the patient does not appear to be ready for any further exploration of the rupture(s) at that time (e.g. when past attempts to further explore the rupture have been rejected and/or the patient is becoming more withdrawn and/or confrontational).

  o Further explore the rupture and clarify the patient's underlying core theme using exploratory strategies such as interpretations. This tends to be the case when patient and therapist have established an overall good alliance and the patient seems to be able to handle further exploration of the rupture. Interpretations often included transference interpretation (i.e. linking the rupture to a larger interpersonal pattern, often in relation to the patient-therapist relationship, as in the below extract from session 8 and 21) and feeling interpretations (i.e. the therapist makes explicit and names a feeling that may have been unconscious and/or difficult to acknowledge for the young person, such as being cross with the therapist, as in the below extract from session 8).

Importantly, this model does not represent a fixed, linear ordering of resolution stages, but it is assumed that cycling between and within stages will occur in and between sessions. Further research is needed to empirically validate and further develop to this model.

8.6.3.1 Examples of exploration of ruptures

The selected three session extracts are taken from different stages of therapy (early, middle, and late) and refer to the sessions with the highest number of ruptures (session 1, 8 and 21). Further, these episodes were all mentioned, without any prompts, by patient and therapist as difficult moments in the post-therapy interviews. The first extract is an example of a withdrawal rupture. The second is an example of a rupture with both confrontation and withdrawal elements. The third is an example of a rupture caused by a therapist's intervention. For each session extract, the ruptures and resolution markers identified by 3RS raters are included in brackets in italic, bold font alongside the text.

Session 1 extract: *"It isn't a terribly good idea to have two therapies going on at the same time"*

This rupture segment is an extract from the middle of the first session. Lewis had just mentioned his ongoing relationship with his community counsellor. Dr Tim was not aware of this and suggested talking to the counsellor to discuss whether it is appropriate to have two therapies at the same time.

Dr Tim (T): would it be OK if I get in touch with your counsellor?

Lewis (L): yes

T: That's something you would really be OK with?

L: Yes *(minimal response, deferential)*

T: If I just contact her, would that be sort of OK? *(invites thoughts and feelings)*

L: Yes *(minimal response, deferential)*

T: Would you see her next week?

L: Yes

T: OK, so, when you next see her, perhaps you could also just say that you had your first appointment with the psychotherapist, and whether it would be ok if I contact her… because sometimes it isn't a terribly good idea to have two therapies going on at the same time

L: Yes *(minimal response, deferential)*

T: Even though that is counselling, and this is psychotherapy… and we can all have a think about that together. Yes**?** *(illustrate rationale)*

L: Ok *(minimal response)*

T: But, I mean, would you be upset if you had only one and not both? *(invites thoughts and feelings)*

L: Mmm… [short silence] I would be upset if I didn't have my counsellor [T: mmm..yess..] because like when I, like, she knows everything and it took me like a while to be able to explain my feelings [T: sure] and, like, I know that she is always there if I need someone to talk to, like, urgently [T: yes, yes… mmm] So I would be upset if I lost her.

T: Yes, obviously it would not be a good idea to take away something that you find helpful *(validate defence)* [L: yes] … but what I would like to actually ask her, it's why she is thinking that what she is offering you is not enough, if you see what I mean. Maybe this is something that [name of person who referred the adolescent] was not so clear about or the researchers. Because if you are doing very well with her and she is helping you, you know, we need to think whether you need something else as well, or whether that's, you know, on the right track for you *(illustrate task/ rationale)*

L: Yes [silence] *minimal response*

T: But anyway, you are here at the moment and that's fine and we will work something out

L: Ok *(minimal response)*

T: And are there other things that make you stressed other than [family trauma]? *(change task)*

L: Yes, the fact that one of my friends does not talk to me anymore

T: Oh, yes, the one from school?

L: Yes, and also… [Lewis continued talking collaboratively about other two stressful events that affected his mood]

In this segment, the therapist attempted to resolve the ruptures using exploratory strategies (e.g. inviting the expression of Lewis's thoughts and feelings about his suggestion to interrupt counselling). However, when faced with Lewis's persistent avoidance (e.g. his minimal response), he used immediate resolution strategies including 'illustrate task/rationale' (e.g. explaining why he would recommend to end counselling) and 'change task' (e.g. shifting topic) to re-establish some collaboration. This choice might be related to the fact that this was the first session and a bond had not been established yet. In this occasion, changing topic, one of the

alliance rupture resolution strategies described in the 3RS (see Table 24), appears to have helped them to continue the sessions with a better atmosphere, allowing a further exploration of Lewis's issues.

Session 8 extract*: "I don't mean to be mean towards you, but I do find it easier to talk to a woman"*

Session 8 follows the missed session by the therapist (unplanned break between session 7 and 8). At the beginning of the session the therapist asked Lewis how he had coped the week they did not have a session. Lewis said that he had struggled and reached out to his counsellor, who however reminded him that he does not longer have access to the service.

Lewis (L): I think the biggest thing about me having the counsellor it's that she is been there since day one [T: Mmm…] and I don't mean to be mean towards you, but I do find it easier to talk to a woman and I have no idea why, but, like, I do not know, it's just different [laughs] *(complain about therapist & content affect split)*

Dr Tim (T): Can you say why? *(Invite thoughts and feelings)*

L: I have no idea, it's just [T:Mmm…] I think it's because, like, I got comfortable, like, it took me a while to get comfortable to talk to her. And then, I am not saying it's a bad thing that I got you, because it's really a good thing *(deferential)*, but... and then I came here and then things started getting confusing [laughs]. And it's like, kind of like, starting again. *(content-affect split & complain about progress)*

T: Yes, yes. But from day one... day one sounds like since the day you were born?

L: No, it's like, like when I started feeling down and... *(rejects intervention)*

T: Mmmmm, mmm. But I suppose what the day 1 was making me think about, it's that you have said before that your mum understands you like no one else, and of course she has been around from day one. And I don't know whether you have always found a bit easier to speak to her than to your dad, for example? *(links to other relationship- transference interpretation)*

L: Definitely, yes... I always found that's the way. […] It's like my mum is like the big softie and my dad is like, when someone needs telling off... [T: yes, yes...] That's why I find it easier to talk to my mum

T: Yes, yes, so it's kind of like, maybe, when you need someone softer, it's like, when you need to be treated like a little boy sometimes... [L: Yes] I see, yes. And then dad is more associated with feelings that you should kind of grow up or that kind of things. And perhaps you feel that I am a bit on the side of growing up as well **…**Mmm… and that makes it harder to talk to me *(links to other relationship – transference interpretation, acknowledge contribution).* But you know, could I understand that a therapist isn't someone that you always feel kind of, all that cosy with? *(validate defence)*

L: Yes...

T: But the job of the therapist is to, really, try to understand and to help you to understand, and sometimes it's hard to face things about oneself and you might not really feel like you want to... *(Illustrate task/rationale, validate defence)*

[silence] *(minimal response)*

T: It also sounds like... you might be a bit cross with me for saying this, it sounds like you feel that I am a bit responsible for not seeing your counsellor anymore. It's as if somewhere there is a daddy me who is saying you cannot get too close to mummy because, you know, you are growing up now [laughs] and it's not appropriate, something like that? *(links to other relationship-transference interpretation-, acknowledge contribution)*

L: No, at the beginning when you mentioned about lowering my sessions with her, I was a bit angry. [T: Yes, yes] But then now, I don't know, like... I don't blame you for it because I know there are lots of other people that need her help and because her job has been cut down in our community. I can understand why I don't see her, so it's not that part of it, as I understand other people might also have problems *(Denial)*

T: Yes, yes, I see, but ... I am waiting for the but? [smiles] *(invite thoughts and feelings)*

L: I don't know *(minimal response)*

[both laughs]

T: You know, it's like what we have talked about before… that there are two sides of Lewis, the grown-up bit that says 'No I understand the counsellor has

other people to see, she got limited time and I have already been allocated to CAMHS and I get once weekly help', but there is another bit of you who thinks, 'this is really not fair!' and why should you not have the right to see her if you want to? *(Invite thoughts and feelings)*

L: Yes…

T: Mmmm… and that part of you that feels it's unreasonable, it feels rather furious with me and maybe you wonder, could I understand someone having furious feelings, and can we get over that? Can we work with that? You know, is it OK? [both smile] and is this part of the work? That you might have furious feelings with me sometimes *(invite thoughts and feelings & validate defence),* especially when I was not here last week *(acknowledge contribution)* [both smile] because that must have been very annoying *(Validate defence)*

L: Mmm… yes, a little bit. I did go home, and I was a bit angry, but then I understand it's an easy mistake to make *(Deferential)*

T: I had written it in my diary, but then obviously I did it in the wrong place

L: Yes, so yes, it's an easy mistake to make, so...

T: Well can you understand that people are not always perfect?

L: Yes

T: I mean you are concerned that you are not always perfect and cannot always do the work, and I actually can also make a mistake thinking that you were not coming that week [L: Yes] Mmm… but you know, of course, you would be cross *(validate defence)*.. and I suppose it's important if you are cross to acknowledge it [L: Yes] and to know that I do feel sorry about it, but I can take it and we can carry on (smiles) *(Disclose internal experience)*

L: Yes [smiles]

T: Mmm… and that, that made you feel rather more that you wanted to see the counsellor as she had not let you down from day 1

L: Yes [smiles]

In this segment, compared to the initial rupture on the issue of stopping to see the counsellor (session 1 extract), Lewis seemed to be more open about his true current (and past) negative feelings towards the therapist. Dr Tim addressed this rupture using exploratory repair strategies, which involve a deeper exploration of the

rupture experience and aim to reveal core themes potentially underlying a rupture (e.g. acknowledging the presence of 'two sides' of Lewis and the difficulties to acknowledge mixed feelings). For instance, Dr Tim used a few transference interpretations (e.g. when he linked Lewis's relationship with his father with their relationship), as well as feeling interpretations (e.g. the therapist named a feeling that may have been unconscious and or difficult to acknowledge for the young person, such as Lewis's furious feelings towards the therapist). Overall, Dr Tim responded in a non-defensive and curious way. He also acknowledged his contribution to the rupture, and openly voiced and validated Lewis's negative and angry feelings towards him. Additionally, Dr Tim disclosed his internal experience (e.g. he feels sorry for the mistake). By empathising with the patient's feelings, he provided Lewis with an indication that it is safe to express his feelings, even if negative. Overall, Dr Tim attempts to address the rupture seemed to have enabled Lewis to engage in the process of further examining the rupture.

Session 21 extract: *"Perhaps is me who you really feel, really, really cross with!"*

In session 21 Lewis reported a painful argument he had with his parents the day before, in which he screamed at them: "*You don't care about me, no wonder I have suicidal thoughts!*". In response to this Dr Tim confronted Lewis about his aggressive behaviour, which created some tension between them

> T: I was just thinking, you might not like this, but it's actually like a manipulative thing that you do, when you feel that your parents or your friends are not paying enough attention to you. And it's kind of like you must be the centre of attention… and so that was kind of really, you know, inflicted on your parents [silence] *(minimal response)*
>
> T: And, actually…, another part of you does know that this is the kind of things that stresses them [Lewis's parents] out
> [Silence] *(minimal response)*
>
> T: And also… you know, can you think about how you get into such states? Because it seems like the littlest things can trigger this off really? (*invites thoughts and feelings)*.
>
> L: [silence] *(minimal response)* You might not think about me like that, but I constantly feel second best, it's a horrible feeling. *(patient defend self)*

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T: Can we think about why you feel second best? (*invites thoughts and feelings*).

L: It's like, it always feels like there is someone in front of me, like with friends, nobody would actually put me first, and like now I feel I have no friends, and, like, I went to school today and I was walking around the corner lonely because, like, I don't know… I always feel second best, I always feel lonely *(abstract communication as vague)*

T: Mmm…

[silence] *(minimal response)*

T: Mmm…

T: Do you think there is something that you do that drives people away possibly?

L: I hope not, I do not want to drive people away

[…]

T: Mmm… but I wonder whether you are particularly, like, a little bit more volatile at the moment because we have just got 4 more weeks (*invites thoughts and feelings*). I wonder whether there is something about that as well and maybe it feels like I am putting you second best to the schedule that we have agreed or something like that *(link to other relationships, acknowledge contribution)*

L: I don't know…. I remember mentioning that I am pretty confident with all of this ending and stuff, but then at school my friend said to me something like 'when it finishes you can just go straight back to the counsellor'. But I don't want to do that because I know that soon or later I will have to do it on my own without relying on someone there, and I am just not going, running back to the counsellor… I don't know *(some denial and rejects intervention)*

T: Mmm…. but I think we obviously know that it's really hard *(validate)…* and it's like there are different sides of you, and there is this baby Lewis, who is really feeling like he needs to be the centre, he needs looking after like a small baby and that people, you know, really should be there for him… and there is a more gown-up side of you, a 15 years old side of you, that actually needs to do something to nurture that baby bit, because that bit it's going to be your responsibility. And if you don't look after that baby bit… it's hard to sort of feel that it's your friends' responsibility and it cannot always be your parents' responsibility… and I feel on reflection you feel they are there for you?

L: Yes...

[…]

L: But I know this might sound very rude now, but I think, if you are being a parent, you kind of need to be prepared for all the things that you have to face. Like, I know it sounds really bad, I appreciate the things they do, I do, a lot. I do thank them a lot and stuff, but then like, I don't know, if you need to be a parent, I think you've got to be prepared for it *(patient defend self)*

T: Yes, for sure but I was also thinking of… I wonder whether your parents are getting a bit of something that belongs to me here, really. Because I am kind of a therapist parent, am I*? (link to other relationships)*

L: Yes

T: and you know, could I face it? could I take it if you are absolutely furious with me?

[both smile]

T: And this is session 24 out of 28[1] and how could I do it? How could I face doing it? Finishing in 4 weeks? And perhaps is me who you really feel, really, really cross with! And it's really hard to express it *(validate defence, acknowledge contribution).* And you know the trouble with strong feelings, you know the fact that loving and hating feelings could be very close together, and so you could really appreciate someone but also be very furious with the same person…And maybe if we can bear it, you can bear it too at the same time [smiles] *(link to other relationships, invites thoughts and feelings)*

L: Yes, definitely [smiles]

[1]Please note that the therapist refers to this session as 24 out of 28, rather than 21 out of 24 because he is counting the 3 sessions missed by Lewis

This is an example of the 'painful truth' that Lewis mentioned in the post-therapy interview as a significant moment in his treatment. In this segment, Dr Tim somehow caused the ruptures by challenging Lewis's behaviour with his parents, as he considered it to be manipulative. This led to Lewis's withdrawal (e.g. minimal response) and attempts to defend himself (e.g. justifying his behaviour because he is feeling second best or affirming that parents should be prepared to experience some difficulties with their children). As in the previous example (session 8 extract), the

therapist also validated Lewis's feelings and acknowledged his own contribution to the rupture. Overall, in this occasion, Dr Tim mainly used expressive reparation strategies, such as transference interpretations (e.g. he linked Lewis's anger towards his parents and feelings of being second best to the here and now of the therapeutic relationship) and feeling interpretations (e.g. being cross with the therapist and being more volatile due to the ending of therapy). He also highlighted possible core themes underlying the rupture (e.g. Lewis' need to be the centre of attention while also learning to be independent of his parents and the therapist). Importantly, this rupture happened in the context of a strong alliance and did not seem to have affected their overall alliance, as shown by the high-resolution rating at the end of this session (3RS resolution score of 4, indicating good resolution and improved alliance).

