



**The Impact of Self-Criticism and Dependency on Adolescent  
Depression, Treatment Outcome, and Therapeutic Process in Brief  
Psychotherapies for Depression**

by

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PhD thesis submitted in fulfilment of the degree of Doctor of Philosophy in Clinical and  
Developmental Psychology

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## **Declaration**

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

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## General Abstract

**Background:** Studies in adults have suggested that personality dimensions of self-criticism and dependency convey vulnerability to depression and negatively influence treatment response. Yet, there is a dearth of studies on these personality dimensions in adolescents. This PhD research, therefore, adopts a mixed-method approach to investigate the relationship between self-criticism, dependency, depression and its treatment in youths with clinical depression.

**Methods:** Data from a pre-existing clinical trial were used, in which 465 depressed adolescents diagnosed with depression who received either cognitive behaviour therapy, short-term psychoanalytic psychotherapy, or brief psychosocial intervention were assessed at baseline, 6-, 12-, 36-week treatment end, 52-, and 86-week post-randomisation. Participants' self-criticism and dependency were measured at baseline, and the therapeutic alliance as rated by both youths and therapists was collected during the treatment. The young people were also interviewed about their expectations and experiences of the therapy after treatment. For this PhD, multiple regression, multilevel modelling, and interpretative phenomenological analysis were the major analytical approaches.

**Results:** Greater self-criticism in the adolescents was associated with maladaptive pre-treatment functioning (e.g., depression) and difficulties in engaging with the therapy (e.g., having poor ratings on the alliance and expressing mistrust in therapists during interviews), which, in turn, were associated with poorer outcomes over time. Findings for dependency were more mixed, as dependency was associated with improvements in general and social functioning during the treatment, but also with a tendency to relapse after treatment. There was some evidence for gender-incongruity, as self-criticism in girls and dependency in boys tended to associate with poorer functioning and poorer alliance as rated by therapists.

**Discussion:** Overall, findings reported in this thesis provide further evidence for the role of both self-criticism and dependency in adolescent depression, and how these personality dimensions may interact with the therapeutic process. The implications and limitations of these findings are discussed.

## Impact Statement

Unipolar major depression is a common mental disorder during adolescence associated with severe consequences such as risk and suicidal behaviour. Although a range of effective psychotherapies for adolescent depression has been recognised, a substantial number of adolescents do not recover or relapse after treatment. It is therefore crucial to further investigate the mechanisms of therapeutic change and identify predictors of treatment response to improve the treatment efficacy for adolescent depression and the life quality of those young people and their families.

One way to conduct such an investigation is through a patient-centred approach, considering whether and how patient variables influence young people's symptoms and treatment outcomes. In fact, research in adults has provided promising findings in which the theoretical-based and empirical-supported personality dimensions, self-criticism and dependency, are negatively associated with depressive symptoms and the therapeutic process. Yet, little is known about their roles in depression and its treatment in adolescents. Therefore, taking a mixed-method approach by using data from a large-scale longitudinal randomised controlled trial, the Improving Mood with Psychoanalytic and Cognitive Therapies (IMPACT) study ( $n = 465$ ), this PhD research sought to provide a systematic investigation on whether and how young people's self-criticism and dependency influence their pre-treatment functioning and symptoms, the therapeutic process, and treatment outcomes in short-term psychotherapies for depression. Four empirical studies were conducted in this regard, and promising findings were identified. Briefly, self-criticism was associated with young people's pre-treatment mental distress more consistently. Self-criticism appeared to interfere with young people's capacity to perceive, develop, and maintain a positive and strong therapeutic alliance and to engage with the therapy, which, in turn, limited their therapeutic gain in brief psychotherapies. Despite that, the negative effect of self-criticism seemed to mitigate during the therapy, and potentially effective therapeutic strategies were discussed. Mixed effects were identified for dependency. For instance, it was associated with improvements in general and social functioning during treatment but also a tendency to relapse.

This PhD research, therefore, successfully extended previous findings in adults regarding the role of personality dimensions to a large-scale clinically depressed adolescent sample. Evidence emerged to reflect young people's vulnerabilities in relation to their personality dimensions, which helped to deepen

the insight into how personality features may express before and during the treatment. The findings also provided evidence to understand how the personality dimensions might interfere with the therapeutic process, which helped to shed light on the mechanism of therapeutic change of adolescent depression in the light of personality developmental theory. Moreover, evidence suggested possible therapeutic strategies that may help youths to benefit from the therapy and cope with their underlying difficulties, which provides directions to develop more effective therapeutic techniques for those young people. In sum, the findings highlight the importance of adopting a patient-centred approach and prioritising young people's perspectives and experiences of their therapy. Based on the present findings, researchers and clinicians are suggested to consider young people's personality expressions to provide more comprehensive investigations and help to develop more effective therapeutic strategies for youths with clinical depression.

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## Table of Contents

Declaration.....	2
General Abstract.....	3
Impact Statement.....	4
Acknowledgements.....	6
List of Tables and Figures.....	12
Chapter 1 General Introduction.....	13
1.1 Adolescent depression: symptoms, prevalence, course, and outcomes .....	13
1.2 Treatment for adolescent depression: pharmacology, psychotherapy, and current issues .....	15
1.3 Self-criticism and dependency in depression: theoretical framework .....	19
1.4 Empirical evidence for personality-related vulnerabilities: early life experience and later stressful events .....	21
1.5 Empirical evidence for personality-related vulnerabilities: their role in psychotherapy ..	24
1.6 The present research.....	25
Chapter 2: The Short Version of the Depressive Experiences Questionnaire for Adolescents (DEQ-A) in Young People with Major Depressive Disorder: Factor Structure and Associations with Clinical Features and Functioning.....	27
2.1 Introduction.....	27
2.1.1 Self-criticism, dependency, and interpersonal functioning.....	27
2.1.2 Self-criticism, dependency, and intrapersonal clinical symptoms .....	28
2.1.3 The measurements of self-criticism and dependency .....	31
2.1.4 The present study .....	33
2.2 Methods.....	34
2.2.1 Participants.....	34
2.2.2 Measures .....	35
2.2.3 Statistical analysis .....	39
2.2.4 Missing data .....	41
2.3 Results.....	42
2.3.1 Factor validity and reliability of the short-version DEQ-A .....	42

2.3.2 Correlational analysis for self-criticism, dependency, intra- and inter-personal functioning .....	44
2.3.3 Regression analysis for self-criticism, dependency, and intrapersonal functioning .....	44
2.3.4 Regression analysis for self-criticism, dependency, and interpersonal functioning .....	46
2.4 Discussion .....	49
2.4.1 Factor structure and reliability of the short-version DEQ-A .....	49
2.4.2 Self-criticism, dependency, intra- and inter-personal functioning for depressed youths .....	50
2.4.3 Limitations .....	54
2.4.4 Conclusions .....	55
Chapter 3 The Impact of Pre-Treatment Self-Criticism and Dependency on the Treatment Outcome of Psychotherapy for Adolescent Depression.....	56
3.1 Introduction .....	56
3.1.1 Psychotherapeutic treatment of adolescent depression .....	56
3.1.2 Self-criticism and dependency in depression and treatment outcome of adults .....	57
3.1.3 The present study .....	60
3.2 Methods.....	60
3.2.1 Participants.....	60
3.2.2 Measures .....	61
3.2.3 Strategy for statistical analysis.....	62
3.2.4 Missing data .....	65
3.3 Results.....	65
3.3.1 Unconditional growth models for the MFQ and HoNOSCA.....	65
3.3.2 The impacts of pre-treatment personality dimensions on MFQ.....	68
3.3.3 The impacts of pre-treatment personality dimensions on HoNOSCA.....	70
3.4 Discussion .....	71
3.4.1 The negative impact of self-criticism on treatment outcome.....	72
3.4.2 The mixed effects of dependency on treatment outcome.....	73
3.4.3 Limitations .....	74
3.4.4 Conclusions .....	75



Chapter 4 Self-Criticism, Dependency, and the Therapeutic Alliance in Short-Term Psychotherapies for Adolescent Depression.....	76
4.1 Introduction.....	76
4.1.1 Self-criticism, dependency, and treatment outcome in short-term psychotherapy .....	76
4.1.2 Personality dimensions, the therapeutic alliance, and treatment outcome.....	77
4.1.3 The present study .....	80
4.2 Methods.....	81
4.2.1 Participants.....	81
4.2.2 Measures .....	81
4.2.3 Statistical analysis .....	83
4.2.4 Missing data .....	85
4.3 Results.....	86
4.3.1 The impact of pre-treatment personality dimensions on the therapeutic alliance.....	86
4.3.2 The mediation model of personality dimensions, the therapeutic alliance, and outcome .....	90
4.4 Discussion .....	92
4.4.1 Personality dimensions, the youth-rated therapeutic alliance, and treatment outcome	92
4.4.2 Personality dimensions and the therapist-rated therapeutic alliance.....	94
4.4.3 The therapeutic alliance and treatment outcome.....	95
4.4.4 Implications and limitations .....	96
4.4.5 Conclusions.....	97
Chapter 5 The Experience of Young People with High Levels of Self-criticism of Short-Term Psychotherapy for Depression: A Qualitative Study .....	98
5.1 Introduction.....	98
5.1.1 Self-criticism, depression, and its treatment outcome .....	98
5.1.2 The present study .....	100
5.2 Method .....	101
5.2.1 The study setting .....	101
5.2.2 Participants.....	101
5.2.3 Data collection .....	102

5.2.4 Data analysis .....	104
5.3 Results .....	105
5.3.1 Before entering therapy: a sense of failure, inferiority, and worthlessness .....	105
5.3.2 Start of therapy: young people held negative assumptions about their therapist as being critical and not caring, and believed that it would be difficult to speak to therapists about their internal worlds.....	106
5.3.3 During therapy: a sense of feeling being cared for and listened to enabled young people to trust their therapists more and share more about their internal worlds.....	108
5.3.4 Towards the end of therapy: a feeling of agency developed through the therapy led young people to progress in their lives and to develop a more positive sense of self .....	109
5.3.5 During/towards the end of therapy: signs of rejection, neglect, and criticism led young people to withdraw or drop-out.....	111
5.4 Discussion .....	113
5.4.1 Expressions of self-criticism before the treatment.....	113
5.4.2 Therapeutic experiences for depressed young people with intense self-criticism .....	114
5.4.3 Clinical implications .....	118
5.4.4 Limitations .....	119
5.4.5 Conclusions .....	120
Chapter 6 General Discussion.....	121
6.1 The negative role of self-criticism: pre-treatment symptoms and functioning .....	121
6.2 The negative role of self-criticism: the therapeutic alliance and outcomes .....	123
6.3 Potentially effective therapeutic strategies to address self-criticism .....	125
6.4 The mixed effects of dependency on symptoms and treatment outcome .....	126
6.5 The effect of gender-incongruent features on symptoms and the therapeutic process ..	127
6.6 Implications for further research.....	128
6.7 Implications for clinical practice.....	129
6.8 General limitations .....	130
6.9 Conclusions .....	131
References .....	133
Appendix 1 Ethics Approval.....	156