8.6.4 Aim 3: Patient's and therapist's views on the role of their relationships and its dynamics on the change process

The exploration of the impact of the patient-therapist relationship and its dynamics on the change process was mainly assessed using the post-therapy interviews. This was integrated with data from the MFQ and WAI-S.

8.6.4.1 Evidence of positive change

In the post-therapy interviews, both patient and therapist reported feeling that Lewis's mood had substantially improved by the end of treatment and that he was no longer depressed. Specifically, Dr Tim described Lewis as one of his "*most successful cases*" [p.34, lines 797-798] and reported that "*some deep changes were made in him*" [p.23, lines 526-527] over the course of the treatment. This was confirmed by Lewis, who said: "*I don't feel suicidal anymore, um, and like to me I think that is the greatest improvement […] now my grades have got better, I can concentrate, […] and I just generally feel like happier within myself […] like I go out with friends […]and, I don't know, I'm not sad anymore.*" [p.10, lines 217-226]. Lewis also talked about the possible long-term benefits of his relationship with Dr Tim. In fact, he felt that he learned something from his therapist that could support him in the future, even after the end of therapy: "*if something goes wrong, I'll always remember him [therapist] and the stuff he said to me about how to cope with it.*" [p.20, lines 466-467]*.*

Lewis's improvements over time were also supported by a decrease in symptoms in the MFQ scores. As shown in Table 25, the MFQ demonstrated a

decrease in depression symptoms below the clinical cut off for major depression (MFQ=27), especially between baseline and end of treatment (36 weeks). Compared to post-treatment, symptoms increased at both the 52 and 86 follow-up assessments but were still below the clinical cut-off. Thus, there is converging evidence about Lewis's improvement and recovery from depression by the end of treatment and follow-up.

Table 25. Depression severity and alliance scores at all time-points

Outcome measure	Assessment Time-point					
	baseline	6 weeks	12 weeks	36 weeks	52 weeks	86 weeks
Depression severity (MFQ)	41.00	40.00	37.13	9.00	26.00	23.00
Alliance self-rating (WAI-S)		38.00	54.00	70.00		

8.6.4.2. The alliance dynamics and the change process

In the post-therapy interviews, patient and therapist both attributed Lewis's positive changes mostly to treatment and specifically referred to the importance of their evolving relationship. From Lewis's perspective, the following three aspects of the therapeutic relationship were, directly or indirectly, responsible for change: (a) trust, (b) their affective bond or, as Lewis said, his feeling that Dr Tim genuinely cared and was interested in him, and (c) a feeling of being understood. Dr Tim mainly attributed change to (a) the work they did on the transference, and (b) Lewis's tolerance for a certain amount of conflict and his suitability to treatment.

"I started trusting him"

Trust emerged as a particularly relevant factor in Lewis's treatment from the start. As reported above, according to Lewis, only once he started trusting his therapist, was he able to use the treatment: *"when I started trusting him [Dr Tim] I was talking like a lot more… there wasn't like any awkward silences or anything like that… everything was just flowing really well"* [p. 24, lines 566-567]. Furthermore, Lewis added that trust in Dr Tim helped resolving misunderstandings and enabled him to learn from Dr Tim even when things were difficult to acknowledge at first. Even if not directly related to change, trust seemed to have enabled Lewis to use therapy.

"*He cared about me*"

Lewis reported having benefitted from the affective bond he developed with his therapist. He particularly valued the experience of having someone to rely upon "*who is constantly there for you at the same time, the same place*" [p.31, lines 726-727]. This feeling seemed to have been facilitated by the stability of the setting (weekly sessions on the same day, at the same time). The experience of a caring therapist made Lewis "*feel kind of special*" empowering him to feel better about himself: "*because back then I felt like nobody cared about me and I think it made me feel good within myself because it was just, it's kind of what I needed to feel*" [p.28, lines 648-651]. Feeling thought about by the therapist seemed to have also had a positive effect on Lewis's expectations of relationships outside therapy: "*it was kind of like he proved to me that he does care about me, and that I had to accept the fact that people do care about me, um, it just felt really good to know*" [p.28, lines 654-656].

"*He understood me*"

Lewis also explained that the experience of being understood by his therapist helped him to feel less confused and more positive about himself: "*I was so confused about everything, like, he [therapist] helped me like understand what I wanted um and, like, it basically felt like I didn't understand myself but he [therapist] understood me and he'd help me to understand myself and I don't know, like, I think that was really, really helpful*" [p.27, lines 640-643].

"*Working with the transference*"

Dr Tim felt that the work they did in the here and now of their relationship was responsible, to a large extent, for the positive changes achieved by Lewis over the course of treatment. Specifically, he mentioned the importance of what he referred to as '*working with the transference*'. With this, he refers to his attempts to acknowledge and facilitate the emotional expression of Lewis's negative feelings in relation to him, and to be able to tolerate them: "*It was important for me to take up his negative feelings towards me and um… There was a lot of exploration of them, like, could we... if we disagreed about something, could we express that disagreement openly? And get through it? And um... find a way forward?*" [p.7, lines 154-157]. According to Dr Tim working with the transference played an important role in enabling Lewis to make the kind of psychological developments (less self-critical, more accepting of imperfection,

less all-or-nothing) that led to a reduction of depression and improvement of his interpersonal relationships.

Specifically, the therapist thought that Lewis's depression was in part due to his unrealistic expectations about how he should be: "*I think he felt he had to be good, good, good, or he was just such a failure, but also he wasn't good, good, good (laughs) because he had lots of ordinary human, angry and aggressive feelings towards others…which he couldn't acknowledge*" [p.12, lines 284-288]. In response to this, Dr Tim not only acknowledged, but also accepted Lewis's negative side without rejecting him. This experience was felt to have allowed Lewis to become more forgiving of and comfortable with his own and other people's ordinary imperfections and human feelings, enabling him to develop "*a more rounded view of himself... and of the things surrounding him*" [p.13, lines 303-304]*.*

Similarly, Dr Tim felt that Lewis's interpersonal difficulties were due to his unrealistic wish to have "*such a perfect closeness*" with all the important people in his life and his expectation that "*if something went wrong in these idealised and over-close relationships, it would all be ruined.*" [p.7, lines 160-161]*.* In this regard, according to Dr Tim, the experience of a different, imperfect, but genuine relationship with the therapist helped Lewis to change his idealised view of relationships. Specifically, over time Dr Tim showed to care about Lewis despite Lewis's negative feelings towards him and/or ordinary imperfections: "*I think, at some level, he couldn't believe that if anybody saw the more nasty side of him, that they would really stick with him.*" [p.13, lines 294-296]*.* The survival of their relationship, despite the tensions they experienced, was felt to lead to improvement not only in the patient-therapist relationship but also in Lewis' relationship outside therapy: "*I think there was a great shift in his relationship with his parents too. And he did come to appreciate them much more.*" [p.13, line 298-299]*.*

Thinking about their relationship with hindsight, Dr Tim could see how the difficulty they experienced from the start, despite its risks, turned out to be ultimately beneficial as allowed them to work on resolving it from the start: "*paradoxically […] although we had this kind of potential fallout right at the outset, I think that was good, that the ambivalence came in right at the beginning, so we could work on it.*" [p.30, lines 691-695]*.*

Lewis's "tolerance for a certain amount of conflicts"

Dr Tim also attributed Lewis's positive changes to his *"tolerance for a certain amount of conflict"* [p.33, lines 773-774] and his suitability for this type of therapy. He valued Lewis' *"capacity to engage"* and *"persevere"* despite some conflicts and difficulties. As the therapist said: "*although some of it was tough, you know, facing aspects of himself that were not that great, that he didn't really want to know about. He was willing to go on that journey with me"* [p.29, lines 686-687]*.* This highlights the importance of a mutual collaboration between them in the process of overcoming difficulties.

Non therapy elements. When asked what else besides therapy might have contributed to his improvements, Lewis mentioned the importance of the support he received from his family and the self-help he experienced from listening to inspiring music. Similarly, Dr Tim also recognised the importance of the meetings with a parent worker that Lewis's parents also received (as part of the IMPACT study parents were also offered up to 7 sessions with a different therapist) and the parents' encouragement of Lewis's engagement in his own treatment.

8.6.5. Integration of data

Overall, what emerged from the interviews corresponded well with and provided further insight into the results of the analysis of the WAI-O-S and 3RS. Neither Lewis nor Dr Tim used terms such as 'alliance' and\or 'ruptures' and 'resolutions', but their description of the difficulties they experienced and how they overcame them bear a resemblance to these concepts and matched well with the results of the WAI-S-O (and WAI-S) and 3RS. Both Dr Tim and Lewis seemed to attribute most of the positive changes experienced by Lewis to the evolution and dynamics of their relationship. This was also supported by the self-report ratings on both alliance and outcomes which showed a negative relationship between them, with the alliance showing an increase over treatment and depression severity decreasing over treatment and at follow-up.

8.7 Discussion

Although this treatment started with an important alliance rupture in its very first session, which caused great tension in the patient-therapist relationship and poor alliance, there was converging evidence that such tension was resolved, and the alliance improved over the course of therapy. Yet, this was not a straightforward process and there were alliance fluctuations and frequent ruptures throughout therapy. Importantly, in this case, the therapist seemed to be aware of most ruptures and actively attempted to repair them. In the majority of sessions, ruptures were at least partially resolved, with only a few sessions in the early phase of therapy showing less successful levels of resolution.

The post-therapy interviews provided important information about what factors both patient and therapist saw as contributing to the positive shift in their relationship and the resolution of ruptures. A turning point in their relationship seemed to be the development of trust and of a genuine bond. This supports the idea that "*psychoanalytic work [..] is only possible if the psychotherapist has established a relationship of trust*" with the adolescent (and their caregivers) (Cregeen et al., 2016). Increased trust in the therapist and a feeling that the therapist genuinely cared seemed to have also enhanced the patient's capacity to bear frustrating aspects of the treatment. As Busch and colleagues (2004) put it: "*only in the context of a trusting relationship can a patient feel truly comfortable exposing areas of shame and vulnerability in order to do the necessary therapeutic work.*" (p. 44). This echoes the idea of the importance of epistemic trust for the patient to be able to learn from the therapist and their communications (Fonagy & Allison, 2014). Epistemic trust refers to an individual's willingness to consider new knowledge from another person as trustworthy and relevant (Fonagy & Allison, 2014).

The alliance ruptures profile that emerged in this case was characterised by a high presence of withdrawal ruptures, especially in the form of minimal response and submissive behaviours. Confrontation ruptures occurred less frequently, had a lower impact on the alliance, and were usually accompanied by withdrawal ruptures. While the overall rate of ruptures found in this case was higher than the average rate reported by other studies with adolescents (O'Keeffe et al., 2020; Schenk et al., 2019), the predominance of withdrawal over confrontation ruptures is consistent with previous research in youth psychotherapy (Gersh et al., 2017; O'Keeffe et al., 2020; Schenk et al., 2019). It might be that withdrawal ruptures are particularly characteristic of youth

population, who might have some difficulty engaging in therapy and tend to be more prone to withdrawal (Constantino et al., 2010; E. Johnson et al., 2009). Nevertheless, the frequency and type of ruptures found in this study could be due to the specific characteristics of this case, including treatment type and/or patient's and therapist's personality style and interpersonal skills. For instance, the large number of withdrawal ruptures may reflect the diagnostic profile of the selected case, which featured a patient with depressive disorders, who may be more prone to interpersonal withdrawal (Lingiardi et al., 2016). It has been suggested that adolescents with depression may be especially inhibited in their interpersonal style and reluctant to overtly challenge or confront their therapist (Hill et al., 1993; Lynch et al., 2016). Accordingly, they might have a tendency to hide - consciously or unconsciously - their disagreement, or even claim to agree with the therapist in a deferential manner (Muran et al., 2010). As such, therapists should be alert to even subtle signs of withdrawal to be able to actively work to repair them and/or use them for therapeutic purposes.

The frequency and type of ruptures found in this case might also be due to the therapeutic approach. It might be that some elements of psychodynamic psychotherapy might lead to the occurrence of ruptures. This could be the case because psychodynamic psychotherapy gives considerable attention to allowing negative feelings to enter the relationship and focuses on tolerating rather than avoiding them. Working through painful and hostile feelings, even if eventually helpful, could be difficult and frustrating for the young person, and might cause alliance ruptures. As the patient of this case explained, some aspects of therapy 'hurt', even if discussions of these aspects ultimately revealed to be beneficial. The few studies available on alliance rupture resolutions in youth psychodynamic treatments have also shown that the alliance is often characterised by strains and ruptures throughout treatment, even in cases that turn out to have a good outcome (Halfon et al., 2019; Schenk et al., 2019). Hence, the results of this study seem to support the available literature suggesting that ruptures per se might not be synonymous of poor alliance and/or outcome, as long as the therapist and patient manage to explore and resolve them (Eubanks et al., 2018; Safran, Muran, & Eubanks-Carter, 2011).

How alliance ruptures were managed

Based on both observational data and existing theory, a preliminary model of the resolution process in STPP was developed. This model does not differ greatly from

Safran and Muran's (2000a) model of resolving rupture with adults, but it is specifically characterised by the frequent use interpretations, especially transference interpretations. Transference interpretations are a core element of STPP and may be done in different ways: from interpretations that link current issues in the therapy to events in the patient's history, through those that link events in the patient's external world to his/her phantasies about the analyst or analysis. This might suggest that the specific STPP technique of transference interpretation can be a helpful way of addressing ruptures in this treatment type.

Transference interpretations also appeared to be beneficial in another study examining STPP with depressed adolescents. Specifically, Ulberg and colleagues (2021) found that transference work amplified the positive effects of STPP in young people with depression compared to young people undertaking STPP that did not include transference work. However, as the therapist of this single case acknowledged, working on the transference might be effective only for young people who can tolerate the frustration that often accompanies this treatment technique. In this regard, it would be important to explore whether and in what circumstances transference interpretations can be a helpful strategy to use in response to ruptures.

Importantly, not all transference interpretations made by Dr Tim were used to repair ruptures and, other alliance resolution strategies he used were less in line with the STPP manual. For instance, Dr Tim also attempted to repair ruptures by changing the topic/task of therapy. This intervention aims to overcome tension by making the topic/task more acceptable. In doing so, the therapist is moving away from difficult feelings, rather than exploring them further, as proposed in the transference work (Cregeen et al., 2016). Likewise, in response to ruptures Dr Tim also often acknowledged his contribution and/or disclosed his internal experience. These interventions are recognised as possible resolution attempts in the 3RS, but are not strictly part of the STPP technique (Cregeen et al., 2016), although they are part of other psychodynamic approaches for children and young people (Midgley et al., 2017).

Therefore, Dr Tim's attempts to repair ruptures went beyond rigidly adhering to the STPP manual. This adds to the available literature suggesting that when there are strains in the therapeutic relationship, the techniques used by therapists of different theoretical orientations become more similar with the aim of engaging the young person in the process (Calderon et al., 2018). Future research is needed to empirically validate and further elaborate on the ways alliance ruptures can be successfully

addressed in STPP. This should involve the validation-oriented phase of task analysis, which includes testing both how well the model constructed describes the nature of the resolution performance and how well the model predicts therapeutic outcome (Greenberg, 2007; Pascual-Leone et al., 2009).

Alliance rupture and resolutions and the change process

Both patient and therapist regarded the evolution in their relationship as the treatment variable mainly responsible for the positive changes experienced by the patient. This might suggest that in this case therapeutic change was not only due to the development of new skills or new insights, but rather to the capacity of the therapeutic relationship to create a feeling of being understood, accepted, and thought about. The finding that various aspects of the therapeutic relationship and its dynamics play an important role in the change process is consistent with the result of a qualitative study where adolescents were interviewed after therapy and reported the key role of the patient-therapist relationship in their treatment (Løvgren et al., 2019).

Importantly, what both patient and therapist in this case described as resolving difficulties in their relationship (including working on the negative transference) bears a resemblance to the process of exploration and resolution of ruptures described in Saran and Muran's theory (2000a). Therefore, the attribution of the success of therapy to the work on the therapeutic relationship can also be seen as consistent with the results of quantitative research showing an association between the resolution of ruptures and good outcome (Eubanks et al., 2018; Safran, Muran, & Eubanks-Carter, 2011). Hence, the findings of this study provide some support to the idea that the therapeutic alliance and the process of resolving ruptures can be an important mechanism of change in therapy (Muran & Eubanks, 2020; Safran & Muran, 2000). In this sense, as argued by Muran and his colleagues, ruptures can be vehicles that may be used to deepen the therapeutic bond and promote growth by allowing patients to practice in the here and now of the therapeutic relationship skills needed for interpersonal conflict resolution (Lipner et al., 2019; Muran & Eubanks, 2020).

Strengths, limitations, and future research directions

This study presents several limitations. Firstly, as it included only one case, its findings cannot be generalised immediately beyond the specific patient and therapist dyad and/or treatment type. Although single case studies are less appropriate for

statistical generalisation, they can still retain some analytical generalisation, in the sense that they can be used to 'explore' rather than 'explain' phenomena. Furthermore, the evidence from multiple single case studies is considered complementary to group studies, as it enables a sounder generalization of the results (Kächele et al., 2008; Lingiardi et al., 2010). In other words, for this type of research generalizability is about gradually building models based on the uniqueness of each experience to produce contextual knowledge. Therefore, to enhance the generalizability of the results of this study it would be important to replicate it across different subjects and types of therapy. For instance, future research should investigate the alliance ruptures and resolutions and their link to outcomes in other STPP cases (both with good and poor outcomes) as well as across other therapy types (e.g., CBT, BPI), and clinical samples (e.g., adolescents with externalising problems). To better understand whether the type of alliance rupture-resolution pattern found in this study differs across therapy types and adolescent presenting problems, similar single-case studies should also be conducted in other forms of therapy and with adolescents presenting with different types of mental health issues.

Secondly, due to the absence of a control condition, causal conclusions about the relationship between alliance rupture resolutions and outcomes cannot be made. Other variables, such as the adolescent maturing and/or intervening life events, might have also influenced outcome. Another limitation of this study was that the same judge rated the alliance rupture and resolutions and the post-therapy interviews, albeit at different times. This can be a source of bias as raters are subject to confirmatory and other biases. However, inter-rater reliability was assessed and obtained on a proportion of the sessions for the observer-based measures used. Further, the post-therapy interviews were conducted by an external researcher blind to the aims of this study and did not include any specific questions about the alliance and/or its rupture and resolution. Hence, what emerged about the therapeutic relationship was spontaneously reported by the participants.

Despite its limitations, single case study analysis can – through the application of multiple qualitative and/or quantitative research methods – provide a nuanced, empirically-rich, holistic account of specific complex phenomena. This may be particularly appropriate for those phenomena that are simply less amenable to more discrete measures, like the alliance, as it is a complex and dynamic variable of therapy. Accordingly, a major strength of this study was the use of various sources of

information at different time points and from different perspectives (e.g. adolescent, therapist, observers). While none of these sources could provide direct access to the reality of the alliance and its dynamics, each piece of information provided important data, and when taken together, the various perspectives can provide a fuller picture of the phenomenon. The complete observation of alliance ruptures and resolutions on a session-by-session basis was another strength of this study. This observation enabled a holistic assessment of alliance rupture processes over time. Another strength of this study is that both the researcher who collected the data and the participants were not aware of the aims of this research, hence could not be influenced by them. Since the different perspectives that were considered converged to a large extent, the findings are highly suggestive and, although cannot be generalised, therapists may find them informative in working with similar adolescents. Overall, despite some of its limitations, studying in-session transactions through a microanalytic investigation of the way patient and therapist construct their alliance has the potential to increase our knowledge of how rupture and resolution processes affect process and outcome in youth psychotherapy. This is important to inform clinical practice and therapeutic trainings.

Conclusions

The results of this study contribute to a small but growing body of evidence suggesting that clinicians should expect alliance ruptures, especially withdrawal, to occur frequently in psychodynamic therapy with depressed adolescents. As this pattern was observed in a good outcome case, this study provides some indicative evidence for the beneficial effect of rupture–repair processes in STPP, as well as a better understanding of how this process may occur. Therefore, the usefulness of the alliance as a predictor of outcome in psychodynamic therapy with young people might not be related to its strength or the number of ruptures, but rather to the ability of patient and therapist to work on the alliance and repair its impasses. Youth therapists should pay close attention to the therapeutic relationship (especially the development of trust) and be alert to, but not alarmed by, ruptures. Although the resolution of alliance ruptures can be a challenging and uncomfortable process, as ruptures require the therapist and patient to tolerate their anxieties and actively engage in addressing the rupture, its competent management can ultimately foster deeper exploration of relational patterns, strengthen the patient-therapist relationship, and foster positive

therapeutic change (Muran & Eubanks, 2020). This study also illustrates one way in which empirical methods can be applied to clinical material and how combining various sources of information can lead to a deeper and more precise understanding of the alliance and its role in producing psychological change.

Chapter 9. General Discussion

"In order to properly understand the big picture, everyone should fear becoming mentally clouded and obsessed with one small section of truth." Xun Kuang

9.1 Introduction

The overall aim of this thesis was to seek to better understand the role of the alliance in psychotherapy for adolescent depression. As such, after presenting an overview of the current literature on the topic (see Chapters 2 & 3), this thesis included four empirical studies investigating different aspects of the alliance using data from the IMPACT RCT (see Chapter 4). This final chapter provides an overview of the main findings and conclusions from each of the studies that comprise this thesis and a broader discussion of those findings. Research and clinical implications, limitations, and methodological reflections will also be considered. Suggestions for future research will be made where appropriate throughout this chapter. Finally, the overall conclusions of this thesis will be drawn.

9.2 Summarising and situating the findings within the youth alliance literature

A summary of the results of each of the studies of this thesis in the context of the wider alliance literature in youth psychotherapy is presented below. The overall implications of the findings of the four studies are then discussed altogether in paragraph 9.3.

9.2.1 Study 1: The factor structure and measurement invariance of the WAI-S

There is large variability in how the alliance construct has been conceptualised and measured. In particular, there is little consensus regarding the alliance components and whether the alliance should be measured as a unitary or a multidimensional construct with young people (McLeod, 2011). As such, I felt it was important to acquire more knowledge about the alliance measure used in this research before digging deep into understanding the role of the alliance in youth psychotherapy. Therefore, Study 1 investigated the factor structure of one of the most popular alliance measures, the Working Alliance Inventory short-form (WAI-S), in youth psychotherapy for adolescent depression. Additionally, it investigated the WAIS full measurement

invariance across (a) time, (b) treatment type, and (c) rater perspectives, and explored whether the WAI-S was affected by method effects.

Although the WAI-S is based on Bordin's (1979) definition of the alliance and therefore structured in three subscales (agreements on tasks, agreement on goals, and the bond), this model was not empirically supported by the results of Study 1 (see Chapter 5). A two-factor model, including the bond component and an overall collaborative component (task and goal items combined), or a general one-factor model seemed to represent more adequately the WAI-S structure when rated by both adolescents and therapists from the IMPACT sample. This suggests that, with this scale, Bordin's alliance components cannot be empirically differentiated, in line with most of the past empirical literature on the structure of the WAI-S in both adult (Corbière et al., 2006; Falkenström et al., 2015; Hatcher & Gillaspy, 2006; Tracey & Kokotovic, 1989) and youth psychotherapy (Anderson et al., 2012; G. S. Diamond et al., 2006; DiGiuseppe et al., 1996).

Furthermore, the results of Study 1 provide evidence for the WAI-S full longitudinal measurement invariance (including metric and scalar invariance) from both adolescent and therapist perspectives. They also support measurement invariance across treatment types from the adolescent perspective. When measurement invariance is supported, it can be assumed that the meanings of the measured latent constructs are equivalent over time and across groups. As such, it can be assumed that differences in the alliance scores using the WAI-S over time or across treatment types reflect actual differences in the alliance strengths, rather than in the way participants rate the items. It is, thus, acceptable to use this scale in longitudinal studies and/or across various types of therapy.

In contrast, Study 1 found no evidence for either metric or scalar invariance across rater groups. This suggests that the way adolescents and therapists interpret the items of the WAI-S differs. Thus, mean alliance ratings of adolescents and therapists cannot strictly be compared and/or aggregated. Accordingly, in all studies of this thesis I did not combine adolescents and therapists' alliance ratings but explored them separately. As this was the first study to investigate the full measurement invariance of the WAI-S in youth psychotherapy, more research is needed to confirm these findings. Importantly, Study 1 assessed measurement invariance across therapy types from the adolescent perspective only. Future research should evaluate this property of the scale when the alliance is rated by other

perspectives too, especially therapists, as it is plausible that their ways of interpreting alliance items are influenced by their respective therapeutic approaches.

Another discovery of Study 1 is that the negatively worded items of the WAI-S are associated with method effects. Method effects are generally understood as occurring when "*any characteristic of a measurement process or instrument contributes variance to scores beyond what is attributable to the construct of interest*" (Sechrest et al., 2000, p. 64). In other words, method effects can add unwanted 'nuisance' variance in observed construct, and if not controlled for, can lead to bias in factor analytic studies (Maul & Mcgrane, 2013). As such, when items differ in their directionality, methods effects are likely and should be investigated. To better understand how to improve the wording of alliance scales for young people, the cause and meaning of such method effects should also be explored. Further reflections on the implications of the findings of Study 1 are reported in paragraph 9.3.1.

9.2.2 Study 2: Alliance patterns and strength across treatment types

Following the results of Study 1, which provided support for the WAI-S full measurement invariance across time and treatment types, I proceeded to investigate the alliance over time and across treatment arms in the IMPACT sample, with a particular interest in the relationship between alliance and therapeutic approaches. There are theoretical reasons to suspect that the alliance strength, its dynamics, and its relationship with outcomes might differ across various types of treatment. For instance, as therapists' interventions are inevitably guided by their therapeutic approach, it is likely that the strategies they might use to foster the alliance in treatment might also vary based on their theoretical orientation. Yet, the relationship between alliance and treatment type has been neglected in youth psychotherapy research. Study 2 attempted to learn more about this relationship by investigating whether certain types of treatments achieve stronger alliance than others, and whether the alliance changes differently over time across various treatment types. Furthermore, since Study 1 had found ambiguous evidence regarding whether the one or two-factor structure of the WAI-S more appropriately reflects the nature of youth alliance, Study 2 also examined whether findings from an investigation into relationships between treatment modality and alliance differed depending on which alliance structure we adopt.

The results of Study 2 showed that adolescents' and therapists' mean alliance ratings differed between treatment types, being highest in CBT, and lowest in STPP at all time points, whilst BPI ratings fell in the middle. Although the average alliance was relatively stable over time across all treatments, Study 2 provided some evidence that the average alliance might change differently over time depending on the treatment delivered. Specifically, the average adolescents' ratings were stable over time in both CBT and BPI, but slightly increased in the STPP group. Overall, these findings might suggest that even if the alliance is a common factor, its mean strength and trajectory over time may vary across therapy types for depressed adolescents. Based on these considerations, the relationship between alliance and treatment type was further investigated in Study 3 by assessing whether the alliance-outcome association was moderated by treatment type.

In Study 2 the finding of the overall alliance ratings paralleled the results of the two subscales of bond and collaboration across time, treatment arms, and rater perspectives. These findings, alongside the high intercorrelations between the subscales found in Study 1 and other studies (Falkenström et al., 2015), further support the idea that it is difficult to differentiate and tease apart the specific alliance components with the WAI-S in youth psychotherapy. Accordingly, in the following studies of this thesis I used the overall WAI-S score only. Further reflections on the implications of Study 2 are reported in paragraph 9.3.

9.2.3 Study 3: Early alliance-outcome association in youth psychotherapy

To shed more light on the causal direction of the relationship between alliance and outcomes, Study 3 examined the relationship between early alliance and subsequent symptom change, while controlling for both prior symptom change and baseline severity, in psychotherapy for adolescent depression. In addition, as it has been suggested that the association between early alliance and outcome might be affected by other variables (Karver et al., 2018; McLeod, 2011), the second goal of Study 3 was to examine potential moderators of the alliance effect on outcome in the context of this more stringent analyses. Adolescents' age, gender, baseline symptom severity, and conduct problems were assessed as patient-related variables that might have an impact on the alliance-outcome association. To gain further insight into the relationship between alliance and treatment type, the moderating effect of treatment type on this association was also investigated.