Appendix 2 The Short Version of the Depressive Experiences Questionnaire for Adolescents (DEQ-A) Used in the IMPACT Study ..... 157

Appendix 3 Semi-structured Experience of Therapy Interview – Young Person Used in the IMPACT-ME Study ..... 159

Appendix 4 Analytical Stages of the IPA Reported in Chapter Five..... 161

Appendix 5 Trial Profile of the IMPACT Study..... 162

Appendix 6 Interview Schedule Across Treatment Stages in the IMPACT-ME Study ..... 163

## List of Tables and Figures

Table 1 Key features and characteristics of self-criticism and dependency as defined in this research	22
Table 2 CFA Analysis for Evaluating and Comparing Models of the short-version DEQ-A	43
Table 3 Zero-order Correlations for self-criticism, dependency, and functioning	45
Table 4 Multiple Regression Analysis for Variables Predicting Clinical Expressions	47
Table 5 Regression Analysis for Variables Predicting C-SSRS Sub-scales	47
Table 6 Regression Analysis for Variables Predicting RCMAS, LOI and Present C-SSRS-SI by Gender	48
Table 7 Regressions for Variables Predicting Personal Attributes and Friendship	48
Table 8 Regression Analysis for Variables Predicting Self-criticism and Dependency	49
Table 9 Summary and Comparison of Unconditional Growth Models of MFQ and HoNOSCA	66
Table 10 Rate of Change and the Estimated Mean MFQ and HoNOSCA Scores Across Measurement Occasions	68
Table 11 Effects of Pre-treatment Variables on Outcomes of MFQ and HoNOSCA	69
Table 12 The therapeutic Alliance Rated by Young People and Therapists Across Time	86
Table 13 Summary of the Final Unconditional Growth Models for the Therapeutic Alliance	87
Table 14 Demographic Features, Type of Therapy Followed, and Scores on Self-criticism, Dependency and Depression for Participants Included in This IPA	103
Figure 1 Estimated Trajectory of MFQ and HoNOSCA Scores Over Time	67
Figure 2 The interaction between self-criticism/dependency and the linear change of outcomes	70
Figure 3 Estimated and Observed Trajectories of WAI-S Scores Over Time	88
Figure 4 Interaction of Self-criticism and Dependency in the Therapist-Rated Alliance and Gender	90
Figure 5 The Mediation Model of Self-criticism, Between-Participant Variance in the Patient-Rated Working Alliance, and Depressive Symptoms	91
Figure 6 Working Model Based on Group Experiential Themes (YP = young people)	105

## Chapter 1 General Introduction

Unipolar major depressive disorder (MDD) affects a substantial proportion of adolescents (Ford et al., 2003). Although a range of effective treatments and psychotherapies for adolescent depression have been proposed, many young people relapse or fail to recover after treatment (e.g., Avenevoli et al., 2015; Goodyer et al., 2017b). It is thus crucial to further investigate the mechanisms of therapeutic change and identify predictors of treatment response. One way to conduct such an investigation is through a patient-centred approach, considering whether and how patient variables, such as theoretical-based and empirical-supported personality features, influence young people's clinical symptoms and responses to therapy. In fact, there has been a long tradition of research on the role of two personality features, self-criticism and dependency, that have been implicated in depression and its treatment in adults, beyond the impacts of broad bandwidth traits such as neuroticism (e.g., Blatt, 2004d; Kane & Bornstein, 2019; Löw et al., 2020; Shahar, 2015; Smith et al., 2016). Yet, little is known about their roles in depression in adolescents. Therefore, taking a mixed-methods approach, this series of PhD studies sought to investigate whether and how young people's pre-treatment personality dimensions of self-criticism and dependency influence their pre-treatment functioning and symptoms, the therapeutic process, and treatment outcomes in short-term psychotherapies for depression. In this chapter, adolescent depression, its treatment and current issues are first discussed. This is followed by a review of the theoretical framework of self-criticism and dependency. Next, empirical evidence of the differentiation of the two maladaptive personality expressions is provided. Lastly, the general aims of the present PhD research are introduced.

### 1.1 Adolescent depression: symptoms, prevalence, course, and outcomes

Two main systems for classifying mental disorders, the Diagnostic and Statistical Manual of Mental Disorders-5 (DSM-5, American Psychiatric Association, 2013) and the International Classification of Diseases-10 (ICD-10, World Health Organization, 1992), have developed similar diagnostic criteria for MDD. According to these criteria, MDD is characterised by a cluster of psychological symptoms (e.g., depressed mood and loss of interest as marked symptoms), somatic or neurogenerative symptoms (e.g., changes in sleep and/or weight), and associated impairments in daily functioning. The clinical features of MDD are broadly similar in both adolescent and adult populations, with one exception according to DMS-5, which suggests that irritability can be a core diagnostic symptom of depression in adolescence.

MDD is associated with high prevalence during adolescence. Studies using community samples have reported that approximately 20–50% of adolescents have self-reported depressive symptoms (Kessler et al., 2001; Petersen et al., 1993). The prevalence of clinically diagnosed depression in adolescents has been found to range from 1.1% to 16.8% (Costello et al., 2003; Ford et al., 2003; Hankin et al., 1998). This variation is because of the dramatic increase in depression incidence rates during adolescence. While the reported rate of depression is generally low in childhood and early adolescence, this rate increases substantially in middle to late adolescence (Costello et al., 2003; Hankin et al., 1998). For example, a longitudinal study reported that while the prevalence of adolescent depression was 1.1% for 11-year-olds, it rose to 16.8% for those aged 18 and over (Hankin et al., 1998).

In addition to its high prevalence, adolescent depression has been found to have a long duration of an episode and a high recurrence rate. Birmaher et al. (1996) reviewed six clinical and epidemiological studies on adolescent depression and reported that the length of an episode of MDD ranges from seven to nine months. Although it has been suggested that as many as 90% of patients reporting depressive episodes entered remission within two years of initial onset (Birmaher et al., 1996), MDD has been repeatedly identified as a recurring disorder (Burcusa & Iacono, 2007; Segal et al., 2003). For example, longitudinal research and epidemiological investigations have suggested that the recurrence rate of adolescent depression is approximately 40% after two years, increasing to around 70% after five years (Lewinsohn et al., 1994; McCAULEY et al., 1993; Sanford et al., 1995; Strober et al., 1993). Indeed, in a prospective longitudinal study that followed a birth cohort ( $n = 1,037$ ) for 26 years (Kim-Cohen et al., 2003), the majority (75%) of individuals aged 26 with a diagnosis of depression experienced a previous depressive disorder in childhood or adolescence. Only 25% of this sample had experienced the onset of depression in adulthood (21 to 26 years old). This finding is consistent with retrospective studies which have suggested that adolescent depression can persist into adulthood, with a probability of recurrence of around 70% (Angold, 1988; Birmaher et al., 1996).

Adolescent depression is associated with long-term negative health outcomes. For example, depression in adolescence has been found to be related to an increased risk of broader psychopathologies in adulthood (Copeland et al., 2009; Fergusson et al., 2005). Indeed, a longitudinal study followed and

compared a group of depressed young people and their matched non-depressive psychiatric controls for 18 years (Harrington et al., 1990). The depressive group experienced significantly elevated levels of affective disorders and psychiatric hospitalisation during adulthood. In addition, several large-scale community-based studies found that adolescent depression was significantly associated with subsequent risk behaviours, such as increased smoking, bingeing, heavy drinking and drug misuse (Field et al., 2001; Glied & Pine, 2002; Naicker et al., 2013). The most serious concern arising from adolescent depression is the increased rate of suicidal ideation and suicide attempts. Approximately 70% of adolescents with MDD displayed suicidality in a three-year longitudinal study (Myers et al., 1991). Another study suggested that 85% of depressive children and adolescents demonstrated a lifetime history of suicidal ideation, with 32% attempting suicide (Kovacs et al., 1993). Most alarming was a preliminary finding in a study that traced 159 participants with a history of adolescent depression ten years after their initial research (Rao et al., 1993). Seven subjects were found to have committed suicide in the intervening period.

## **1.2 Treatment for adolescent depression: pharmacology, psychotherapy, and current issues**

A range of treatments has been developed for adolescents with depression, including pharmacological treatments and psychotherapies. Whereas the efficacy of antidepressant medications for adults has been well documented, the efficacy of antidepressants for adolescents has been contested (Moreno et al., 2007). The majority of research on the efficacy of antidepressants in adolescents has focused on selective serotonin reuptake inhibitors (SSRIs, e.g., fluoxetine, paroxetine), tricyclic antidepressants (TCAs, e.g., imipramine), and serotonin–norepinephrine reuptake inhibitors (SNRIs, e.g., venlafaxine). However, reviews and meta-analyses have suggested that antidepressants do not show a clear advantage over placebos, with fluoxetine (an SSRI) tending to be an exception (Cipriani et al., 2016; Moreno et al., 2007; Papanikolaou et al., 2006; Tsapakis et al., 2008). For instance, Moreno et al. (2007) reviewed 32 randomised placebo-controlled antidepressant trials conducted with adolescents. The results indicated that compared with placebos, TCAs generally failed to show superiority in controlling depressive symptoms, with only two randomised controlled trials (RCTs)—using fluoxetine—demonstrating significant positive effects. Another meta-analysis revealed that compared with other medications (i.e., TCAs, SNRIs), fluoxetine was the only antidepressant that was significantly more effective than a placebo in controlling depressive symptoms in young people (Cipriani et al., 2016).

Along with the potential lack of efficacy of antidepressants in children and adolescents, a significant concern relates to safety. Antidepressants may cause side effects such as insomnia, irritability, impulsivity and, most seriously, increased suicidality in children and adolescents (Cheung et al., 2005; Garland, 2004; Hetrick et al., 2012). Warnings about increased suicidality in adolescents have come from national institutes (Cheung et al., 2005; Jureidini et al., 2004). For example, in June 2003, the UK Medicines and Healthcare Products Regulatory Agency (MHRA) reported the inefficacy of paroxetine (an SSRI) in adolescents and its associated unacceptable risk of increased hostility and suicidality. Subsequently, the MHRA issued a warning against paroxetine's use with patients under the age of 18. In December 2003, the MHRA banned all SSRIs from being prescribed to youths under 18, except for fluoxetine, which has been suggested to have an acceptable risk–benefit ratio. In October 2004, after analyses of 26 RCTs related to suicide, the US Food and Drug Administration issued a black box warning for all antidepressants about the risk of increased suicidality when used by those under the age of eighteen.

Concerns about the limited efficacy and safety of antidepressants have led to a greater focus on the efficacy of psychotherapies for depressed adolescents. Researchers and clinical practitioners have discussed several evidence-based psychotherapies for the treatment of depression, such as cognitive behavioural therapy (CBT) and psychodynamic psychotherapy. Indeed, in 2015, the National Institute for Health and Care Excellence (NICE) issued a revised guidance for the treatment of moderate to severe depression in children and adolescents. While NICE continues to warn against the use of SSRIs alone, this revised guideline advises that a combination of SSRI and psychological therapy (e.g., CBT, psychodynamic psychotherapy and family therapy) could be used as a first-line treatment.

The efficacy of psychotherapies for depression has been reported in empirical research. For instance, a meta-analysis of 11 RCTs evaluated the treatment efficacy of CBT in depressed adolescents (Klein et al., 2007). The results supported the treatment efficacy of CBT for depressive symptoms with a moderate effect compared with a range of control conditions (e.g., waitlists, active treatment for depression and a medication placebo). Similarly, reviews and meta-analyses have indicated the efficacy of psychoanalytic psychotherapy for young people with mental disorders (Driessen et al., 2010; Midgley



& Kennedy, 2011; Midgley et al., 2017). Although some of the findings may have been limited by the use of smaller samples and the absence of control groups, overall they support the effectiveness of psychoanalytic psychotherapy. For example, one RCT compared the treatment efficacy of individual psychodynamic psychotherapy and family therapy with a sample of 72 depressed patients aged 9–15 (Trowell et al., 2007). Significant reductions in diagnostic rates were observed for both therapies: 74.3% of the patients who underwent psychodynamic psychotherapy and 75.7% of the patients in the family therapy group were no longer clinically depressed at treatment termination, indicated by a battery of measurement instruments (e.g., clinical interviews and standardised instruments). This RCT also identified a significant improvement in overall functioning across the two treatment groups. This finding reflects the assumption regarding psychotherapy, which proposes that given that psychotherapy aims to address the underlying maladaptive mental or affective–cognitive model, it may not only reduce depressive symptoms but also improve global functioning and life adjustments (Blatt et al., 2000; Mufson et al., 2004; Mufson et al., 1999).

A more recent large-scale longitudinal randomised controlled superiority trial in the UK, the Improving Mood with Psychoanalytic and Cognitive Therapies (IMPACT) study, provided further evidence of the treatment efficiency of short-term psychotherapy for adolescent depression (Goodyer et al., 2017a). 465 adolescents who had been diagnosed with depression were randomly assigned to receive CBT, short-term psychoanalytical therapy (STPP), or a brief psychosocial intervention (BPI). The participants' clinical symptoms (e.g., depression, anxiety, and obsessive–compulsive behaviour) and functioning (e.g., self-esteem, general and social functioning) were assessed at baseline, at 6, 12, and 36 weeks (the end of treatment), and at follow-up points of 52 and 86 weeks. The finding suggested significant and similar treatment effectiveness for depression (e.g., symptom reduction) across the three treatment conditions at the end of treatment and follow-up. Short-term psychotherapies, therefore, appeared to be efficient for young people with depression. However, it should be noted that the remission rate across treatment modalities at the treatment end was 62.77% as determined by a semi-structured diagnostic instrument (i.e., the Kiddie-Schedule for Affective Disorders and Schizophrenia Inventory, Kaufman et al., 1997), with 11% of the participants showing relapse at 86-week of follow-up. These findings suggested that the effectiveness of psychotherapy for adolescent depression is not equal for all young people, making it crucial to identify potential predictors of treatment response.

One of the obstacles to investigating therapeutic changes, namely the differences in responses to therapy, is the assumption of homogeneity among patients, that is, the assumption that patients are generally similar or have some similar qualities before they receive treatment. Researchers and clinicians have increasingly stressed the need to abandon this assumption and take patients' differences into consideration to investigate more complex questions, such as which types or characters of individuals may influence the therapeutic process and in what ways (Blatt, 2004f). Even when taking individual differences into consideration, many researchers have been methodologically limited by a lack of theoretical frameworks. Research in this field has largely employed a data-driven approach to investigate whether patients' pre-treatment demographic characteristics (e.g., age, gender, marital status) and clinical features (e.g., the severity of depression, comorbid disorders) are associated with their treatment responses to a given therapy (e.g., Asarnow et al., 2009; Barber et al., 2012; Van et al., 2008a; Van et al., 2008c). Although such an approach may detect associations between variables, it may lead to a "hall of mirrors" due to the complexity of potential interactions between variables (Blatt, 2004f, p. 278). For instance, Van et al. (2008b) reviewed 21 studies and reported mixed findings regarding the association between the pre-treatment severity of depression and the treatment efficacy of CBT: three studies reported a negative association, one study reported a positive association, and one study failed to detect any linkage. In relation to psychodynamic psychotherapy, one of the studies reviewed reported that female patients were more likely to benefit from the therapy, while another revealed the opposite finding.

These mixed results generated by research using a data-driven approach not only point to its potentially misleading findings but also demonstrate its limited clinical utility. One way to tackle the complexity of potential interactions between variables and increase clinical utility is to explore the impacts of interactions between theoretically meaningful variables. As Blatt and Felsen (1993) suggested, a theoretical framework would be considered appropriate if it can reflect not only the holistic developmental process but also the potential gaps in this process to illustrate the aetiological pathways of clinical symptoms. From this perspective, a well-established personality development theory, namely the "two configurations" theory proposed by Blatt and colleagues (e.g., Blatt & Shichman, 1983; Blatt,

1974), can provide a theoretically grounded, empirically supported framework to introduce patient variables in the investigation on therapeutic changes.

### **1.3 Self-criticism and dependency in depression: theoretical framework**

Blatt and colleagues (e.g., Blass & Blatt, 1996; Blatt & Shichman, 1983; Blatt, 1974) proposed a “two configurations” or “two polarities” model of normal and disrupted personality development. Specifically, this model suggests that a well-functioning personality evolves through a complex dialectic and synergistic interaction between two fundamental developmental dimensions, self-definition and interpersonal relatedness, across the life span (e.g., Blatt, 1997, 2007, 2008; Blatt & Luyten, 2009; Luyten & Blatt, 2013). Self-definition refers to the development of “an increasingly differentiated, integrated, realistic, essentially positive sense of self or identity”, while interpersonal relatedness refers to the development of “increasingly mature, intimate, mutually satisfying, reciprocal, interpersonal relationships” (Blatt & Luyten, 2009, p. 795). This model was initially utilised to understand different depressive experiences (e.g., depression revolving around feelings of failure and worthlessness versus depression related to experiences involving abandonment and neglect), and it has been further developed and generalised to other forms of psychopathology and the personality developmental process. As summarised by Blatt (2008), an increasingly differentiated, integrated and mature sense of self emerges from constructive interpersonal relationships, while, conversely, the continued development of increasingly mature interpersonal relationships is contingent on the development of a more differentiated and integrated self-definition and identity.

Although slight distortions in this developmental process are considered to lie within the normal range (Blatt & Luyten, 2009), severe distortions are thought to result in the maladaptive personality functions of self-criticism and/or dependency (e.g., Blatt & Shichman, 1983; Blatt & Luyten, 2009; Luyten & Blatt, 2013). Self-criticism involves an excessive emphasis on self-definition. Individuals with self-criticism generally suffer from an impaired sense of self and deep-seated feelings of failure, inferiority, unworthiness and guilt (Blatt & Zuroff, 1992). They tend to engage in harsh self-evaluation associated with a chronic fear of being criticised by and losing confirmation from significant others (Blatt & Zuroff, 1992). Consequently, individuals who experience self-criticism tend to strive for a sense of autonomy and control and pursue excessive and perfectionist standards for achievement. However, precisely due

to their tendency for self-criticism, such individuals may feel little lasting satisfaction even if they do achieve their goals.

Dependency involves an overemphasis on interpersonal relatedness (Blatt & Luyten, 2009). This personality dimension is generally characterised by the fear of being abandoned, insecurity about significant others, and a sense of self-worth that is contingent on the support and care of others (Kopala-Sibley & Zuroff, 2014). Individuals with dependency tend to value others primarily for their ability to provide care, comfort and satisfaction. Furthermore, individuals with dependency tend to rely on others to supply and preserve their sense of well-being. Therefore, they have been found to experience great difficulties in expressing anger, as they fear the loss of need-gratification and closeness provided by others (Blatt & Zuroff, 1992). In the extreme, these two personality dimensions give rise to so-called “introjective” or “anaclitic” types of psychopathology, characterised by excessive self-criticism and dependency, respectively (Blatt et al., 2001).

Researchers with different theoretical orientations have articulated similar personality developmental frameworks or theories themed around the two fundamental configurations of self-definition and interpersonal relatedness (Luyten & Blatt, 2016). These different frameworks and theories are suggested to reflect different levels or aspects of the two configurations (see detailed discussion in Luyten & Blatt, 2016). For example, similar to Blatt, Beck (1983) taking a cognitive behavioural perspective, proposed that the general personality development process is derived from a balance between autonomy, or an individual's investment in their sense of self, and sociotropy, or investment in social interaction. By focusing on the motivation structure of the development process, self-determination theory (Deci & Ryan, 2008) suggests individuals strive to meet the need for self-control and personal achievement (i.e., autonomy and competence) as well as the need to be related to others (i.e., relatedness). Based on considerations of interpersonal interactions, contemporary interpersonal theory suggests that the dynamic pattern of interpersonal experience is developed through security, or the anxiety-free condition regarding self-esteem, and integrating tendency, which refers to the mutual pursuit of satisfaction of both sides in interpersonal relationships (Sullivan, 1947). Similarly, researchers further developed the attachment theory to describe the internal working models when relating to others (e.g., Bartholomew, 1990; Mikulincer & Shaver, 2007) and identified two underlying dimensions of insecure attachment

behaviours: avoidance and anxiety. Attachment avoidance is characterised by “discomfort with closeness... [and] depending on others” (Mikulincer & Shaver, 2007, p. 87), and has been suggested to overlap with the self-definition and autonomy dimensions (Luyten & Blatt, 2011, 2016). Attachment anxiety, on the other hand, is characterised by “fear of rejection and abandonment” (Mikulincer & Shaver, 2007, p. 87), which has been proposed to relate to the notions of relatedness and sociotropy (Luyten & Blatt, 2011, 2016).

In this PhD thesis, definitions in line with Blatt’s theory (Blatt, 1974) were mainly adopted. The term “self-criticism” was used to reflect dysfunctional development in the dimension relating to self-definition and the term “dependency” was used to reflect maladaptive attitudes in the dimension of interpersonal relatedness. Based on previous literature (e.g., Blatt, 1997; Blatt, 2004e; Blatt & Luyten, 2009; Blatt & Zuroff, 1992; Deci & Ryan, 2008; Kopala-Sibley & Zuroff, 2014; Murphy & Bates, 1997; Zuroff & Fitzpatrick, 1995), the author summarised key features and characteristics of self-criticism and dependency that have been adopted in this research, in Table 1.