The results of Study 3 showed that adolescent and therapist average alliance ratings early in therapy (within the 4 weeks of treatment) have a weak but significant association with subsequent symptom change, even after controlling for prior symptom change and baseline severity. This provides some support to the idea that a strong alliance can produce subsequent positive change in outcomes, rather than being a product of earlier improvements. In the context of the available empirical literature in youth psychotherapy, these findings are in line with a few studies which supported the existence of a relationship between alliance and outcome while controlling for baseline symptom severity only (Chiu et al., 2009; Labuliere et al., 2017) or for prior symptom change only (Reyes, 2014). Given the dearth of research on the alliance-outcome relationship controlling for both baseline symptom severity and prior symptom change, more research is needed to confirm these findings.

Importantly, the results of Study 3 do not preclude the possibility of reciprocal effects between early alliance and symptomatology. To further understand whether the alliance leads to symptom improvement or is a product of it, future studies should involve repeated assessment of the alliance and outcome and investigate the reciprocal effects of alliance and outcome over time. Moreover, Study 3 showed that when prior symptom change and baseline severity were not controlled for in the analyses, the strength of the early alliance-outcome association was stronger. This might suggest that early improvement in therapy might result in patients viewing their therapists and their therapy more positively, and/or that early improvement might predict continued improvement. To avoid inflated findings it is advisable to control for early symptom gains in the assessment of the alliance-outcome association.

Adolescents' age, gender, as well as baseline symptom severity and conduct problems did not have a statistically significant effect on the alliance-outcome association. This is inconsistent with previous research suggesting that the alliance-outcome link is stronger for female and younger patients (Accurso & Garland, 2015; McLeod, 2011; Shirk et al., 2011), and for adolescents who presented more externalising than internalising problems (Shirk and Kraver, 2003; McLeod, 2011; Shirk et al, 2011; Karver, 2018). It might be that when controlling for prior symptom change and baseline symptom severity, the early alliance-outcome association is no longer influenced by patients' baseline characteristics, in line with the evidence in the adult literature (Flückiger, et al., 2018).

Consistent with past research (Shirk et al., 2011; Karver et al., 2018), in Study 3 treatment arm showed a significant moderator effect on the early alliance-outcome association. Specifically, CBT demonstrated a moderate early alliance–outcome association, while STPP, and especially BPI, showed a weak association. It might be that early alliance, as measured by the WAI-S, is more instrumental in driving change in CBT than in STPP or BPI. It is important to link this result with the ones of Study 2, which found significant differences in the average alliance ratings between treatment types, with the alliance being highest in CBT compared to BPI and especially STPP, despite the treatments being equally effective in reducing symptoms. Taken together these findings might suggest that not only the strength but also the role of the alliance might vary across therapy types, being more responsible for outcome in some therapies than others. Further reflections on the implications of these findings are reported in paragraph 9.3.

9.2.4 Study 4: Alliance ruptures and resolutions in short-term psychoanalytic psychotherapy for adolescent depression

Based on the results of studies 2 and 3, I became curious to explore why STPP achieved lower alliance ratings, especially given its explicit focus on the relationship. I also wanted to learn more about what caused low alliance ratings in STPP and why this did not compromise outcomes, given there was no difference in the effectiveness of the treatments in the IMPACT study (Goodyer et al., 2017a). Therefore, in Study 4 I focused on understanding the role of the alliance dynamics, including its rupture and resolutions, in STPP. To do so, I selected a single case of an adolescent from the IMPACT-ME study who attended STPP and reported (a) an increase in the alliance strength throughout therapy (a pattern found in Study 2), and (b) a good outcome at the end of therapy (to better understand the relationship between alliance and outcome found in Study 3). The specific aims of this single-case study were: (1) to describe the alliance and its dynamics, including the type and frequency of alliance ruptures and resolutions in STPP, (2) to understand how alliance rupture and resolution events were managed, and (3) to investigate patient's and therapist's view on the role of their relationship and its dynamics on the change process.

Results showed that the low alliance ratings early in therapy were related to an important rupture that occurred between patient and therapist in the very first session and to the patient's initial reluctance to engage in treatment. Nevertheless, this rupture

was directly addressed, and, over time, the adolescent was able to overcome his resistance and develop a positive and progressively stronger alliance with his therapist. Yet, there were frequent alliance ruptures through therapy, even when a strong alliance had been established. Importantly, in most sessions, especially in the middle and late phase of treatment, ruptures were at least partially addressed and resolved.

In Study 4, the majority of ruptures were of the withdrawal type. This result contributes to a growing literature suggesting that ruptures with adolescents tend to assume the form of withdrawal. Withdrawal ruptures, such as minimal response or being deferential, are more subtle than confrontation ones and can be confused with pseudo-alliance (Muran & Eubanks, 2020). Recognising and exploring these ruptures from the very early stages of treatment might be a way to prevent the young person's withdrawal dictating the course of therapy. Hence, when working with adolescents, therapists should be trained to recognise and address even minor tensions as a potential marker of withdrawal ruptures. Post-therapy interviews with patient and therapist, separately, revealed that the building of trust was key for the positive shift that occurred in their relationship and their capacity to work together collaboratively and overcome problems. The feeling that the therapist "genuinely cared" was also reported as an important element to enhance the patient's engagement in the work of therapy. This might point to the importance of fostering trust and a genuine bond from the onset of therapy when working with young people.

In this case, both patient and therapist largely attributed the adolescent's positive change to the work they did in treatment making use of their relationship. Even if neither the patient nor the therapist mentioned the terms 'alliance', 'ruptures', and 'resolutions' their own account of their relationship and the process of resolving difficulties resembles Muran and colleagues' (2000a, 2020) ideas of working through alliance ruptures. This seems to suggest that the alliance dynamics matter in STPP and that resolving alliance ruptures can contribute to the change process.

From a research perspective, these results highlight how taking a snapshot of the alliance at a specific time-point (e.g. early in therapy, as in Study 3) is not sufficient to fully understand the relationship between alliance and outcome in STPP. This is because the alliance can fluctuate over the course of therapy and these fluctuations have meaning for the therapeutic process. It can, thus, be misleading to draw any conclusion on the alliance outcome relationship in STPP when using aggregated

global ratings of the alliance at one time point and/or measuring the frequency of ruptures without assessing whether they were resolved. Session by session assessment of the alliance and its rupture and resolutions might be a better way to understand the alliance and its role in STPP.

The in-depth analysis of some selected ruptures of this case allowed the development of a preliminary model of rupture resolution in STPP (see Chapter 8 for more details). While this model does not differ greatly from Safran and Muran's (2000a) model of resolving rupture with adults, it is specifically characterised by the regular use of transference interpretation. Transference interpretations are a core element of STPP and aim to acknowledge the young person's feelings towards the therapist and/or make links between current issues in the therapy and events outside therapy and/or in the patient's history. This might suggest that therapists can use some therapy specific techniques to repair ruptures. However, since not all rupture-resolution strategies used by the therapist of this case were in line with the STPP techniques, it might also be that some strategies to repair ruptures, such as self-disclosure, are common across different types of therapy, or are used by therapists even if they are not formally part of their training (Aron, 1991; Bridges, 2001; Goldfried et al., 2003; Stricker, 2003). Further reflections on the implication of these findings are reported in paragraph 9.3.

9.3 Overall implications of the findings of this thesis

The findings of the various studies included in this thesis have several research, conceptual, and clinical implications.

9.3.1 What constitutes an alliance with young people?

The studies of this thesis have some implications for both the measurement and conceptualization of the alliance in youth psychotherapy. From a research and measurement perspective, as this thesis found that empirically it is not possible to disentangle the specific alliance components with the WAI-S, it is advisable to use the overall score, and not the subscales, in future studies employing this scale. This result casts doubts on the capacity of the WAI-S to assess Bordin's three-dimensional alliance definition. Given the WAI-S mainly focuses on agreement of tasks and goals (8 items focus on this) and less so on the bond dimension (4 items on this), it might be important to reflect on whether it is sufficiently able to capture this alliance

component. Not surprisingly, it has been argued that the modern definition and measures of the alliance do not fully address the complexities of the emotional relationship between patient and therapist (Castonguay et al., 2006). In light of the finding of the existence of method effects associated with the negatively worded items of the WAI-S, further attention should also be paid to the item wordings in future developments of this scale.

Notably, in its current form, the WAI-S items tend to focus mainly on agreement and do not assess possible conflicting or negative feelings in the alliance, nor their eventual resolutions (Doran, 2016). Overlooking this aspect might provide a limited picture of the alliance and can lead to mistaking patient compliance or pseudo-alliance for a true strong alliance (Bender, 2005a; Muran & Eubanks, 2020; Samstag et al., 2008). This is especially relevant in light of the modern development in the alliance literature (see Chapter 3), which highlights how a constructive and strong alliance is not necessarily characterised by a perfect agreement but can involve patient-therapist disagreements and the work needed to resolve them. The results of Study 4 seem to support these ideas. Therefore, researchers using the WAI should be aware that this scale, given its focus on agreement, might assess some, but not necessarily all, aspects of the alliance. It would also be important to consider whether the assessed aspect might have a better fit with the way the alliance is considered in certain types of therapy than others (see paragraph 9.3.2 for more details on the relationship between alliance and treatment type).

The results of the high correlations between the alliance components might be related not only to the operationalisation of the alliance but also to its nature and can, therefore, have implications for the definition of the alliance too. This is especially relevant given a growing body of research has supported the one-factor structure of the alliance across a range of other youth alliance measures too (Faw et al., 2005; Fjermestad et al., 2012; Hogue et al., 2006; Meyer et al., 2002; Shelef et al., 2005; Shelef & Diamond, 2008). It might be that the alliance with young people is an integrated, general phenomenon, so that failure to establish one aspect of it hinders the development of the alliance entirely. For instance, issues in the bond might interfere with the development of a good collaboration, as much as disagreements can affect the affective bond. Conversely, a positive bond might enable the young person to collaborate in the process of therapy; and a good level of collaboration can foster a positive bond. This should make therapists reflect on the importance of paying

attention to and fostering all aspects of the alliance when working with young people. In this regard, more should be learnt about which elements of the relationship are important for a good alliance and how to foster them.

Based on the above-mentioned considerations, both the construct of the alliance and its operationalisation in youth psychotherapy might require revision. Although the aim of this PhD was not to (re)define the alliance in youth psychotherapy, it is important to reflect on its current definition and on whether it is helpful to broaden or revise the concept to include aspects of the relationship beyond agreement on goals and tasks. To do so, it might be helpful to refer back to the historical development of the alliance definition (see Chapter 2 for more detail). From a broad, historical, perspective, an essential issue of the alliance definition concerns its link with the search for common factors, which generated a generality versus specificity dilemma. A concept identifying a feature common to all forms of treatments, by definition, must be adaptable and broadly inclusive. This, however, makes the concept vaguer and perhaps not equally suitable to different types of therapy. Furthermore, the most popular alliance definition seems to focus mainly on the collaborative aspect of the alliance, while neglecting other aspects. Yet, expanding the concept to include more aspects of the therapeutic relationship (e.g., the real relationship, transference-countertransference) might nevertheless lead to an equally unhelpful merging of several concepts, resulting in an even greater loss of meaning and specificity.

If our goal is to better understand how the relationship works in therapy, we ought to identify its different features, better explore its relationship with various therapeutic approaches, and discover what aspects of the therapeutic relationship are linked to outcomes. As Horvath (2018) said: "*Science progresses by making distinctions; homogenizing differences does not serve the enterprise*" (p. 509). In this regard, I personally find it helpful going back to Greenson's (1965) ideas on the therapeutic relationship as including three components: (1) the working alliance, e.g. the part of the relationship devoted to the "work" of treatment, (2) the transference and countertransference, e.g. the distortions and defensive projections of both patient and analyst, and (3) the real relationship, e.g. the real and transference-free reactions between patient and analyst (Greenson, 1971). This definition highlights, in my opinion, the different aspects of the relationship while stressing that the alliance is only one part of it.

What seems to be needed to continue making progress in the field of alliance research is a renewal of the conversation between the theoretical/clinical field and the research one. Research on the key ingredients of a good alliance with young people is an important step towards learning how to best define the alliance, as well as support therapists to foster its development. In this regard, it might be helpful to interview both young people and therapists so that our future re-definition of the term include their perspectives. The results of Study 4 seem to suggest that key elements for a good alliance are the development of trust, a sense that the therapist genuinely cares and a willingness to address difficulties or ruptures as they arise, and less about agreement on goals and tasks. These aspects should be further investigated in future research. Qualitative research seems to be particularly needed in this field to learn more about what constitutes a good alliance in youth psychotherapy and develop a more empirically based and clinically relevant definition of this complex psychotherapy variable.

9.3.2 Is the alliance a common factor in youth therapy?

The research in this thesis also contributes to the literature on the relationship between alliance and treatment type and has several implications. Specifically, this research showed that treatment type can influence (a) the average alliance strength across time, (b) the early alliance subsequent outcome relationship, (c) the strategies therapies might use to address alliance ruptures. Taken together these findings point to the existence of a relationship between alliance (as measured by the WAI-S) and treatment type and question the idea that the alliance is a generic factor. It might be that the research for common factors, and a common language to define them, led to a loss of precision and somehow clinical meaning, and created "*a Tower of Babel problem in reverse: the discourses, originating within different theoretical circles, now use the same words, but to mean different things*" (Horvath, 2011; p. 127). This issue is part of the larger debate on whether the alliance is a common ingredient of all therapies acting independently of technique or whether its clinical function -and perhaps meaning- is specific to each therapy type.

The alliance construct has been operationalised as a general psychotherapy variable. Alliance measures have been written in a general rather than a therapy-specific manner and little, if any, is known about whether they are able to effectively measure the nature of the alliance across all types of treatment (Horvath, 2018).

Accordingly, it is essential to consider that although the results of studies 2 and 3 might reflect genuine differences in the alliance strength and its relationship with outcome across treatment types, they can also be related to the conceptualization and measurement of the alliance used in this thesis. For instance, the WAI-S items, given their emphasis on collaboration of tasks and goals of therapy, might better capture aspects of the alliance that are more in line with the way the alliance is conceptualised and used in CBT than in STPP. In fact, in CBT encouraging explicit collaboration on tasks and setting common goals are essential components and a regular focus of therapy sessions (IMPACT Study CBT Sub-Group., 2010). In contrast, psychodynamic therapies do not aim to set 'tasks' and 'goals', and theoretical accounts of the alliance in these therapies do not usually refer to Bordin's concept, but to more psychodynamic alliance definitions (e.g., Luborsky's, 1976). Therefore, it might well be that if another alliance measure had been used in this research, this would have led to different results.