#### **1.4 Empirical evidence for personality-related vulnerabilities: early life experience and later stressful events**

In line with the theoretical framework outlined above, a range of empirical studies supports the differentiation of self-criticism and dependency and their roles in depression. Both retrospective and longitudinal studies suggest that self-criticism and dependency evolve from maladaptive early child–caregiver relationships. Specifically, research using samples with Western and non-Western cultural backgrounds has consistently indicated that demanding and intrusive caregiving characterised by excessive authority, control, and criticism tends to induce children’s susceptibility to self-criticism, while caregiving that provides inconsistent nutrition, care, and support is related to children’s dependency (e.g., Ahmad & Soenens, 2010; Blatt, 2004c; Campos et al., 2010; Cheng & Furnham, 2004). For example, in a retrospective study, McCranie and Bass (1984) found that while participants with self-criticism recalled both parents having strict control with an emphasis on achievement, participants with high dependency perceived their mothers as dominant and having strict control with an emphasis on conformity. While parental control appeared to be a general risk factor in this study, it seems that different types of parental control (i.e., achievement-oriented versus dependency-oriented

control) tended to lead to distinct problematic personality expressions, which is consistent with the findings of a more recent cross-sectional study using an adolescent sample (Soenens et al., 2012). While the finding may be limited by their retrospective or cross-sectional nature, longitudinal studies have provided further evidence of the effects of problematic caregiver-child relationships. For example, You et al. (2017) followed 3,600 adolescents over six months and found that young people’s perceptions of hostile and coercive parental behaviours were significantly associated with their self-criticism at the following measurement points. Similarly, Thompson et al. (2012) followed an adolescent sample for two years and indicated that lower levels of emotional and instrumental support from parents predicted elevated levels of dependency and self-criticism.

Table 1 Key features and characteristics of self-criticism and dependency as defined in this research

	Self-criticism	Dependency
Developmental task	Self-definition	Interpersonal relatedness
Emotional expressions	Feelings of guilt, inferiority, and low self-worth	Fear of being abandoned, insecurity about significant others
Definition of self	Definition through a sense of agency, autonomy, control, and independence that comes from self-achievement and being recognised, ascertained, and confirmed by others	A sense of well-being that is contingent on the support and care of others
Interpersonal patterns	Fear of criticism from others, mistrust in close relationships and difficulties disclosing aspects of inner life or vulnerable experiences	Putting considerable effort into establishing and maintaining close relationships and avoiding confrontational assertions
Cognitive style	Focus on action, sequential processing, overt behaviour, manifestation, consistency and causality	Focus on affect, simultaneous processing, and cohesive synthesis of elements
Underlying motivations	Excessive striving for self-control and personal achievement	An intense need to be related to others
Attachment style	Fearful-avoidant attachment	Anxious attachment
Patterns of stress generation	Distress comes from events related to a sense of frustration and failure	Distress comes from interpersonal separation and loss

Self-criticism and dependency are suggested to be associated with different sensitivity to stress and patterns of stress generation (Blatt, 2004e). Numerous studies have reported a general pattern whereby individuals with high levels of dependency are more sensitive to negative events related to interpersonal

issues, whereas individuals with self-criticism tend to show greater vulnerability to events relating to achievement and failure in particular (e.g., Besser & Priel, 2011; Campos et al., 2018; Hewitt et al., 1996). For example, Besser and Priel (2011) investigated 233 adult participants and found that dependency predicted negative affect after interpersonal rejection, while self-criticism predicted negative affect after achievement failure and was associated with more negative meaning-making regarding failure. In addition, self-criticism seems to be associated with greater sensitivity for a wider range of life stressors compared to dependency (e.g., Blatt, 2004e; Hammen et al., 1985; Priel & Shahar, 2000; Zuroff et al., 1990a). For example, Hammen et al. (1985) followed 93 college students for four months and found that individuals with dependency tended to develop depressive symptoms after negative interpersonal events. However, for individuals with self-criticism, although depression was mainly provoked by negative events concerning achievement, there was a non-significant difference between the effects of the two types of events on depression. Similarly, Priel and Shahar (2000) followed 182 young adults over nine weeks and found that dependency was associated with increased distress only after interpersonal stress, while self-criticism was associated with increased general distress and decreased social support over time.

A possible explanation of the above findings is that individuals with self-criticism tend to assimilate a range of events or experiences into an established self-critical schema (Blatt, 2004e). For example, for self-critical individuals, conflict in romantic relationships may stem from concern about the loss of recognition from significant others, which may increase their sense of self-criticism and emotional distress. It is also possible that the self-critical schema may actively generate stress. For example, it has been proposed while dependency is characterised by striving to maintain close relationships with others, self-criticism is associated with more negative or ambivalent attitudes towards social interaction, as they may fear losing autonomy and control or being criticised by others (Blatt, 2004e). Such features may provoke stress for individuals with self-criticism in their daily communication with others as they may worry about being judged if they share feelings and experiences with others. In addition, the emphasis on achievement and the sense of control may also impede the development of a social network for those individuals. Indeed, Santor and Zuroff (1998) reported that when facing threats to resources shared with friends, individuals with dependency tended to compromise and relinquish control over the resources to minimise social conflict, while individuals with self-criticism tended to actively strive to retain the

resources even at the expense of a close relationship. This is consistent with findings from longitudinal studies, which have suggested that individuals with self-criticism receive less social support than their counterparts with dependency (e.g., Dunkley et al., 2009; Priel & Shahar, 2000; Shahar & Priel, 2003). The reduced levels of social support received by individuals with self-criticism potentially further increase their difficulties in coping with stressors and thus lead them to perceive more increased distress.

### **1.5 Empirical evidence for personality-related vulnerabilities: their role in psychotherapy**

Studies have suggested that self-criticism and dependency are not only associated with different early life experiences and later stressors; they may also have different impacts on short-term psychotherapies. The Treatment of Depression Collaborative Research Program (TDCRP) study was among the first studies to demonstrate the impact of both personality dimensions on both the outcome and process in psychotherapies for depression. In this study, the efficacy of short-term (16-week) treatments for adult patients diagnosed with depression ( $n = 250$ ) was investigated (Elkin et al., 1989). The participants were randomly allocated to interpersonal psychotherapy, CBT, antidepressant medication (imipramine) with clinical management (as a standard reference condition), and placebo with clinical management (as a double-blind control condition). While the primary results revealed a significant but similar therapeutic gain (e.g., reduction of symptoms, improvement of global functioning and social adjustment) across treatment groups at the end of treatment, the introduction of patients' pre-treatment personality vulnerabilities helped to shed light on the therapeutic changes. While pre-treatment dependency traits showed a tendency to be positively associated with treatment outcomes, pre-treatment self-criticism traits significantly predicted negative outcomes across all four treatment conditions (Blatt et al., 1995). In addition, pre-treatment self-criticism appeared to impede therapeutic gain in the latter half of the treatment (Blatt et al., 1998), and this negative effect was observed across outcomes rated by participants, therapists and independent clinical evaluators (Blatt et al., 1995).

As previously discussed, self-criticism is believed to be associated with interpersonal impairments (e.g., Dunkley et al., 2009; Priel & Shahar, 2000; Shahar & Priel, 2003). Accordingly, researchers from the TDCRP study tried to understand the detrimental impacts of self-criticism through its role in social relationships within the therapeutic setting (i.e., the therapeutic alliance) and outside the therapeutic setting (i.e., social network) (Blatt et al., 1996b; Shahar et al., 2004a; Zuroff et al., 2000). Two



significant mediation models were identified. The negative association between pre-treatment self-criticism and therapeutic gain was partially mediated by patients' failure to establish a strong therapeutic alliance as the treatment progressed (Zuroff et al., 2000). Moreover, pre-treatment self-criticism predicted a less supportive social network, which in turn was associated with a smaller reduction in clinical symptoms at the end of treatment (Shahar et al., 2004a). These two mediators fully accounted for the significant part of the effects of self-criticism on outcomes (Shahar et al., 2004a). These findings provide direct evidence of the detrimental role of self-criticism in short-term therapy for depression. Self-criticism appears to limit patients' capacity to contribute to adaptive interpersonal relationships both within and outside the therapeutic process, thereby interfering with short-term psychotherapy. A more detailed discussion of findings regarding the effects of self-criticism and dependency on depression and its treatment is provided in the following chapters.

## **1.6 The present research**

In summary, Blatt's two polarities or two configurations model of personality development provides a theoretical-based and empirical-supported theoretical framework to understand typical and atypical personality development. The distinction between self-criticism and dependency is supported by empirical evidence on their associated early life experiences, vulnerability stressors, social interaction patterns, and outcomes of short-term psychotherapies. By introducing these two personality dimensions, previous research has provided considerable insights into the process of therapeutic change in depression. However, as described in subsequent chapters, the majority of research in this area has been done in adults. Adolescent depression has been largely neglected, despite its high prevalence and often profound long-term negative outcomes.

Accordingly, the present PhD research determined to focus on adolescent depression and adopt a mixed-method approach to explore whether and how young people's pre-treatment personality traits, namely self-criticism and dependency, influence their symptoms and therapeutic outcome in short-term psychotherapies. Short-term psychotherapies are the current focus as this approach is expected to have greater practical value. The present PhD research drew on data from the IMPACT study which is a clinical trial that evaluated the treatment effectiveness of short-term CBT, STPP, and BPI on clinically depressed adolescents ( $n = 465$ , Goodyer et al., 2017), as well as the IMPACT-ME study (Midgley et

al., 2014), in which a sub-sample of participants from the IMPACT trial were interviewed both before and after therapy. Both quantitative data (e.g., measures of symptoms and functioning) and qualitative materials (e.g., interviews with young people) were collected across these two studies, thus qualifying a mixed-method approach.

This PhD research first aimed to explore whether and how young people's personality vulnerabilities are associated with their clinical symptoms and functioning before treatment (chapter 2). Secondly, the author asked whether self-criticism and dependency are associated with the treatment outcomes of short-term psychotherapies (chapter 3). Thirdly, in light of previous findings for adults, this PhD research investigated whether self-criticism and dependency influence the therapeutic alliance as rated by both young people and their therapists, and whether the potential associations explain or mediate the impacts of personality dimensions on treatment outcomes (chapter 4). Finally, this PhD research aimed to in-depth explore young people's therapeutic experiences to understand how their personality features express and potentially interfere with the therapeutic process by analysing their interviews after the therapy (chapter 5). This is then followed by a chapter with a general discussion of findings from this PhD (chapter 6). A detailed discussion of the research questions, their rationale, and the specific hypotheses is provided in each of the respective chapters.

## **Chapter 2: The Short Version of the Depressive Experiences Questionnaire for Adolescents (DEQ-A) in Young People with Major Depressive Disorder: Factor Structure and Associations with Clinical Features and Functioning**

### **2.1 Introduction**

Self-criticism and dependency, as two maladaptive personality expressions, have drawn increased research attention as vulnerability factors for psychopathology in adult populations. As discussed in the previous chapter, a considerable body of research has demonstrated the difference between dependency and self-criticism in terms of associated life experiences (e.g., Blatt, 2004c, 2004e; Thompson et al., 2012), social interactions (e.g., Blatt & Zuroff, 1992; Dunkley et al., 2009), clinical expressions (e.g., Blatt, 2004b; Smith et al., 2016), and treatment outcomes (e.g., Blatt, 2004f). Whilst there is a growing body of research that has investigated the role of these personality dimensions in explaining vulnerability to psychopathology in adolescents, most of this research has been conducted in non-clinical samples. The present study aimed to extend these findings into a clinical sample of young people diagnosed with depression ( $n = 465$ ) drawing on data from the Improving Mood with Psychoanalytic and Cognitive Therapies (IMPACT) study (Goodyer et al., 2017b). In what follows, the author first discusses previous findings on how self-criticism and dependency are associated with interpersonal functioning and intrapersonal clinical symptoms. Next, assessment approaches within this field are discussed. This is followed by a summary of the research aims as well as hypotheses as part of this chapter.

#### **2.1.1 Self-criticism, dependency, and interpersonal functioning**

The definition of self-criticism and dependency, as well as their associated early life experience and later attachment styles have been discussed in the previous chapter. Briefly, self-criticism is proposed to involve an overemphasis on self-definition, and is expressed as excessive preoccupations with self-worth and autonomy (Blatt & Luyten, 2009). Self-critical features typically involve feelings of guilt, low self-worth, failure, and excessive needs to ascertain, confirm and preserve autonomy. Dependency, on the other hand, reflects a distorted overemphasis on interpersonal relatedness, and is characterised by maladaptive concerns on interpersonal relatedness, such as fear of being abandoned, preoccupied with past, current and future disruptions on close relationships (Blatt & Zuroff, 1992).

The two maladaptive personality expressions are generally assumed to derive from negative early experiences. Self-criticism has been suggested to associate with critical, psychologically controlling parenting, and a tendency for parents to express approval and love contingent on whether their children meet high standards (Bleys et al., 2018). Dependency, on the other hand, generally relates to controlling, overprotective parenting, and a tendency for parents to show love and approval contingent upon children's expressions of love (Campos et al., 2010). The two personality dimensions also seem to influence individuals' ways of relating to others (Blatt & Zuroff, 1992). Studies using samples of college students suggest that self-criticism tends to relate to more severe impairments in social interactions such as social isolation (Aube & Whiffen, 1996; Santor & Zuroff, 1997, 1998), which is consistent with the self-critical features of emphasising autonomy and fear of being criticised by others (Blatt & Zuroff, 1992). Conversely, dependency is suggested to associate with greater investment in establishing and maintaining interpersonal relationships, even at the cost of self-affirmation (Santor & Zuroff, 1998).

### **2.1.2 Self-criticism, dependency, and intrapersonal clinical symptoms**

The majority of studies regarding the role of dependency and self-criticism in psychopathology have focused on mood disorders. Cross-sectional (e.g., Campos et al., 2010; Iancu et al., 2015; Shahar & Gilboa-Shechtman, 2007), longitudinal studies (e.g., Cohen et al., 2013; Kopala-Sibley et al., 2017; Kopala-Sibley et al., 2015), and meta-analysis (Smith et al., 2016) have indicated self-criticism and/or dependency are associated with elevated levels of depression and anxiety in both adolescent and adult samples, beyond the impacts of the broad bandwidth trait of neuroticism (e.g., Dunkley et al., 2009; Smith et al., 2016). Self-criticism tends to be a more pronounced vulnerable factor for anxiety compared to dependency in adult populations (Iancu et al., 2015; Shahar et al., 2015; Shahar & Gilboa-Shechtman, 2007), while in adolescents, dependency seems to associate with more severe anxiety symptoms (Cohen et al., 2013; Kopala-Sibley et al., 2017). The association between dependency and anxiety symptoms during adolescence has also been mentioned by Kopala-Sibley et al. (2015), and they suggested dependency may capture the concerns when youths trying to transfer from having their caregivers as main attachment figures to developing attachments to peers and/or romantic partners.

Findings generally indicate self-criticism has a stronger association with depressive symptoms than dependency (e.g., Cohen et al., 2013; Kopala-Sibley & Zuroff, 2014; Sherry et al., 2014). For example,

in a meta-analytic study, Nietzel and Harris (1990) analysed 20 cross-sectional and 4 prospective studies with adult samples. While dependency was associated with depression with a small effect size, self-criticism displayed a medium effect size. More recently, Smith et al. (2016) conducted a meta-analysis based on 10 longitudinal adult studies. After controlling for baseline depression and neuroticism, baseline self-criticism was still significantly associated with depressive symptoms in the follow-up stage. As noted, self-criticism is proposed to associate with a defensive interpersonal orientation to protect the vulnerable sense of self, such as being socially isolated and involved in negative social integrations (Dunkley et al., 2006; Dunkley et al., 2009). These features may lead individuals with self-criticism to perceive less social support, which in turn, may increase their emotional distress and depressive symptoms (Dunkley et al., 2009; Shahar et al., 2004b; Shahar & Priel, 2003). Indeed, Dunkley et al. (2009) followed an adult clinical sample for 4 years and found that the association between year-1 self-criticism and year-4 depression as well as global psychosocial impairments could be explained by year-3 negative perception of social support and social interactions.

The more consistent negative role of self-criticism is also reflected in broader clinical symptoms. Although longitudinal studies and meta-analysis have shown that self-criticism and dependency are both implicated in two severe consequences of clinical depression in young people, namely self-harm (Cohen et al., 2015; Glassman et al., 2007; Xavier et al., 2017) and suicidality (Fazaa & Page, 2003; O'Connor, 2007; Smith et al., 2018; Werner et al., 2019), again, self-criticism emerged as a stronger factor. In a sample of college students, for example, Fazaa and Page (2003) found individuals with dependency tended to treat suicide as a way of communication, and they tended to express lower suicidal intent and lethality. Conversely, individuals with self-criticism seemed to regard suicide as a means of terminal escape, showing more lethal suicide attempts. Self-criticism has also been shown to relate to more externalising problems, such as aggressive, antisocial, and oppositional behaviours (e.g., Campos et al., 2014; Leadbeater et al., 1999; Vandenkerckhove et al., 2019). It is possible that the intense desire to develop or protect a positive sense of self may increase the possibility for individuals with self-criticism to adopt confrontation coping strategies (Dunkley et al., 2006), such as being defiant and aggressive to others (Leadbeater et al., 1999), which may increase their likelihood of reporting externalising problems.

Although these findings suggest that self-criticism and dependency are promising factors to explain vulnerability to depression and psychopathology more generally, a number of important limitations that need to take into account. Firstly, research in this area tended to emphasise on “main effects” of self-criticism or/and dependency, but not on potential interactions between these two-personality-related vulnerabilities. However, from a theoretical perspective, self-criticism and dependency can operate synergistically, as psychopathology implies disruptions on the synergistic and dialectic interaction between relatedness and autonomy. Consequently, it is possible that one personality vulnerability interacts with the other one, resulting in potentially greater adverse effects on psychopathology when compared with the risk brought by a solo personality vulnerability. Yet, few studies have investigated the interaction effect, and those that have been investigated have yielded inconsistent findings. While some studies reported a significant interaction between dependency and self-criticism on mood disorders (Mongrain & Leather, 2006; Rosenfarb et al., 1998), some failed to detect the effect (Fichman et al., 1994; Luthar & Blatt, 1993; Mongrain & Zuroff, 1995), which suggests the need to further explore this potential interaction using design with more statistical power (e.g., more accurate measurement instrument and large sample size). The investigation of the interaction effect may be particularly important in adolescent research, as adolescence is a developmental period involving intense integration of two fundamental tasks of interpersonal relatedness (e.g., peer relationship) and self-identify (Schore, 2015).

Furthermore, much research in this area has neglected the potential role of gender. Evidence suggests that gender difference could be observed in expressions of dependency and self-criticism (Blatt, 2004d). It has been suggested while women have been reported to associate more with interpersonal issues, men tend to become preoccupied with self-critical concerns (Blatt, 2004a). One possibility is that Western societies tend to value attachment and relatedness in females, while autonomy and self-definition tends to be valued in males (Luyten & Blatt, 2013). Consequently, gender incongruence (i.e., higher levels of dependency in men or self-definition in women) has been suggested to be associated with an increased risk of psychopathology, as such features may diminish the self-identity and lead to explicit and implicit criticisms from others (Blatt, 2004d; Luyten et al., 2007). However, few empirical studies in Western societies and worldwide, especially adolescent ones, have tested the gender role, suggesting that further research is needed.

Finally, as noted, the majority of studies have focused on the adult population. Given that the theoretical framework of personality development essentially implies a life-span developmental focus, more research is needed in adolescent populations. Moreover, there is a dearth of studies that have investigated the validity of this personality development approach in clinical samples and clinically depressed young people in particular, as this approach was initially proposed for depression and then extended to the broader psychopathology. Although findings on vulnerability research in non-clinical samples could be justified as investigations for risk factors before clinical onset, and such research could provide key candidates of risk factors for clinical samples, it may be inadequate to simply extrapolate the findings from non-clinical samples to clinical ones (Coyne et al., 2004; Coyne & Whiffen, 1995). The concerns regarding the dearth of research on clinical samples are also reflected in debate on the reliability of measurement for self-criticism and dependency, which is discussed in detail in the following.

### **2.1.3 The measurements of self-criticism and dependency**

Variety of measurements for assessing self-critical and dependent features have been developed and evaluated, for instance, the Depressive Experiences Questionnaire (DEQ; Blatt et al., 1976), the Sociotropy-Autonomy Scale (Beck et al., 1983), the Dysfunctional Attitude Scale (Weissman & Beck, 1978), and the Personal Style Inventory (Robins & Ladd, 1991). One of the most commonly used measures is the one developed by Blatt and colleagues, the DEQ and its derivative of DEQ-Adolescent version (DEQ-A; Blatt et al., 1992). As the name implies, the DEQ was initially developed using clinical reports that described life experiences of patients with depression. However, given that the DEQ is designed to assess a wide range of life experiences rather than to evaluate specific depressive symptoms, it is expanded to assess personality vulnerabilities on both typically and atypically developed populations.