Based on these considerations, can we actually say that therapists and researchers from various therapeutic approaches mean the same thing when they talk about the alliance? While the relationship between alliance and treatment type was already pointed out by Bordin and other authors (Bordin, 1979; Gaston et al., 1991), it has been neglected in empirical research. Perhaps more attention should be paid to the operationalization of the alliance within and across therapies to ensure that the measures selected have a conceptual 'fit' with the treatments being investigated. This does not mean that we need to develop more alliance measures, and/or that the same measure cannot be used across treatments. However, caution should be taken when comparing research findings from studies using different alliance measures and types of treatment, as it cannot be assumed that different scales assess the same aspect of the alliance, nor that research findings in one treatment are generalisable to different treatment modalities. Researchers should, thus, learn more about what aspect of the alliance is assessed by existing alliance measures and consider this information in both the selection of the measure and the interpretation of findings.

There is a multitude of alliance measures, and it might not be wise to develop more scales without a prior theoretical debate and research on the key components of the alliance with young people. As such, it is important to take stock of and acknowledge the benefits of the current measures and the knowledge achieved so far. For instance, relevant strengths of the use of the WAI-S regard the fact that it is the

most used alliance measure in both the adult and adolescent literature, as well as the measure with the strongest and most investigated psychometric properties (Hatcher et al., 2019). Therefore, results from studies using this measure can be more easily compared with other studies, reducing the confusion caused by the presence and use of a multitude of measures. Furthermore, most alliance scales draw upon Bordin's alliance definition anyway, and none of them intends or is able to capture aspects of the alliance more in line with the psychoanalytic definitions of the concept (e.g., the unconscious aspects of the relationship) (Horvath, 2018). Therefore, on balance, despite its limits, amongst all available alliance measures, the WAI-S can still be considered an important and helpful alliance scale (Flückiger et al., 2018). While it is essential to learn more about what aspects of the alliance the WAI is able to capture and interpret research findings accordingly; it is equally important to use a common, well-validated measure across studies to reduce variability in the field and compare results across studies.

Study 4 also contributes to the literature on the relationship between alliance and treatment type. In this study, some treatment specific techniques, like the use of transference interpretation, appeared to be beneficial to resolve alliance ruptures in STPP. Yet, Study 4 also showed that the therapist's attempts to repair ruptures went beyond the specific techniques included in the STPP manual. This was usually the case in the early phase of treatment and/or when there was too much tension in the therapeutic relationship. In such circumstances, the therapist would change the topic rather than further explore the young person's negative feelings, as recommended in the transference work (Cregeen et al., 2016). It might be that, when there are strains in the therapeutic relationship, the techniques used by therapists of different theoretical orientations become more similar with the aim of re-engaging the young person in therapy. This result contributes to a growing literature suggesting that successful exploration of ruptures requires flexibility from the therapist (Ackerman & Hilsenroth, 2001; Calderon et al., 2018; Muran et al., 2010). More should be learnt about how therapists from different therapeutic approaches repair ruptures, and to what degree therapists may use techniques that are, or are not, part of their core training or explicit model of working.

Overall, the results of the studies of this thesis, taken together, seem to suggest that the notion of the alliance as a common factor acting independently of technique could be both methodologically and theoretically unsound. Perhaps attempts to

research the alliance may have blurred these important issues in favour of a uniform and more measurable concept, with a consequent loss of precision and, perhaps, clinical meaning. Not surprisingly, in the last decade the alliance concept has been criticised for having become progressively vaguer, and less clinically meaningful (Horvath, 2018; Safran & Muran, 2006). What seems to be needed is a renewal of the conversation between the clinical/theoretical field and the research field so that current research findings can inform theoretical and clinical developments on the alliance, and clinical ideas can guide future research.

9.3.3 Is the alliance, including its rupture and resolutions, therapeutic in youth psychotherapy?

The findings of Studies 3 & 4, which suggest the existence of a relationship between alliance and outcome, also have important clinical implications. Firstly, the results that the strength of the alliance early in therapy plays a role in determining subsequent outcome independent of prior symptom change and initial severity, provide some support to the assumption that the alliance drives symptom changes. This endorses the idea that the alliance is an important mechanism of change in psychotherapy (Norcross, 2018). Accordingly, youth therapists should aim to foster a strong alliance with their young patients from the beginning of treatment. This seems to be especially relevant to CBT as in this treatment arm the alliance-outcome association was found to be stronger than in STPP and BPI, where therapeutic change appeared to be driven less by alliance ratings, as measured by the WAI-S, compared to CBT.

The results of Study 4 provide further insight into the results of Study 3. Although the former suggests that the alliance, as measured by the WAI-S early in therapy, matters less for outcomes in STPP, in Study 4 session by session ratings of the alliance and its ruptures and resolutions showed that the relationship and its dynamics, especially the resolutions of alliance ruptures, do actually matter in STPP. Specifically, the results of Study 4 suggest that even with an initially low alliance, improved alliance and good outcomes can be achieved, as long as alliance ruptures are resolved. This could be viewed as relevant in all treatments since alliance ruptures can arise in any treatment type (Muran & Eubanks, 2020). Yet, as Study 4 involved one STPP case only, more research is needed across various STPP cases, as well as other treatment types, to confirm these hypotheses.

Overall, from a clinical perspective, knowing the alliance, and its dynamics, subsequent effect on youth outcomes, clinicians should increase effort to foster a good alliance and – perhaps even more importantly - repair eventual ruptures through treatment. This might be especially relevant among depressed adolescents who typically experience high levels of hopelessness, withdrawal, and reduced engagement (Hill et al., 1993; Lynch et al., 2016). Yet, to date, there appear to be few clinical guidelines around how to promote a good alliance and manage alliance ruptures with young people. In adult psychotherapy not only there are guidelines on how to resolve ruptures across various therapy types, but also alliance focused training (Safran et al., 2014), which revealed beneficial effects in promoting better alliance and outcome (Safran, Muran, & Eubanks-Carter, 2011). Theories of rupture-resolution should be regarded as a fundamental aspect of clinical training in youth psychotherapy too. Future research should explore whether training youth therapists to manage the alliance dynamics, including its ruptures, can be beneficial to improve therapy process and outcomes.

It is also important to notice that some patient's and therapist's characteristics and/or their interpersonal skills may influence the alliance-outcome relationship, including the resolution of alliance ruptures. For instance, therapists' attunement to their patients' feelings, their non-defensiveness and open and empathetic attitudes seem to be associated with successful resolution of alliance ruptures (Ackerman & Hilsenroth, 2001; Midgley et al., 2018; Muran & Eubanks, 2020). This idea was supported by Study 4, where the therapist's genuine interest in the patient revealed to be an important element of the alliance. Study 4 also suggests that the patient's suitability for treatment and his capacity to bear - with the therapist's support - some frustrating aspect of therapy, including alliance ruptures, was important for both the resolution of ruptures and outcome. This contributes to the literature highlighting the importance to assess patients' suitability for the success of treatment (Parker, 2005; Philips, 2009). Similarly, the patient's attachment and/or personality style might influence their ability to face and collaborate in the process of repairing ruptures. Miller-Bottome and colleagues (2018) found that patients with a secure attachment style, who are open in expressing their internal experiences, may be more able to work through the tasks of resolving ruptures than patients with various types of insecure attachment styles, as the latter may be less open and/or collaborative. In other words, it might be that the strategies to foster a good alliance and address ruptures should

be tailored to some patients' characteristics. Future research should seek to further understand the relationship between therapy process variables and patient and therapist's characteristics. This would be an important step to gain further insight into the question of what works for whom.

9.4 Limitations and strengths of this thesis

It is important to acknowledge the limitations of the research in this thesis. Firstly, this research consists of secondary analyses of the IMPACT data. This meant that the studies in this thesis had to be designed around pre-collected data. As such, it was not possible to change the frequency and timings of alliance assessments and/or to include measures that could have further contributed to understanding the role of the alliance in this sample. For instance, it was not possible to change the alliance measures and it might well be that different results would have been achieved if a different measure had been used (e.g. the TASC). Secondly, the generalizability of the results of this thesis is limited by different factors. For instance, all data used in this thesis were collected in the context of an RCT for adolescent depression, in CAMHS in the UK. It is unknown how transferable these findings can be to similar or different groups treated in routine practice. Furthermore, this thesis included only participants from the IMPACT trial who had completed at least one assessment of the alliance. Although there were no statistical differences between this subsample and the overall IMPACT sample in terms of baseline demographic characteristics and symptom severity, as well as outcomes and length of treatment, it is important to keep this in mind when interpreting the results of this thesis. It might be that adolescents who were not satisfied with their therapy or had a poor alliance were less likely to complete the WAI-S. Finally, the last study of this thesis involved only one case. It is likely that the experiences reported in Study 4 is unique to the adolescent and therapist included in this study and cannot be transferred to other cases. It would, therefore, be important to study more good outcome cases in STPP, as well as STPP cases of adolescents who reported poor outcome and/or dropped out of therapy. Further research is also needed to explore the alliance dynamics in other therapy types.

There are also advantages of conducting this research as part of the wider IMPACT study. These included a robust design and database already being in place at the start of this thesis. The available data from the IMPACT trial provided an exceptional dataset including audio recordings of therapy sessions, patient and

therapist evaluated alliance, post-therapy interviews, and a battery of outcome measures. Such rich data offered greater scope for exploring the role of the alliance in youth psychotherapy. Moreover, data were derived from an RCT, a design that reduces bias due to treatment assignment or other confounding variables. Another advantage of this database was the inclusion of different types of therapy in which the adherence to treatments was closely monitored for integrity. Finally, an important strength of this research was that it adopted a mixed-methods design, which included both sophisticated statistical methods and qualitative analyses, in line with the most recent recommendation on alliance research (Doran, 2016; Falkenström, Granström, et al., 2014; Flückiger et al., 2018; Horvath, 2018). Specifically, the research of this thesis took into account the nested structure of psychotherapy data (e.g. repeated measures of the same participants, as well as patient nested within therapists) using multilevel modelling (Tasca et al., 2009), and also attempted to control for variables that can impact on the alliance-outcome association (e.g. previous symptom change). Integrating these methods with in-depth qualitative analyses of audio-recordings of therapy sessions and post-therapy interviews allowed for a fuller assessment of a complex therapy variable like the alliance. As such, the studies included in this thesis are the first of their kind in the alliance literature in youth psychotherapy.

9.5 Methodological reflections

Having worked in research for the past seven years, before and during my PhD, I have had the experience of conducting both quantitative and qualitative research. Further, being a clinician, I was aware of the complexity involved in defining and measuring a complex psychotherapy variable, like the alliance. Therefore, I began my PhD interested in how I could make the best use of a database including repeated measures of the alliance and different treatment modalities, while also addressing important gaps in youth alliance research. I also hoped to produce research that could be meaningful to clinicians. Therefore, since I started my PhD, I felt a mixed-methods approach would be the most appropriate to study the alliance with young people.

With this in mind, I began the empirical work of this thesis by exploring the IMPACT quantitative data about the alliance. The statistical analyses of the first three studies of this thesis enabled me to investigate the factor structure of the alliance, its pattern over time and across therapy, and its relationship with outcomes. This led to several thought-provoking findings, the most striking of which was the differences in

the average alliance strength across treatment types that have revealed to be equally effective. This made me question the conceptualization of the alliance as a common, generic factor. Therefore, I decided to assess whether the alliance-outcome association was also influenced by treatment type. This led to the interesting result that the alliance-outcome association was weaker in STPP compared to CBT. I was particularly intrigued by these results, and especially the fact that STPP, a treatment approach that tends to focus on the therapeutic relationship, revealed the lowest alliance ratings compared to the other treatments, without this seeming to compromise outcomes. I, therefore, decided to further understand the nature and role of the alliance in this treatment arm. Since a qualitative approach allows for a more in-depth and open exploration of data, I felt it was the most appropriate for this purpose. Based on the findings of Studies 2 and 3, I selected a STPP case and immersed myself in the analysis of the audio-recordings of therapy sessions and the post-therapy interviews of this case. This not only allowed me to gain further insight into the findings of Studies 2 & 3, but also enabled me to appreciate the dynamic nature of the alliance, via the assessment of the alliance ruptures and resolutions within and between sessions.

My early studies provided a more global picture, drawing upon a relatively large database. The last study allowed me to zoom in the specific alliance dynamics of STPP, while also providing further insight into previous findings. Specifically, this study revealed that alliance strains early in treatment might not be associated with poor alliance later in treatment or poor outcome if they are recognised and addressed over the course of treatment. Hence, the use of a mixed-methods approach allowed me to contextualise the findings from my earlier quantitative studies and to gain further insight into the understanding of the alliance and its role in youth psychotherapy.

Had I used solely a quantitative or qualitative approach, this would have limited what I could have discovered about the alliance. For instance, had I used a solely quantitative approach, I would not have learnt about the nuances of the alliance in STPP or what patient and therapist valued the most about their relationship and interaction over treatment. On the contrary, had I used only a qualitative approach, I would have missed the opportunity to make the best use of a rich database, which led me to important discoveries on the alliance and its relationship with outcome across various treatments, and also guided me in the selection of the qualitative study of this thesis. The IMPACT data presented an important opportunity to explore the phenomenon of the alliance in adolescent depression, which allowed the development

of a holistic understanding of the construct that simply would not have been possible had a solely quantitative or qualitative research design been adopted.

9.6 Overall conclusion

Overall, the results of the various studies of this thesis highlight the complexity of the alliance construct and the challenges in measuring and studying this important psychotherapy variable. The alliance is the product of the encounter between patient and therapist in the context of a specific therapeutic approach. As such it is influenced by both patient and therapist characteristics, the therapeutic approach, and the interaction between these variables. Furthermore, the relationship between patient and therapist is not static but evolves over time, and so does the alliance. Despite these challenges, I hope I have demonstrated with this research that, via combining sophisticated statistical analyses of relatively large groups with in-depth explorations of therapy sessions and interviews, it is possible to provide a fuller picture of this central psychotherapy variable.

An important finding of this thesis is that the alliance and the process of resolving alliance ruptures do matter in youth psychotherapy. This confirms the results of previous research and supports the hypothesis that the alliance and its dynamics, including its ruptures and resolutions, play an important role in the prediction of outcomes. As such, clinicians need to be aware of the importance to foster and maintain a positive alliance, including trust, and repair ruptures when they occur through treatment. Future research should seek to better understand what elements of the therapeutic relationship constitute a good alliance within and across therapies for young people. A good avenue for further research in the field seems to be the study of the process of alliance rupture and resolutions through therapy. Studying the processes of negotiation of the alliance could provide useful clinical guidance regarding the therapeutic relationship, increasing knowledge of what factors/processes affect outcomes. This can have important clinical implications to inform therapeutic trainings and ultimately improve psychotherapy for young people. Insight into the mechanisms of change, like the alliance and the process of repairing alliance ruptures, is of direct relevance to improving psychotherapy for young people, as well as making mental health services more productive and cost-effective.

Another discovery of this research is the existence of a relationship between alliance and treatment types. This seems to suggest that although the alliance may be

an important element in most types of therapy, its strength and how it interacts with the specific treatment to achieve benefits may not be the same across various therapy types. Hence, the alliance might not be a generic variable, as it has often been assumed, and it might be more beneficial to think of it as a specific component of the broader category of the therapeutic relationship, which relates to the collaborative aspects of the relationship and whose characteristics might change across types and stages of therapy. The relationship between alliance and therapeutic approach requires further attention and needs to be taken into account when defining and measuring the construct.

In conclusion, I hope to have demonstrated with this thesis that alliance research has the potential to bring the clinical and research fields closer together, via providing both fertile grounds for dialogue between research and clinical practice and a place where the needs of clinicians and researchers can converge. This is something I am passionate about and the main reason why I am committed to the study of this complex and important psychotherapy variable. While with this thesis I have attempted to fill some of the gaps of the alliance literature in youth psychotherapy, I am aware there still are several unanswered questions for future research, which I hope I will continue to contribute to.

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11. Appendix A. Supplementary Materials – Chapter 5

TABLE A1. WAI-S and WAI-S-T items

WAI-S	Adolescent version	Therapist version
		Goal
Item 4	My therapist does not understand what I am trying to accomplish in therapy.	I have doubts about what we are trying to accomplish in therapy.
Item 6	My therapist and I are working towards mutually agreed upon goals.	We are working towards mutually agreed upon goals.
Item 10	My therapist and I have different ideas on what my problems are.	My client and I have different ideas on what his/her real problems are.
Item 11	We have established a good understanding of the changes that would be good for me.	We have established a good understanding between us of the kind of changes that would be good for my client.
		Task
Item 1	My therapist and I agree about the things I will have to do in therapy to improve my situation.	My client and I agree about the steps to be taken to improve his/her situation.
Item 2	What I am doing in therapy gives me new ways of looking at my problem.	My client and I both feel confident about the usefulness of our current activity in therapy.
Item 8	We agree on what is important for me to work on.	We agree on what is important for my client to work on.
Item 12	I believe the way we are working with my problem is correct.	My client believes the way we are working with his/her problem is correct.
		Bond
Item 3	I believe my therapist likes me.	I believe my client likes me.
Item 5	I am confident in my therapist's ability to help me.	I am confident in my ability to help my client.
Item 7	I feel that my therapist appreciates me.	I appreciate my client as a person.
Item 9	My therapist and I trust one another.	My client and I have built a mutual trust.

Table A2. Correlation matrix and descriptive statistics of WAI-S items at 6 weeks (n=223)

	Item1	Item2	Item3	R-Item4	Item5	Item6	Item7	Item8	Item9	R-Item10	Item11	Item12
Item1	1											
Item2	0.66	1										
Item3	0.54	0.55	1									
R-Item4	0.44	0.41	0.44	1								
Item5	0.68	0.65	0.61	0.52	1							
Item6	0.73	0.64	0.55	0.38	0.67	1						
Item7	0.62	0.59	0.72	0.47	0.68	0.66	1					
Item8	0.71	0.65	0.53	0.40	0.69	0.79	0.68	1				
Item9	0.64	0.67	0.70	0.46	0.72	0.64	0.76	0.69	1			
R-Item10	0.40	0.32	0.22	0.44	0.29	0.28	0.21	0.29	0.28	1		
Item11	0.65	0.63	0.52	0.40	0.63	0.68	0.63	0.75	0.64	0.27	1	
Item12	0.75	0.69	0.56	0.56	0.77	0.75	0.69	0.78	0.73	0.4	0.71	1
Mean	4.85	4.32	4.74	5.22	4.74	4.74	4.48	5.00	4.71	4.90	4.75	4.73
SD	1.66	1.82	1.61	1.76	1.83	1.85	1.65	1.70	1.92	1.65	1.75	1.91
Skewness	-0.59	-0.30	-0.53	-0.73	-0.48	-0.65	-0.36	-0.76	-0.55	-0.55	-0.67	-0.62
Kurtosis	-0.36	-0.94	-0.33	-0.58	-0.88	-0.63	-0.68	-0.17	-0.88	-0.67	-0.39	-0.77
N Missing	0	0	4	1	0	2	1	0	1	3	1	0

R= reversed item

Table A3. Correlation matrix and descriptive statistics of WAI-S-T items at 6 weeks (n=139)

	Item1	Item2	Item3	R-Item4	Item5	Item6	Item7	Item8	Item9	R-Item4	Item11	Item12
Item1	1											
Item2	0.74	1										
Item3	0.65	0.59	1									
R-Item4	0.42	0.57	0.51	1								
Item5	0.54	0.59	0.39	0.52	1							
Item6	0.72	0.70	0.59	0.52	0.61	1						
Item7	0.44	0.42	0.36	0.3	0.56	0.52	1					
Item8	0.76	0.65	0.61	0.49	0.6	0.75	0.44	1				
Item9	0.65	0.64	0.66	0.46	0.62	0.75	0.52	0.78	1			
R-Item10	0.41	0.53	0.35	0.58	0.39	0.49	0.35	0.51	0.45	1		
Item11	0.69	0.66	0.49	0.54	0.59	0.71	0.45	0.72	0.67	0.43	1	
Item12	0.70	0.71	0.61	0.46	0.59	0.67	0.41	0.73	0.73	0.48	0.76	1
Mean	4.55	4.46	4.57	4.89	4.84	4.59	5.88	4.68	4.56	4.71	4.44	4.38
SD	1.22	1.30	1.13	1.25	1.13	1.32	0.95	1.30	1.34	1.29	1.28	1.25
Skewness	0.02	-0.20	-0.55	-0.63	-0.52	-0.16	-0.54	-0.34	-0.34	-0.24	-0.30	-0.28
Kurtosis	-0.68	-0.64	0.10	-0.13	0.13	-0.30	-0.34	-0.19	-0.19	-0.90	-0.21	-0.59
N Missing	1	0	2	0	0	1	0	3	0	0	0	0

R= reversed item

Table A4. Correlation matrix and descriptive statistics for each WAI-S item at 12 weeks (n=247)

	Item1	Item2	Item3	R-Item4	Item5	Item6	Item7	Item8	Item9	R-Item10	Item11	Item12
Item1	1											
Item2	0.68	1										
Item3	0.63	0.58	1									
R-Item4	0.43	0.45	0.45	1								
Item5	0.62	0.69	0.64	0.56	1							
Item6	0.73	0.66	0.66	0.44	0.72	1						
Item7	0.63	0.61	0.81	0.45	0.70	0.72	1					
Item8	0.71	0.66	0.60	0.49	0.75	0.78	0.68	1				
Item9	0.63	0.61	0.71	0.47	0.76	0.68	0.79	0.71	1			
R-Item10	0.32	0.33	0.30	0.43	0.29	0.22	0.25	0.33	0.36	1		
Item11	0.73	0.72	0.63	0.46	0.72	0.73	0.68	0.78	0.73	0.36	1	
Item12	0.73	0.76	0.66	0.52	0.80	0.76	0.73	0.75	0.77	0.35	0.79	1
Mean	4.72	4.28	4.67	5.11	4.60	4.65	4.45	4.90	4.70	4.72	4.72	4.57
SD	1.67	1.74	1.73	1.77	1.87	1.83	1.68	1.69	1.83	1.72	1.72	1.83
Skewness	-0.56	-0.56	-0.47	-0.62	-0.34	-0.54	-0.42	-0.66	-0.57	-0.37	-0.55	-0.42
Kurtosis	-0.48	-0.89	-0.62	-0.70	-1.04	-0.85	-0.71	-0.47	-0.70	-1.04	-0.59	-0.87
N Missing	1	1	1	0	1	2	0	1	0	2	1	0

R= reversed item

Table A5. Correlation matrix and descriptive statistics for each WAI-S item at 36 weeks (n=222)

	Item1	Item2	Item3	R-Item4	Item5	Item6	Item7	Item8	Item9	R-Item10	Item11	Item12
Item1	1											
Item2	0.78	1										
Item3	0.72	0.70	1									
R-Item4	0.39	0.39	0.46	1								
Item5	0.70	0.74	0.68	0.44	1							
Item6	0.75	0.75	0.71	0.42	0.78	1						
Item7	0.67	0.70	0.81	0.40	0.70	0.70	1					
Item8	0.82	0.78	0.74	0.48	0.78	0.82	0.73	1				
Item9	0.76	0.71	0.77	0.39	0.70	0.69	0.75	0.75	1			
R-Item10	0.49	0.38	0.43	0.50	0.40	0.42	0.36	0.47	0.41	1		
Item11	0.81	0.74	0.74	0.44	0.80	0.82	0.72	0.87	0.78	0.46	1	
Item12	0.80	0.80	0.75	0.49	0.84	0.80	0.75	0.85	0.77	0.44	0.87	1
Mean	4.86	4.55	4.88	5.40	4.77	4.85	4.64	5.05	4.87	4.59	4.98	4.89
SD	1.73	1.80	1.74	1.71	1.88	1.89	1.82	1.80	1.91	1.80	1.72	1.89
Skewness	-0.67	-0.41	-0.66	-1.07	-0.56	-0.66	-0.47	-0.82	-0.66	-0.40	-0.82	-0.62
Kurtosis	-0.31	-0.83	-0.34	0.22	-0.79	-0.62	-0.67	-0.29	-0.70	-0.87	-0.18	-0.70
N Missing	1	1	1	3	2	0	1	0	2	0	0	1

R=reversed item

Table A6. Correlation matrix and descriptive statistics for each WAI-S-T item at 12 weeks (n=119)

	Item1	Item2	Item3	R-Item4	Item5	Item6	Item7	Item8	Item9	R-Item10	Item11	Item12
Item1	1											
Item2	0.85	1										
Item3	0.76	0.76	1									
R-Item4	0.45	0.51	0.42	1								
Item5	0.69	0.74	0.52	0.48	1							
Item6	0.82	0.82	0.68	0.46	0.63	1						
Item7	0.40	0.43	0.42	0.32	0.36	0.45	1					
Item8	0.80	0.82	0.66	0.43	0.64	0.87	0.46	1				
Item9	0.74	0.76	0.77	0.39	0.60	0.78	0.46	0.75	1			
R-Item10	0.47	0.53	0.43	0.45	0.47	0.55	0.40	0.51	0.48	1		
Item11	0.79	0.80	0.65	0.55	0.66	0.84	0.45	0.82	0.75	0.53	1	
Item12	0.84	0.86	0.72	0.46	0.72	0.85	0.45	0.83	0.77	0.51	0.82	1
Mean	4.65	4.43	4.77	4.84	4.71	4.65	5.92	4.69	4.85	4.87	4.69	4.55
SD	1.35	1.44	1.09	1.24	1.19	1.47	1.00	1.35	1.36	1.36	1.26	1.27
Skewness	-0.53	-0.59	-0.61	-0.45	-0.43	-0.40	-0.77	-0.38	-0.72	-0.64	-0.45	-0.62
Kurtosis	-0.03	-0.29	0.43	-0.39	-0.57	-0.38	0.72	-0.32	-0.04	-0.72	-0.30	0.03
N Missing	0	1	0	0	1	2	0	3	1	0	0	0

R=reversed item

Table A7. Correlation matrix and descriptive statistics for each WAI-S-T item at 36 weeks (n=63)

	Item1	Item2	Item3	R-Item4	Item5	Item6	Item7	Item8	Item9	R-Item10	Item11	Item12
Item1	1											
Item2	0.82	1										
Item3	0.54	0.48	1									
R-Item4	0.35	0.42	0.22	1								
Item5	0.46	0.50	0.27	0.34	1							
Item6	0.86	0.78	0.47	0.35	0.54	1						
Item7	0.48	0.48	0.57	0.24	0.19	0.33	1					
Item8	0.86	0.81	0.61	0.35	0.45	0.85	0.52	1				
Item9	0.77	0.72	0.53	0.35	0.57	0.68	0.46	0.75	1			
R-Item10	0.53	0.54	0.28	0.42	0.24	0.62	0.20	0.55	0.40	1		
Item11	0.87	0.78	0.56	0.41	0.42	0.84	0.43	0.84	0.74	0.64	1	
Item12	0.75	0.75	0.45	0.27	0.52	0.74	0.32	0.83	0.70	0.54	0.77	1
Mean	5.32	5.22	5.23	4.97	5.19	5.17	6.29	5.29	5.39	5.13	5.25	5.24
SD	1.15	1.30	1.11	1.24	1.06	1.29	0.77	1.09	1.09	1.14	1.18	1.06
Skewness	-0.86	-0.70	-1.07	-0.41	-0.98	-0.71	-0.77	-0.69	-0.99	-0.86	-0.88	-0.41
Kurtosis	0.34	-0.23	0.74	-0.62	1.27	-0.18	-0.15	0.43	0.98	-0.10	0.40	0.15
N Missing	0	0	1	0	0	0	0	1	1	0	0	0

R=reversed item

Table A8. Descriptive statistics of the number of patients treated by each therapist in both samples

	WAI-S 6 weeks	WAI-S-T 6 weeks
N of therapists	114	63
N of adolescents	223	139
N of adolescents treated by each therapist		
Mean	1.96	2.21
Median	1	1
Mode	1	1
Std. Deviation	1.70	2.13
Minimum	1	1
Maximum	9	11

Table A9. Standardised factor loadings of the one-factor and two-factor models of the WAI-S at 6 weeks

Scales	Items	CFA: one factor	CFA: Two factor	
		Alliance	Bond	Collab.
Bond	**item 9**	0.83	0.88	
	item 7	0.81	0.86	
	item 5	0.83	0.83	
	item 3	0.68	0.76	
Goal	**item 11**	0.79		0.79
	item 10	0.36		0.38
	item 6	0.83		0.84
	item 4	0.55		0.54
Task	**item 12**	0.89		0.90
	item 8	0.86		0.87
	item 2	0.78		0.78
	item 1	0.81		0.82

R=reversed item

Table A10. Standardised factor loadings of the one-factor, two-factor and three-factor models of the WAI-S-T at 6 weeks