The original DEQ was intended for the adult population and comprised 66 items on a 7-point Likert scale. Items assess issues including a distorted or depreciated sense of self and others, helplessness, egocentricity, fear of loss, ambivalence, difficulty in dealing with anger, self-blame, guilt, loss of autonomy, and distortions in family relations (Blatt & Zuroff, 1992). The original DEQ were then revised and simplified into 66 items for the DEQ-A to make the scale appropriate for the adolescent

population (Blatt et al., 1992). Principal components factor analysis for DEQ and DEQ-A identified the same three naturally occurring sub-factors across gender by using samples of 660 adult college students and 601 high school students aged between 12 and 18 years (Blatt et al., 1976; Blatt et al., 1992). The first factor, self-criticism, involves items that reflect distorted overemphasis on self-definition and self-worth. The second factor, dependency, consists of items that capture maladaptive concerns on issues of interpersonal relatedness. The last factor, efficacy, could be regarded as an adaptive function, as it involves items reflecting individuals' sense of confidence about their capacities and resources. Given that the efficacy factor was beyond the focus of current research, the following discussion focuses on self-criticism and dependency factors.

Instead of selecting items loading high and differently on each factor, the original DEQ and DEQ-A contain items showing high loadings on multiple factors, and items without high loadings on any one factor (e.g., several item loadings were lower than .40). The straightforward unit-weight scoring method is then not appropriate. Correspondingly, Blatt et al. (1976) proposed a scoring programme to calculate standardised factor scores by using the mean, standard deviation and factor score coefficients. Several researchers have doubted the complexity of the scoring process (Desmet et al., 2009), and short forms of DEQ measures with unit-weight scoring have been developed, such as the Reconstructed DEQ (Bagby et al., 1994) and the short version of DEQ-A (Fichman et al., 1994).

Despite the wide acceptance of the DEQ series measures, some researchers questioned its validity. Concerns about the factor structure of DEQ measures were first raised from the relatively high correlation between dependency and self-criticism in studies using the unit-weight scoring method. Such correlations between two factors were generally small to moderate in non-clinical samples, and the factors tended to show moderate to high correlations in clinical samples (Abela et al., 2007; Brown & Silberschatz, 1989; Coyne & Whiffen, 1995; Enns et al., 2003; Fichman et al., 1994; Kopala-Sibley et al., 2017). Given that the overly high correlation questions the independence of dependency and self-criticism, criticisms have then been proposed for the factor structure of DEQ (Coyne et al., 2004; Coyne & Whiffen, 1995; Viglione Jr et al., 1990). While high correlation indeed may bring pragmatical issues (e.g., hindering the observation of different impacts among personality dimensions), the author argues that it does not necessarily conflict with the theoretical framework. The personality development theory



proposed by Blatt (1974) emphasised a synergistic interaction between interpersonal relatedness and self-definition. The development of one dimension is proposed to be contingent on the levels of maturity of the other dimension, and thus slightly high correlation in clinical samples is not against the theoretical expectation. Indeed Zuroff et al. (2004b) suggested a threshold of .60 for correlation between factor scores of dependency and self-criticism to ensure the theoretical and pragmatical validity.

Another concern about the validity of DEQ measures has been raised from factor analysis studies. The factor structure of the DEQ and DEQ-A series measures has generally been stably replicated in non-clinical samples (e.g., Blatt, 2004a; Jerdonek, 1980; Zuroff et al., 1983; Zuroff et al., 1990b). The factors, however, failed to emerge clearly in studies using clinical samples (Viglione Jr et al., 1990). For example, Jerdonek (1980) indicated that only two factors emerged in an adult psychiatric sample. They labelled the first factor as Dysphoric Experience, which consists of items loaded high in the original dependency and self-criticism factors. The other factor was labelled as Psychosocial Competence and corresponded to the original efficacy factor. More recently, several studies provided evidence to support the construct validity of DEQ in clinical samples (Campos et al., 2013; Desmet et al., 2009). For example, Desmet et al. (2009) supported the two-factor structure of the DEQ by evaluating the convergence between dependency and self-criticism factors with clinicians' ratings on an outpatient sample. However, few studies have evaluated the factor structure of the DEQ-A on large clinical adolescent samples, which suggests the need for more studies.

#### **2.1.4 The present study**

The present study, therefore, has two aims: (1) to investigate the factor structure and reliability of the DEQ-A on a large clinical sample of depressed adolescents, and (2) to investigate whether self-criticism and dependency, either alone or in interaction (i.e., with each other and with gender), associate with indices of a wide range of intrapersonal functioning (i.e., depression, anxiety, antisocial behaviour, obsessional-compulsion, risk-taking and self-harm behaviour, suicidality, global functioning, self-esteem, rumination and general emotion states) and interpersonal functioning (i.e., perceived parenting, family functioning and friendship by adolescents) in theoretically expected ways among a large sample of clinically depressed adolescents.

Instead of using the original DEQ-A, the present study focused on validity and reliability evaluations of its short form (Fichman et al., 1994), given that the short version of DEQ-A has been widely used for its great practical value. Based on the theoretical framework and previous empirical findings, it was hypothesized to obtain a two-factor structure of self-criticism and dependency with adequate reliability for the short version of DEQ-A. While self-criticism and dependency were both hypothesized to confer vulnerability in functioning, it was assumed that self-criticism would show more consistent negative impacts (e.g., associated with more severe depression and impairments). Moreover, it was expected to observe an interaction between two personality dimensions, and their interaction with gender following the assumption of gender incongruence effect as discussed earlier.

## **2.2 Methods**

### **2.2.1 Participants**

The present study drew on data from the Improving Mood with Psychoanalytic and Cognitive Therapies (IMPACT) study (Goodyer et al., 2017b), which is a randomised controlled trial investigating the effectiveness of short-term psychotherapies in adolescents with major depressive disorder. Adolescents who were diagnosed with DSM-IV major depression and who were aged between 11 and 17 years were recruited from 15 National Health Service child and adolescent mental health service clinics across three regions of the UK: East Anglia, North London and North-west England (Manchester and the Wirral). Participants were excluded from the study if they (1) had generalised learning difficulties, (2) had pervasive developmental disorders, (3) were pregnant, (4) were unable to stop taking another medication that may interact with a selective serotonin reuptake inhibitor, (5) had abusing substances, or (6) had a primary diagnosis of bipolar type I, schizophrenia or an eating disorder. Overall, 470 adolescents were recruited. Five adolescents withdrew from the study after randomisation, leaving 465 participants who were included in the analysis. The full details of the inclusion and exclusion criteria, as well as the recruitment and research procedure, can be found elsewhere (Goodyer et al., 2017b).

A wide range of assessments was conducted in IMPACT study to monitor changes on participants' symptoms and functioning during treatment (at baseline, 6-, 12- and 36-week) and long-term follow up (52- and 86-week post-randomisation). According to current research aims, only the baseline IMPACT data were used. Participants in the current sample aged from 11.30 to 17.99 (mean = 15.61, standard

deviation, SD = 1.42). There were 348 female participants with a mean age of 15.72 (SD = 1.31), and 117 male participants with a mean age of 15.28 (SD = 1.67). The majority of participants (80.7%) were Caucasian and British. Participants' comorbid diagnoses were screened by a semi-structured interview measurement of the Kiddie-Schedule for Affective Disorders and Schizophrenia Present and Lifetime version (Kaufman et al., 1997). There were 225 participants (48%) who received comorbid psychiatric diagnoses. Of these, 86.67% of participants had less than two comorbidities. The most frequent comorbidities that account for over 80% of diagnoses were generalised anxiety disorder, social phobia, oppositional defiant disorder, specific phobia, post-traumatic stress disorder and separation anxiety disorder.

## **2.2.2 Measures**

### ***2.2.2.1 Personality dimensions***

Dependency and self-criticism were measured by the short version of DEQ-A<sup>1</sup> (Fichman et al., 1994). This 7-point, 20-item version of the DEQ-A was shortened from the original version of 66-item DEQ for adolescents (Blatt et al., 1992). Since the current study focuses on the personality dimensions of dependency and self-criticism, only these two subscales were used (with 8-item for each sub-scale). Higher scores in each sub-scale reflect more maladaptive personality expressions in the interpersonal relatedness or the self-definition dimensions.

### ***2.2.2.2. Indices of intrapersonal functioning***

*Depression.* The Mood and Feelings Questionnaire (MFQ; Costello & Angold, 1988) is a self-report questionnaire designed according to the DSM-IV criteria for an episode of unipolar major depression (Costello & Angold, 1988; Costello et al., 1996). It consists of 33-item that assess the current depressive symptoms of children and young people aged between 6 and 17 years present over the previous two weeks. With a 3-point Likert scale, the sum scale of MFQ ranges from 0 to 66, and the higher the score, the greater the likelihood of increased severity of depressive symptoms. The MFQ has high internal reliability in the current sample (Cronbach's  $\alpha = .90$ ).

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<sup>1</sup> The short-version of DEQ-A is given in Appendix 2.

*Anxiety.* The Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1978) is a self-report questionnaire that measures the general anxiety of children and adolescents, including physiological anxiety, worry or over-sensitivity, and social concerns. The RCMAS is scored on a 3-point Likert scale with 28 items. Higher sum scores reflect more severe levels of anxiety symptoms. It has acceptable internal consistency in the current sample (Cronbach's  $\alpha = .77$ ).

*Obsessive-compulsive symptoms.* The Short Leyton Obsessional Inventory (child version) (LOI; Bamber et al., 2002) is a self-report questionnaire that measures obsessive-compulsive symptoms for children and adolescents. The LOI is scored on a 3-point Likert scale with 11 items. Higher sum scores reflect more significant obsessional thinking and compulsive behaviours. It has good internal consistency in the current sample (Cronbach's  $\alpha = .84$ ).

*Antisocial behaviour.* Behaviours Checklist (BC; Lawton & Moghraby, 2016) is an 11-item self-report checklist for current antisocial behaviour and is designed based on the DSM-IV criteria for conduct and oppositional disorders. With a 3-point Likert scale, the higher the score, the greater the likelihood of increased severity of antisocial behaviour symptoms. It has acceptable internal consistency in the current sample (Cronbach's  $\alpha = .76$ ).

*Risk taking and self-harm behaviour.* The Risk-Taking and Self-Harming Inventory for Adolescents (RTSHIA; Vrouva et al., 2010) is a self-report questionnaire to evaluate the risk-taking and self-harm behaviour in adolescents. This 26-item, 4-point scale yields two sub-scales. One is the Risk-taking (RT) sub-scale, consisting of items ranging from mild RT (e.g., smoking) to more severe behaviours (e.g., gang violence). It should be noted that one item about unsafe sex in this sub-scale has been excluded from the IMPACT study. Another Self-harm (SH) sub-scale consists of items capturing SH in different levels (e.g., picking at wounds, overdose). Both sub-scales demonstrate good internal consistency in the current sample (Cronbach's  $\alpha > .81$ ).