Scales	Items	CFA: one factor	CFA: Two factor		CFA: Three- factor		
		Alliance	Bond	Collab.	Bond	Goal	Task
Bond	item 9	0.85	0.88		0.88		
	item 7	0.55	0.57		0.57		
	item 5	0.70	0.71		0.71		
	item 3	0.71	0.72		0.72		
Goal	item 11	0.82		0.82		0.82	
	R-item 10	0.56		0.57		0.57	
	item 6	0.86		0.86		0.86	
	R-item 4	0.57		0.57		0.57	
Task	item 12	0.85		0.85			0.85
	item 8	0.87		0.87			0.87
	item 2	0.82		0.82			0.82
	item 1	0.83		0.83			0.84

R=reversed item

12. Appendix B. Supplementary Materials – Chapter 6

Figure B1. Spaghetti plot of the observed trajectory of youth-rated alliance mean overall Bond score
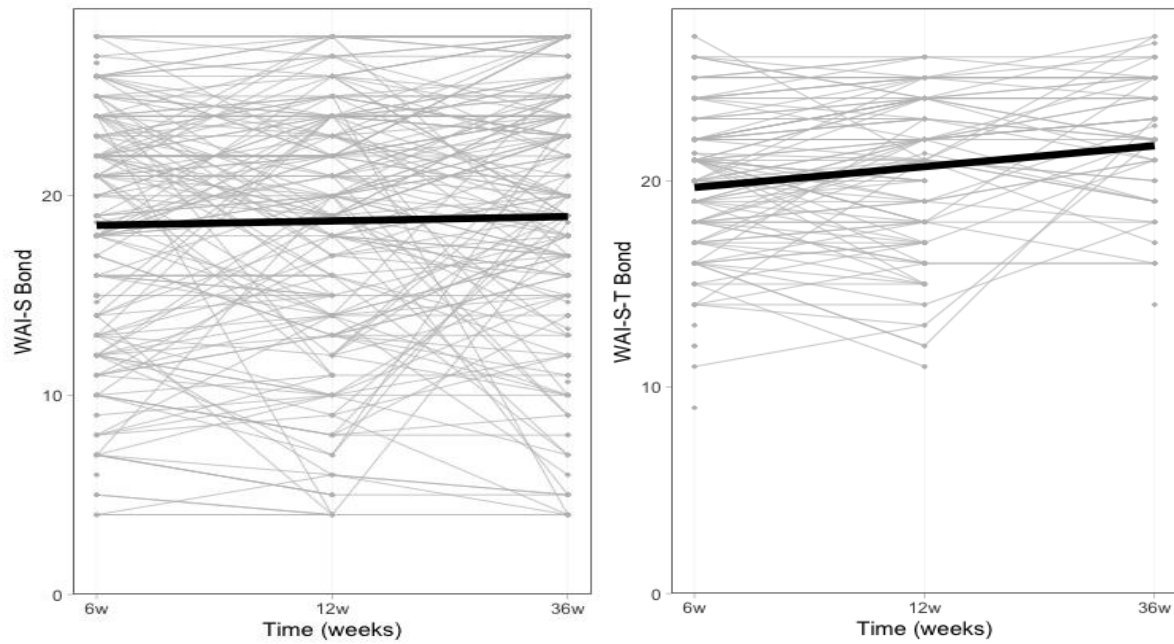
Figure B2. Spaghetti plot of the observed trajectory of youth-rated alliance mean overall Collaboration score

Table B1. Model comparison of the categorical and linear three-level models using time and treatment arm as predictors of the WAI-S and WAI-S-T scores with random intercept and slope

Sample	D.V.	Model	df	AIC	BIC	logLik	L.Ratio	p
WAI-S	WAI-S overall	Linear	11	5591.31	5641.24	-2784.65		
		Discrete	18	5602.01	5683.72	-2783.00	3.30	0.856
	WAI-S collabor.	Linear	11	5050.66	5100.60	-2514.33		
		Discrete	18	5061.01	5142.72	-2512.50	3.66	0.819
	WAI-S bond	Linear	11	4245.21	4295.14	-2111.60		
		Discrete	18	4255.21	4336.92	-2109.61	4.00	0.780
WAI-S-T	WAI-S-T overall	Linear	11	2352.82	2394.31	-1165.41		
		Discrete	18	2354.50	2422.39	-2422.39	12.32	0.091
	WAI-S-T collabor.	Linear	11	2159.95	2201.44	-1068.98		
		Discrete	18	2162.13	2230.02	-1063.07	11.82	0.107
	WAI-S-T bond	Linear	11	1591.68	1633.17	-784.84		
		Discrete	18	1599.96	1667.84	-1667.84	5.72	0.573

Table B2. Comparison between the linear three-level model including the interaction term between alliance and time and the simple model without interaction

Sample	D.V.	Model	df	AIC	BIC	logLik	L.Ratio	p
WAI-S	*WAI-S overall*	Model 1	11	5591.306	5641.241	-2784.65		
		Model 2	13	5588.341	5647.356	-2781.17	6.96	0.030
	WAI-S collabor.	Model 1	11	5050.663	5100.598	-2514.33		
		Model 2	13	5046.34	5100.355	-2510.17	8.32	0.015
	WAI-S bond	Model 1	11	4245.208	4295.144	-2111.60		
		Model 2	13	4245.672	4304.687	-2109.84	3.54	0.170
WAI-S-T	*WAI-S-T overall*	Model 1	11	2352.822	2394.308	-1165.41		
		Model 2	13	2355.856	2404.885	-1164.93	0.97	0.966
	WAI-S-T collabor.	Model 1	11	2159.954	2201.439	-1068.98		
		Model 2	13	2162.883	2211.912	-1068.44	1.07	0.586
	WAI-S-T bond	Model 1	11	1591.68	1633.165	-784.84		
		Model 2	13	1594.202	1643.23	-784.10	1.48	0.477

Table B3. Model comparison of the discrete and linear three-level models using time and treatment arm as predictors of the WAI-S and WAI-S-T scores with random intercept and slope for cases with alliance ratings at all time points

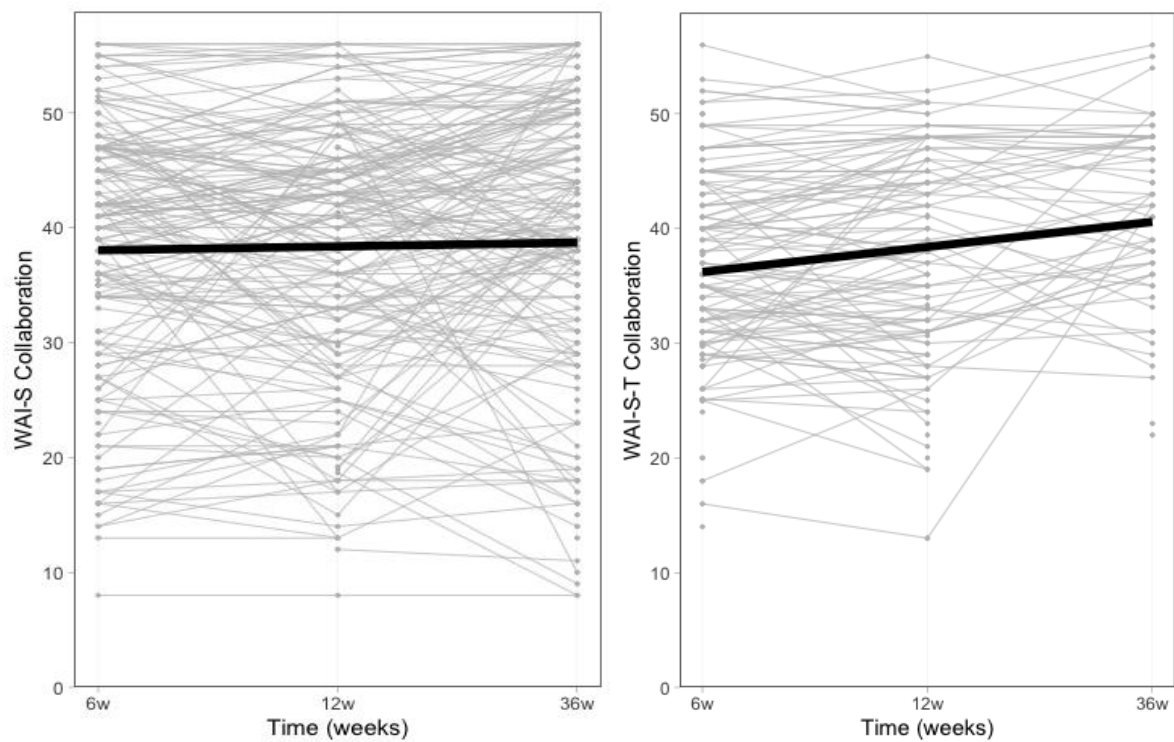| Sample	D.V.	Model	df	AIC	BIC	logLik	L.Ratio	p
WAI-S (n=109)	*WAI-S overall*	Linear	11	2588.539	2630.229	-1283.27		
		Discrete	18	2598.166	2666.385	-1281.08	4.37	0.736
	WAI-S collabor.	Linear	11	2331.442	2373.131	-1154.72		
		Discrete	18	2342.26	2410.48	-1153.13	3.18	0.868
	WAI-S bond	Linear	11	1969.68	2011.37	-973.84		
		Discrete	18	1976.222	2044.441	-970.11	7.45	0.383
WAI-S-T (n=51)	*WAI-S-T overall*	Linear	11	1093.922	1127.257	-535.96		
		Discrete	18	1101.302	1155.85	-532.65	6.62	0.469
	WAI-S-T collabor.	Linear	11	1003.176	1036.51	-490.59		
		Discrete	18	1010.551	1065.099	-487.28	6.62	0.469
	WAI-S-T bond	Linear	11	731.2933	764.6281	-354.65		
		Discrete	Failed to converge					

Table B4 Comparison between the linear three-level model including the interaction term between alliance and time and the simple model without interaction for cases with alliance ratings at all time points

Sample	D.V.	I.V	df	AIC	BIC	logLik	L.Ratio	p
WAI-S (n=109)	*WAI-S overall*	Model 1	11	2590.406	2639.676	-1283.27		
		Model 2	13	2588.539	2630.229	-1282.20	2.13	0.344
	WAI-S collabor.	Model 1	11	2331.544	2380.813	-1154.72		
		Model 2	13	2331.442	2373.131	-1153.27	2.90	0.235
	WAI-S bond	Model 1	11	1969.680	2011.37	-973.84		
		Model 2	13	1972.152	2016.422	-973.58	0.528	0.768
WAI-S-T (n=51)	*WAI-S-T overall*	Model 1	11	1093.922	1127.257	-535.96		
		Model 2	13	1096.658	1136.054	-535.33	1.26	0.532
	WAI-S-T collabor.	Model 1	11	1003.176	1036.51	-490.59		
		Model 2	13	1004.920	1044.316	-489.46	2.26	0.324
	WAI-S-T bond	Model 1	11	731.293	764.6281	-354.65		
		Model 2	13	734.878	774.2739	-354.44	0.42	0.813

Table B5. Sensitivity analyses: estimates from multilevel models predicting adolescent ratings of the WAI-S: Total score, Collaboration Subscale, and Bond Subscale (n=109).

Variables	WAI-S overall			WAI-S Collaboration			WAI-S Bond		
	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p
Fixed effect									
Intercept	47.64	2.72	0.000	31.63	1.72	0.000	15.93	1.00	0.000
Time	0.14	0.07	0.050	0.11	0.05	0.048	0.03	0.02	0.145
Arm (ref: STPP)									
Arm: BPI	12.44	3.74	0.001	8.98	2.37	0.000	3.57	1.40	0.017
Arm: CBT	16.83	3.69	0.000	12.11	2.34	0.000	4.78	0.04	0.001
Time*BPI	-0.10	0.10	0.333	-0.08	0.07	0.269	-0.03	0.04	0.499
Time*CBT	-0.17	0.10	0.051	-0.13	0.07	0.049	-0.04	0.04	0.285
Random effect (level 3)	SD			SD			SD		
intercept	3.61			2.29			0.91		
time	0.02			0.00			0.01		
Random effect (level 2)	SD			SD			SD		
Intercept	11.66			7.51			4.81		
Time	0.28			0.20			0.09		
Residual (level 1)	7.63			5.21			3.18		

Table B6. Sensitivity analyses: estimates from multilevel models predicting adolescent ratings of the WAI-S-T: Total score, Collaboration Subscale, and Bond Subscale (n=51).

Variables	Linear Model			WAI-S-T Collaboration			WAI-S-T Bond		
	b	SE b	p	Estimate	SE	p	Estimate	SE	p
Fixed effect									
Intercept	55.69	2.13	0.000	35.84	1.59	0.000	19.78	0.65	0.000
Time	0.13	0.05	0.013	0.09	0.04	0.025	0.05	0.02	0.004
Arm (ref: STPP)									
Arm: BPI	6.80	3.42	0.057	5.98	2.57	0.028	0.68	1.03	0.509
Arm: CBT	8.16	3.09	0.014	5.35	2.33	0.030	2.85	0.93	0.005
Random effect (level 3)	SD			SD			SD		
intercept	3.50			2.48			1.53		
time	0.15			0.10			0.04		
Random effect (level 2)	SD			SD			SD		
Intercept	8.84			6.67			2.23		
Time	0.18			0.14			0.06		
Residual (Level 1)	5.09			3.78			1.62		

13. Appendix C. Supplementary Materials – Chapter 7

Table C1. Comparison between the IMPACT subsamples with and without the WAI-S at 6 weeks

	IMPACT sample (465)					
	WAI-S 6 weeks missing (N=242)		WAI-S 6 weeks complete (223)			
	N	%	N	%	Chi2	p
Gender					0.16	0.686
Male	59	24.4	58	26.0		
Female	183	75.6	165	74.0		
Ethnicity					0.76	0.382
White British	190	82.3	173	79.0		
Other	41	17.7	46	21.0		
Treatment Arm					0.67	0.714
BPI	83	34.3	72	32.3		
CBT	76	31.4	78	35.0		
STPP	83	34.3	73	32.7		
	Mean	**SD**	**Mean**	**SD**	**t**	**P**
Age	15.67	1.42	15.54	1.42	-1.04	0.299
MFQ baseline	46.13	10.71	45.75	10.41	0.45	0.648
MFQ 86 weeks	23.89	16.23	21.53	15.35	0.16	0.164
P factor baseline	1.01	0.71	0.94	0.71	-1.14	0.254
P factor 86 weeks	-0.71	1.17	-0.76	1.14	-0.48	0.629
Weeks in treatment	28.02	20.20	27.92	17.14	0.01	0.960

Note: MFQ=The Mood and Feelings Questionnaire

Table C2. Comparison between the IMPACT subsamples with and without the WAI-S-T at 6 weeks