*Suicidal ideation and behaviour.* Columbia Suicide Severity Rating Scale (C-SSRS; Posner et al., 2011) was adopted to assess suicidal ideation and suicidal behaviours. Following the scoring guideline and statistical purpose (Nilsson et al., 2013), the current study regarded the sub-scale of Suicidal Ideation

(SI) as a 5-point ordinal scale, comprised of the following categories: (1) wish to die, (2) non-specific active suicidal thoughts, (3) active suicidal ideation with methods without intent to act, (4) active suicidal ideation with some intent to act, without a specific plan, and (5) active suicidal ideation with a specific plan and intent. Similarly, the Suicidal Behaviour (SB) sub-scale is regarded as a 4-point ordinal scale made up of the following categories: (1) preparatory acts or behaviour, (2) aborted attempt, (3) interrupted attempt, and (4) actual attempt (non-fatal). The absence of suicidal ideation or behaviour was coded as 0. The C-SSRS captures both present and lifetime suicidal ideation and behaviour. In the current study, the “present” referred to the current episode of major depression, while the “lifetime” referred to the entire span of the participant’s life, excluding the current episode.

*General health and social functioning.* The Health of the Nation Outcome Scales for Children and Adolescents (HoNOSCA; Gowers et al., 1999) is a 13-item self-reported questionnaire for children and adolescents assessing general mental health and social functioning, including symptomatic, behavioural, social and impairment domains. With a 4-point Likert scale, higher total scale scores of HoNOSCA reflect more severe levels of impairments in general and social functioning. This scale demonstrates fairly poor internal consistency (Cronbach’s  $\alpha = .59$ ) in the current sample. This has been reported by previous research (Harnett et al., 2005) and was suggested as resulting from the fact that this scale captures functioning across a number of independent psychological domains. Therefore, this scale has still been used in the present study.

*Rumination.* The Ruminative Responses Scale (RRS; Nolen-Hoeksema & Morrow, 1991) consists of 21 items assessing the ruminative response style to low mood. Specifically, this scale measures to what extent the response style is focused on self, symptoms, and possible consequences and causes of low moods. This scale is scored on a 4-point Likert scale, and higher total scale scores reflect more severe levels of rumination. It has good internal consistency in the current sample (Cronbach’s  $\alpha = .89$ ).

*Self-esteem.* Rosenberg Self-esteem Scale (RSES; Rosenberg, 1965) is a widely used self-report measure for global self-esteem. It consists of 10 items on a 4-point Likert scale. Higher sum scale scores reflect higher levels of self-esteem. The RSES has good internal consistency in the current sample (Cronbach’s  $\alpha = .81$ ).

*Positive and negative emotions.* Differential Emotions Scale-IV (DES-IV; Izard et al., 1974) is a self-report questionnaire designed to assess the fundamental mood states. This 36-item, 5-point scale consists of 12 sub-scales. An aggregate of three sub-scales of Interest, Joy and Surprise comprises the index of Positive Emotions (PE), while the other nine sub-scales of Anger, Disgust, Contempt, Self-Hostility, Fear, Shame, Shyness, and Guilt comprise the index of Negative Emotions (NE, Youngstrom & Green, 2003). The two indexes demonstrated an acceptable internal consistency in the current sample (Cronbach's  $\alpha > .77$ ).

### ***2.2.2.3 Indices of interpersonal functioning***

*Parenting.* The Alabama Parenting Questionnaire – 9 (APQ-9; Elgar et al., 2007) was adopted to assess the parenting practice perceived by participants. This 5-point, 9-item scale consists of three sub-scales of Positive Parenting (PP), Inconsistent Discipline (ID), and Poor Supervision (PS). Higher scores reflect the higher frequency of that perceived behaviour in each sub-scale (e.g., more positive parenting, more severe levels of inconsistent discipline, or poorer supervision perceived by participants). The three sub-scales of APQ-9 have overall acceptable internal consistency in the current sample (Cronbach's  $\alpha$  ranging from .66 to .89).

*Family functioning.* Family Assessment Device – General Functioning (FAD-GF; Epstein et al., 1983) was adopted to reflect the overall family functioning perceived by the young person. It consists of 12 items on a 4-point Likert scale. Higher total scale scores indicate a more positive family environment perceived by young people. The FAD-GF has excellent internal consistency in the current sample (Cronbach's  $\alpha = .91$ ).

*Friendship.* Friendship Questionnaire (FQ; J. Memarzia et al. unpublished observations) was adopted to assess the number, quality and availability of friendships. The FQ consists of 8 items on a 4-point Likert scale. Higher total scale scores reflect the better overall quality of friendship perceived by the young person. The FQ has an acceptable internal consistency in the current sample (Cronbach's  $\alpha = .78$ ).

### 2.2.3 Statistical analysis

To address the first research question, confirmatory factor analysis (CFA) was adopted to test the factor structure of the short-version of DEQ-A. CFA has been regarded as a powerful analytical tool for testing the nature and relation of latent variables (Jackson et al., 2009). As a theory-driven statistical technique, it is appropriate for examining theory-driven hypotheses about relationships among observed variables (e.g., items) and latent variables or factors (Schreiber et al., 2006). Therefore, CFA has been widely used in psychological research, such as for evaluating and refining the construct validity of established scales (Brown, 2015). In the present study, CFA was conducted by using maximum likelihood estimation in Amos version 25. Two models were tested and compared: (1) a theory-based parallel two-factor model with correlated structures of dependency and self-criticism, and (2) a one-factor model with all items loading on a general factor. A hierarchical model possessing lower-order factors (e.g., self-criticism and dependency) loading to higher-order factors was excluded from consideration for two reasons. First, the model with two correlated first-order factors (i.e., model 1) is mathematically equal to the model with two first-order factors loading on one second-order factor (Hau et al., 2004). Secondly, a model with only two first-order factors loading on one second-order factor may have potential identification/estimation flaws (Kline, 2015).

The evaluation and comparison of the model fit were based on the multiple criteria of the goodness-of-fit index, namely both the absolute and incremental fit index, following the suggestions of Hu and Bentler (1999) and Bentler and Bonett (1980). For the absolute fit index, the Root Mean Square Error of Approximation (RMSEA) was used, and a value smaller than .60 was regarded as a reasonable fit (Hu & Bentler, 1999). The classic index of Chi-square goodness-of-fit was excluded from the research as this statistic is sensitive to sample size. It tends to reject reasonable models with large sample size while accepting poor models if the sample size is rather small (Kline, 2015). Therefore, the alternative index of the Chi-square to the degree of freedom ratio ( $\chi^2/df$ ) was adopted, and a ratio lower than three was regarded as an acceptable level (Schreiber et al., 2006). The Bender's Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) were used as incremental fit indexes. A value higher than .90 was regarded as an indicator of a reasonable model for both CFI and TLI (Bentler & Bonett, 1980; Van de Schoot et al., 2012). In addition, the Akaike Information Criterion (AIC) and the Expected Cross-validation Index (ECVI) were also referred to compare the quality of non-nested models. The smaller

values of ACI and ECVI indicate the better quality of the model (Schreiber et al., 2006). The refinement of models was carefully evaluated and conducted based on the modification indexes and the theoretical framework.

Once the model with an adequate model fit was obtained, multigroup CFA was conducted to test the measurement invariance between gender groups. Three levels of measurement invariance were tested: configural invariance, metric invariance and scalar invariance (Putnick & Bornstein, 2016). Obtaining the three levels of measurement invariance implies that factor scores from different groups demonstrate the same measurement unit and origin, thereby qualifying comparisons of factor means. Specifically, configural invariance implies that the same model structure is valid across groups (e.g., the gender groups). This level of invariance was regarded as being achieved if the same model structure demonstrated a reasonable model fit across gender. Metric invariance suggests that factor loadings are equivalent across groups. This invariance was tested by comparing the unconstrained model with the model constrained factor loadings. The Chi-square difference test was adopted to compare nested models, with a non-significant result indicating no meaningful difference between models and supporting metric invariance. Scalar invariance indicates that factor loadings and residuals are equivalent across groups. Again, the Chi-square test was used to compare the unconstrained model with the model constrained factor loadings and intercepts, with a non-significant result indicating passing scalar invariance. Following the recommendations of Steenkamp and Baumgartner (1998) and Vandenberg and Lance (2000), partial invariance was accepted if more than half of the items under one factor were invariant. After testing measurement invariance, each factor of the final model was tested for internal consistency among the total sample, boys and girls separately. While higher values of Cronbach's  $\alpha$  reflect better internal consistency, a value larger than .65 is often considered to be sufficient for a scale that is used to conduct research on humanity dimensions (Vaske, 2019; Vaske et al., 2017).

For the second research aim, correlation and multiple regression were conducted to investigate whether personality vulnerabilities (i.e., self-criticism and dependency, their interactions with each other and with gender) influenced participants' intrapersonal and interpersonal functioning before the treatment. Following the theoretical assumption related to early experience, self-criticism and dependency were



treated as dependent variables only in regression models that involved young people perceived parenting styles of their parents and family functioning. For continuous variables, Pearson's correlation and multiple linear regression were used. For ordinal scales (i.e., C-SSRS), Spearman's correlation and ordinal regression were adopted. Given that 89.9% of the participants reported zero present suicidal behaviours, binary logistic regression was used for the C-SSRS subscale of present suicidal behaviour. The standardised beta ( $\beta$ ) and odds ratio ( $OR$ ) were mainly reported in regression analyses to reflect the contribution of predictor variables on dependent variables. All the regression analyses were conducted using SPSS version 25.

#### **2.2.4 Missing data**

There was 16.99% of missing data on DEQ-A. The proportion of missing data ranged from 0 to 69.46% for other measures (mean = 20.92%, SD = 26.11%). The missing mechanism was investigated by using independent  $t$ -test to compare cases with complete datasets and with missing datasets (Enders, 2010). Following the suggestion of Nicholson et al. (2017), study-related variables (e.g., dependency, self-criticism and MFQ) instead of demographic variables were employed to indicate the missing pattern. Results provided evidence to support that data were missing completely at random, except DES-IV (for emotion states), FQ (for friendship) and FAD (for family functioning). The difference between DES-IV missing subgroups was significant on self-criticism scores, with missing DES-IV cases having slightly higher levels of self-criticism ( $t = 2.08, p = .039, d = 0.21$ ). Significant differences were also observed for DES-IV ( $t = 2.23, p = .026, d = 0.21$ ), FQ ( $t = 2.43, p = .016, d = 0.23$ ), and FAD ( $t = 2.79, p = .005, d = 0.26$ ) on MFQ scores, with the missing cases demonstrating slightly higher MFQ scores. Enders (2010) suggested to interpret the missing mechanism by the significant test in combination with the effect size; thus, the author argued that the small effect size ( $d$  around .20) reflected the limited impact of missingness. The present analysis was therefore based on cases with complete datasets except for CFA. A regression imputation was adopted to impute missing items in the DEQ-A for CFA. This is because the imputed data supports more analytical functions (e.g., the estimation of modification indexes) for CFA using AMOS.

## 2.3 Results

### 2.3.1 Factor validity and reliability of the short-version DEQ-A

The factor structure of the short-version DEQ-A was tested by evaluating the theory-based two-factor model and the one-factor model using CFA. The sample for CFA included 386 participants with 290 girls and 96 boys. The analysis was based on non-reversed data, and therefore reverse worded items (item 4, 19 and 20) displayed negative loadings on their corresponding factors.