	IMPACT sample (465)					
	WAI-S-T 6 weeks missing (N=326)		WAI-S-T 6 weeks complete (139)			
	N	%	N	%	Chi2	p
Gender					1.97	0.160
Male	76	23.3	41	29.5		
Female	205	76.7	98	70.5		
Ethnicity					14.17	<0.001
White British	267	85.3	96	70.1		
Other	46	14.7	41	29.9		
Treatment Arm						
BPI	123	37.7	32	23.0	12.63	0.002
CBT	108	33.1	46	33.1		
STPP	95	29.1	61	43.9		
	Mean	SD	Mean	SD	t	P
Age	15.59	1.40	15.65	1.46	0.17	0.310
MFQ baseline	45.74	10.56	46.34	10.50	0.56	0.575
MFQ 86 weeks	23.34	16.53	21.12	14.08	1.24	0.216
P factor baseline	0.95	0.72	1.03	0.69	1.19	0.264
P factor 86 weeks	-0.70	1.18	-0.80	1.08	-0.90	0.385
Weeks in treatment	26.77	20.36	29.63	14.80	1.99	0.159

Note: MFQ=The Mood and Feelings Questionnaire

Table C3. Model comparison of the linear and logarithmic shape of the MFQ and p factor change from 12 weeks to posttreatment (86 weeks)

Sample	D.V.	Model	AIC	BIC	logLik
WAI-S	MFQ change	Linear	5800.55	5855.93	-2888.27
		Logarithmic	5734.22	5789.60	-2855.11
	p factor change	Linear	2427.65	2485.17	-1201.83
		Logarithmic	2391.02	2448.54	-1183.51
WAI-S-T	MFQ change	Linear	3504.22	3553.47	-1740.11
		Logarithmic	3471.02	3520.28	-1723.51
	p factor change	Linear	1540.03	1591.88	-758.02
		Logarithmic	1524.41	1576.25	-750.20

Table C4. Comparison between the logarithmic three-level model predicting outcomes including the interaction term between alliance and time (Model 2) and the equivalent model using alliance and time as independent predictors (Model 1)

Sample	D.V.	Model	AIC	BIC	logLik	L.Ratio	p
WAI-S	MFQ change	Model 1	5734.22	5789.60	-2855.11		
		Model 2	5736.17	5796.16	-2855.09	0.05	0.825
	p factor change	Model 1	2391.02	2448.54	-1183.51		
		Model 2	2393.00	2455.31	-1183.50	0.02	0.881
WAI-S-T	MFQ change	Model 1	3471.02	3520.28	-1723.51		
		Model 2	3472.97	3526.33	-1723.49	0.05	0.818
	p factor change	Model 1	1524.41	1576.25	-750.20		
		Model 2	1526.25	1582.42	-750.12	0.16	0.693

Table C5. Comparison of the model predicting the primary outcome (MFQ) by Prior Depression Change, Baseline severity, treatment type (Model 1) and the model including the interaction term between alliance and treatment arm

Sample	Model	AIC	BIC	logLik	L.Ratio	p
WAI-S	Model 1	5734.22	5789.60	-2855.11		
	Covariate + WAI-S X Arm	5732.16	5790.76	-2852.08	6.06	0.048
WAI-S-T	Model 1	3471.02	3520.28	-1723.51		
	Covariate + WAI-S-T X Arm	3470.95	3526.41	-1721.47	4.08	0.130

Note: Covariate include Prior Depression Change, Baseline severity, treatment type

14. Appendix D. Supplementary Materials – Chapter 8

Figure D1. Working Alliance Inventory Shortened Observer-rated version scoring sheet

1	2	3	4	5	6	7
Very strong evidence against	Considerable evidence against	Some evidence against	No evidence	Some evidence	Considerable evidence	Very strong evidence

1. There is agreement about the steps taken to help improve the client's situation.

1	2	3	4	5	6	7

2. There is agreement about the usefulness of the current activity in therapy (i.e., the client is seeing new ways to look at his/her problem).

1	2	3	4	5	6	7

3. There is a mutual liking between the client and therapist.

1	2	3	4	5	6	7

4. There are doubts or a lack of understanding about what participants are trying to accomplish in therapy.

1	2	3	4	5	6	7

5. The client feels confident in the therapist's ability to help the client.

1	2	3	4	5	6	7

6. The client and therapist are working on mutually agreed upon goals.

1	2	3	4	5	6	7

7. The client feels that the therapist appreciates him/her as a person.

1	2	3	4	5	6	7

8. There is agreement on what is important for the client to work on.

1	2	3	4	5	6	7

9. There is mutual trust between the client and therapist.

1	2	3	4	5	6	7

10. The client and therapist have different ideas about what the client's real problems are.

1	2	3	4	5	6	7

11. The client and therapist have established a good understanding of the changes that would be good for the client.

1	2	3	4	5	6	7

12. The client believes that the way they are working with his/her problem is correct.

1	2	3	4	5	6	7

Figure D2. Rupture Resolution Rating System (3RS) score sheet

Patient & session: **3RS Score Sheet** Coder:

	Time stamp:											
		0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	FREQ.
Withdrawal Markers	Denial											
	Min Response											
	Abstr Comm											
	Avoidant Story/Shift topic											
	Deferential											
	Cont/Aff Split											
	S-crit/hopeless											
	TOTAL WD											
Confrontation Markers	C. Therapist											
	Reject interv.											
	C. Activity											
	C. Parameter											
	C. Progress											
	Pt def. self											
	Control/press											
	TOTAL CF											
Resolution Strategies	Clarify misunderst											
	Change task/g											
	Ill. task/ration											
	Invite thoths/feel											
	Ackn contrib											
	Discl int exp											
	Link btw p/t											

To what degree were ruptures **resolved** over the course of the session?

1 Poor	2 Below avg	3 OK/avg	4, Good, above avg	5 Very good

Did the **therapist** cause or exacerbate ruptures in the session?

1 No	2 Maybe	3 Yes, somewhat	4, Yes moderately	5 Yes, mostly

Table D1. Framework developed to analyse the adolescent and therapist interviews at post-treatment

Framework	Positive	Negative
Outcome: What adolescent and therapist felt had changed	Adolescent's perspective	Adolescent's perspective
	Therapist's perspective	Therapist's perspective
Therapeutic relationship: Adolescent & therapist's view of their relationship, including their first impression, how it evolved, important elements/moments (both positive and negative)	Adolescent's perspective	Adolescent's perspective
	Therapist's perspective	Therapist's perspective
Therapeutic process: Adolescent & therapist's view of was significant in treatment (both positive and negative)	Adolescent's perspective	Adolescent's perspective
	Therapist's perspective	Therapist's perspective
What contributed to the outcome: Adolescent & therapist's view of what contributed to the change process (both therapy and non-therapy elements).	Adolescent's perspective	Adolescent's perspective
	Therapist's perspective	Therapist's perspective

Experience of Therapy Interview – Young Person

1. The difficulties that have brought the young person into contact with Child and   Adolescent Mental Health

-        Can you tell me how you came to be referred to the CAMHS service [use name of clinic, if known]? What was going on for you at the time?

(Try to unpack what is said, e.g. 'When you say "depressed", what do you mean by that?').

-        In what way did these things affect your life at the time? (Concrete examples - daily life, relation to others, education, feelings)

2. The young person's understanding of those difficulties

-        How do you make sense of what was going on for you at the time? (Or 'Can you tell me the story of how things came to be the way you described?')

(Possible prompts: What do you think has made things get like they were? how did the whole thing begin? Was going on at that time? How's that connected to how things became?)

3. Change

-        Compared to about a year ago, how have you been feeling/how have you been experiencing things?

[Prompt with referral to CAMHS if they don't understand about a year ago]

[E.g. of prompts: What has improved? What has got worse? (Concrete examples)]

-        In thinking about the changes you have mentioned, what are the things that contributed to those changes (concrete examples)? What has been helpful/ unhelpful?

4. The story of Therapy

-        What ideas did you have about therapy before you first met your therapist?

-        What were your first impressions of your therapist?

(How did you feel about starting therapy with them? How did you feel after the first meeting?)

-        Can you tell me the 'story' of your therapy as you see it?

(What happened next?)

Possible prompts:

- How would you describe your relationship with your therapist? How did it change during the therapy?

- Can you think of a word to describe your therapist? Can you think of a particular moment when your therapist was [word]?

- Are there any specific moments or events that you remember about the therapy?

[E.g. of prompts: Things that happened that seemed important? Things that you or the therapist did or said that you particularly remember?]

- Were your parents/carers involved in the therapy? If so, how did this affected things?

- Can you tell me about the ending of the therapy?

[Prompts: How did therapy end? How do you feel about the way therapy ended?]

- What was it like for you knowing that your therapy was a time-limited intervention?

- Looking back, how did it feel to be in therapy? What has it been like for you overall?

5. Evaluating therapy

- What were the most helpful things about the therapy? (Concrete examples).

- What kinds of things about therapy were unhelpful, negative or disappointing (concrete examples)?

- Was medication ever discussed with you?

- If you were starting therapy again, what would you like to be different?

- If a friend of yours was in difficulty or feeling depressed, do you think you would recommend that they went for therapy?

[Why/why not?]

- If you were describing therapy to a friend who had never been, how would you describe it?

6. Involvement in research

- I'd like to ask you a few questions about what it has been like being involved in the research side of the IMPACT study...

- Can you tell me about your experience of being involved in the research side of things? How did you feel about your therapy sessions being recorded?

- When you initially joined the IMPACT study, you were allocated to one of three treatments on a random basis. Looking back, how do you feel about that process? Did you have a view on which of the three you hoped to get / not get?

- Can you tell me a bit about the regular meetings with the research assistants? (Prompts: What has it been like having those meetings? Have you met different research assistants? How did that feel like? Did you ever talk about those meetings in your therapy? What was it like to attend research meetings at different points in time while you were still receiving therapy? And how do you feel now about attending research meeting after the therapy has ended?)

- Overall, what difference do you think it has made that your therapy has been part of a research study?

- Do you have any suggestion for us regarding the research side of the study?

6. Therapist

- Check whether the young person is okay with their therapist being interviewed.

15 Appendix E. Ethical Approval

NHS

National Research Ethics Service

Cambridgeshire 2 Research Ethics Committee

Victoria House
Capital Park
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09 October 2009   SECOND LETTER

Prof Ian Goodyer
Professor of Child and Adolescent Psychiatry
Section of Developmental Psychiatry
University of Cambridge
Douglas House
18b Trumpington Road
Cambridge
CB2 8AH

COPY FOR YOUR INFORMATION

Dear Prof Goodyer

Study Title:	Randomised Controlled Trial of Short term Psychodynamic Psychotherapy (STPP), Cognitive Behaviour Therapy (CBT) and Specialist Clinical Care (SCC) in adolescents with moderate to severe depression attending routine child and adolescent mental health clinics
REC reference number:	09/H0308/137
Protocol number:	3

Thank you for your letter of 09 October 2009, enclosing the amended IRAS form listed below, as referred to in the Committee's first letter of today's date.

The further information has been considered on behalf of the Committee by the Chair.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

Ethical review of research sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to

This Research Ethics Committee is an advisory committee to East of England Strategic Health Authority
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the start of the study at the site concerned.

For NHS research sites only, management permission for research ("R&D approval") should be obtained from the relevant care organisation(s) in accordance with NHS research governance arrangements. Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at http://www.rdforum.nhs.uk. *Where the only involvement of the NHS organisation is as a Participant Identification Centre, management permission for research is not required but the R&D office should be notified of the study. Guidance should be sought from the R&D office where necessary.*

Sponsors are not required to notify the Committee of approvals from host organisations.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	Version	Date
Check list		19 June 2009
Investigator CV	Prof Goodyer	19 June 2009
Summary/Synopsis	2 Flow chart attachment to PIS	05 May 2009
Questionnaire: RTSHIA		
Questionnaire: DEQ (A and S)		
Questionnaire: DES-IV		
Questionnaire: NEO-FFI		
Questionnaire: YPQ (incorporating MFQ, RCMAS, LOI, RSES and Behaviour checklist)		
GP/Consultant Information Sheets	3	27 April 2009
Questionnaire: K-SADS-PL(Depressive disorders, Depression supplement, pyschosis supplement, panic disorder supplement, attention deficit hyperactivity disorder supplement, alcohol abuse supplement)		
Questionnaire: DSC		
Questionnaire: SCL-90		
Questionnaire: WAI-S (Therapist,Client)		
Questionnaire: APQ (Child, parent, APQ-P-S, APQ-C-S)		
Questionnaire: HCAM		
Questionnaire: CDRS		
Questionnaire: CGI		
Questionnaire: HoNOSCA		
Questionnaire: ZAN-BPD		
Questionnaire: Early experiences (non-validated)	2	01 March 2006
Questionnaire: Life events (non-validated)	8	10 August 2005
Questionnaire: Friendships (non-validated)	6	01 February 2008
Questionnaire: C-SSRS		
Questionnaire: CA-SUS		
Measures Glossary	3	18 May 2009

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Questionnaire: FAD		
Questionnaire: RRS		
letter from funder (NIHR)		
Protocol		13 May 2008
REC application 26218/67654/1/699	3	19 May 2009
Response to Request for Further Information		19 June 2009
study Timeline		09 October 2009
E-mail from CI re study timeline	4	15 July 2009
Participant Information Sheet: Child 16-17		15 July 2009
Participant Information Sheet: Child 11-15	10	11 September 2009
Participant Information Sheet: Parent	10	11 September 2009
Participant Consent Form	5	11 September 2009
Participant Consent Form: assent	4	04 August 2009
Lone Working Policy	4	04 August 2009
Participant Consent Form: saliva	1	24 August 2009
Participant Consent Form: assent saliva	1	04 August 2009
Letter from UOC insurance team	1	04 August 2009
E-mail with response from Prof Goodyer		28 July 2009
Response to Request for Further Information		06 October 2009
		06 October 2009

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Now that you have completed the application process please visit the National Research Ethics Service website > After Review

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the website.

The attached document "After ethical review – guidance for researchers" gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Progress and safety reports
- Notifying the end of the study

The NRES website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

We would also like to inform you that we consult regularly with stakeholders to improve our service. If you would like to join our Reference Group please email referencegroup@nres.npsa.nhs.uk.

Yours sincerely

Dr Rowan Burnstein
Chair

Email: Ros.Cook@eoe.nhs.uk

Enclosures: "After ethical review – guidance for researchers"

Copy to: Ms Natercia Godinho,
Cambridge and Peterborough Foundation Trust
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CB2 8AH

Prof Goodyer's response to Committee, dated 9 October 2009.

with compliments:

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09/H0308/13?
Rcvd 9/10/09

To: DR. Ros Cook,
Committee Co-ordinator
Cambridgeshire 2 Research Ethics
Committee

From: PROF. IAN GOODYER.
We would be grateful if you