The initial two-factor model demonstrated a rather poor model fit (Table 2). All paths had significant standardised factor loadings except the path from item 19 to self-criticism (Table 2). The path from item 19 to self-criticism, and the path from item 2 to dependency were sequentially deleted from the initial two-factor model, as their standardised factor loadings were considerably low with  $\lambda = -.05$  and  $.16$  correspondingly. To prevent purely statistical-driven post-hoc model fitting, the model was refined based on both theoretical and statistical justifications. The modified model, with 8 pairs of error items correlated, displayed a rather good model fit ( $\chi^2/df = 2.10$ , RMSEA =  $.05$ , CFI =  $.93$ , TLI =  $.90$ ). It also had lower values in AIC ( $244.58 < 472.88$ ) and ECVI ( $0.64 < 1.23$ ) compared to the initial two-factor model, indicating its better quality. All paths in the modified model had significant standardised factor loadings with the absolute values of  $\lambda$  ranging from  $.22$  to  $.66$  (Table 2). The factors of dependency and self-criticism had a relatively higher correlation of  $.83$ .

A similar procedure was conducted for the estimation of the one-factor model. The initial one-factor model showed a poor model fit, with all paths demonstrating significant factor loadings (Table 2). Again, the paths from item 19 and 2 were deleted due to low factor loadings ( $\lambda = .01$  and  $.14$ ). The model was further refined by covarying 10 pairs of error items based on theoretical and statistical justifications. The modified model had a reasonable model fit, with  $\chi^2/df = 2.20$  RMSEA =  $.06$ , CFI =  $.92$ , TLI =  $.90$ . Although the modified one-factor model showed lower values in AIC ( $251.21 < 524.21$ ) and ECVI ( $0.65 < 1.36$ ) compared with the initial one-factor model, it had higher values in AIC ( $251.21 > 244.58$ ) and ECVI ( $0.65 > 0.64$ ) compared with the modified two-factor model, suggesting the modified two-factor model had a slightly better model fit. Therefore, the modified two-factor model was regarded as a final model, and its measurement invariance was further tested.

Table 2 CFA Analysis for Evaluating and Comparing Models of the short-version DEQ-A

	Two-factor Model		One-factor Model	
	initial	modified	initial	modified
Standardised factor loadings				
Q2 <- D (or O)	.16**	-	.14*	-
Q5 <- D (or O)	.55***	.57***	.52***	.49***
Q9 <- D (or O)	.56***	.63***	.58***	.59***
Q11 <- D (or O)	.45***	.38***	.41***	.38***
Q13 <- D (or O)	.43***	.35***	.41***	.38***
Q14 <- D (or O)	.58***	.46***	.51***	.45***
Q16 <- D (or O)	.47***	.45***	.45***	.43***
Q17 <- D (or O)	.63***	.57***	.58***	.54***
Q3 <- S (or O)	.42***	.43***	.44***	.44***
Q4 <- S (or O)	-.31***	-.22***	-.21***	-.20***
Q6 <- S (or O)	.67***	.65***	.58***	.55***
Q8 <- S (or O)	.50***	.50***	.45***	.45***
Q10 <- S (or O)	.66***	.66***	.64***	.64***
Q12 <- S (or O)	.36***	.36***	.35***	.39***
Q19 <- S (or O)	-.05	-	.01	-
Q20 <- S (or O)	-.51***	-.46***	-.40***	-.41***
Correlation				
D - S	.73***	.83***	-	-
Model fit				
$\chi^2/df$	3.64	2.10	4.12	2.20
RMSEA	.08	.05	.09	.06
CFI	.75	.93	.71	.92
TLI	.71	.90	.66	.90
AIC	472.88	244.58	524.21	251.21
ECVI	1.23	0.64	1.36	0.65

Note: 1. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ ;

2. S = self-criticism; D = dependency; O = one-factor; RMSEA = Root Mean Square Error of Approximation; CFI = Bender's Comparative Fit Index; TLI = Tucker-Lewis Index; AIC = Akaike Information Criterion; ECVI = Expected Cross-validation Index

Multigroup CFA for the modified two-factor model was conducted by dividing the sample by gender. Firstly, an overall reasonable model fit across gender groups was identified ( $\chi^2/df = 1.69$ , RMSEA = .04, CFI = .91, TLI = .88), suggesting passing configural invariance. The Chi-square test on unconstrained and metric models was non-significant ( $\chi^2 = 10.74$ ,  $p = .71$ ), indicating that metric invariance was

achieved. However, the Chi-square difference test between unconstrained and scalar models was significant ( $\chi^2 = 28.48, p = .010$ ), suggesting a significant change in the model fit between the two models. The source of the non-invariance was then investigated by sequentially releasing item intercept constraints in a backward approach. After releasing constraints for item 17 and 16, the partial scalar invariance was achieved ( $\chi^2 = 37.82, p = .063$ ). The modified two-factor model then tested its internal consistency. The internal consistency was overall acceptable, as the Cronbach's  $\alpha$  for self-criticism is .67, .65, and .70 for the total sample, girls, and boys respectively, and the Cronbach's  $\alpha$  for dependency is .72, .72, and .68 for the total sample, girls, and boys respectively.

### **2.3.2 Correlational analysis for self-criticism, dependency, intra- and inter-personal functioning**

By utilising the modified DEQ-A, zero-order correlation analysis among self-criticism, dependency, intrapersonal and interpersonal functioning was conducted. Detailed results based on the total sample and across gender are shown in Table 3. As expected, self-criticism was more consistently and strongly related to clinical symptoms (e.g., depression, suicidal ideation and behaviour, impairment in general functioning) and maladaptive functioning (e.g., impaired self-esteem) compared to dependency overall. Moreover, the gender incongruence pattern was observed, as the significant correlations for dependency seemed to be mostly driven by boys, while no remarked differences between boys and girls in the pattern of correlations were found for self-criticism.

### **2.3.3 Regression analysis for self-criticism, dependency, and intrapersonal functioning**

The results of all regression analyses are shown in Tables 4 to 8. As expected, self-criticism was a significant and more consistent risk factor for depressive symptoms (MFQ, with  $\beta = .42, p < .001$ ), antisocial behaviour symptoms (BC, with  $\beta = .32, p = .007$ ), general and social functioning (HoNOSCA, with  $\beta = .40, p = .002$ ), and self-esteem issues (RSES, with  $\beta = -.56, p < .001$ ), as dependency failed to show a significant main effect on depressive symptoms (MFQ, with  $\beta = .12, p = .272$ ), self-esteem (RSES, with  $\beta = -.10, p = .302$ ), and was significantly associated with less antisocial behaviour (BC, with  $\beta = -.37, p = .002$ ) and reduced impairment in general and social functioning (HoNOSCA, with  $\beta = -.31, p = .013$ ). Self-criticism and dependency showed similar main effects on lifetime suicidal behaviour (C-SSRS-SB) and rumination (RRS), with respective  $OR = 1.36, p = .005$ , and  $OR = 1.20, p = .042$  for C-SSRS-SB, and  $\beta = .34, p = .002$ , and  $\beta = .35, p = .002$  for RRS. Both self-criticism and

dependency failed to show significant effects in predicting risk-taking and self-harming behaviour (RTSHIA, with  $ps > .341$ ), emotion status (DES,  $ps > .123$ ), lifetime suicidal ideation (C-SSRS-SI, with  $ps > .098$ ), and present suicidal behaviour (C-SSRS-SB with  $ps > .341$ ).

Table 3 Zero-order Correlations for self-criticism, dependency, and functioning

	Self-criticism			Dependency		
	total sample	girls	boys	total sample	girls	boys
Personality dimensions						
Self-criticism	–	–	–	<b>.51**</b>	<b>.50**</b>	<b>.50**</b>
Intrapersonal functioning - clinical expressions						
Depression (MFQ)	<b>.49**</b>	<b>.48**</b>	<b>.50**</b>	<b>.29**</b>	<b>.24**</b>	<b>.35**</b>
Anxiety (RCMAS)	<b>.32**</b>	<b>.33**</b>	<b>.21*</b>	<b>.34**</b>	<b>.28**</b>	<b>.41**</b>
Obsessional behaviour (LOI)	<b>.25**</b>	<b>.29**</b>	.10	<b>.28**</b>	<b>.28**</b>	<b>.26**</b>
Antisocial behaviour (BC)	.08	<b>.12*</b>	.11	<b>-.11*</b>	-.03	-.18
Risk-taking behaviour (RTSHIA-RT)	.06	.07	.04	<b>.15**</b>	<b>.19**</b>	.07
Self-harm behaviour (RTSHIA-SH)	.00	.04	-.07	.04	.10	-.09
General and social functioning (HoNOSCA)	<b>.16**</b>	<b>.14*</b>	<b>.23*</b>	-.03	.00	-.12
Present suicidal ideation (C-SSRS-SI) <sup>#</sup>	<b>.16*</b>	.09	<b>.29*</b>	.06	-.05	<b>.30*</b>
Lifetime suicidal ideation (C-SSRS-SI) <sup>#</sup>	<b>.14*</b>	.11	.16	<b>.19**</b>	<b>.18*</b>	.14
Present suicidal behaviour (C-SSRS-SB) <sup>#</sup>	<b>.13*</b>	.11	.15	.06	.06	-.00
Lifetime suicidal behaviour (C-SSRS-SB) <sup>#</sup>	<b>.26**</b>	<b>.25**</b>	.19	<b>.25**</b>	<b>.24**</b>	.18
Intrapersonal functioning - personal attributes						
Rumination (RRS)	<b>.46**</b>	<b>.42**</b>	<b>.51**</b>	<b>.43**</b>	<b>.37**</b>	<b>.51**</b>
Self-esteem (RSES)	<b>-.58**</b>	<b>-.55**</b>	<b>-.60**</b>	<b>-.33**</b>	<b>-.26**</b>	<b>-.38**</b>
Positive emotions (DES-PE)	.06	-.02	.22	-.02	-.05	.06
Negative emotions (DES-NE)	.06	.05	.11	.02	-.04	.19
Interpersonal functioning						
Family functioning (FAD)	<b>.33**</b>	<b>.30**</b>	<b>.46**</b>	<b>.16*</b>	.11	<b>.39*</b>
Positive parenting (APQ)	<b>-.20**</b>	<b>-.18*</b>	<b>-.31*</b>	-.03	.02	<b>-.25*</b>
Inconsistent parenting (APQ)	.12	.12	.10	.11	.13	0.03
Poor supervision parenting (APQ)	<b>.21**</b>	<b>.20**</b>	<b>.39*</b>	<b>.15*</b>	.11	<b>.36**</b>
Friendship (FQ)	-.08	-.06	-.12	.05	.10	-.09

Note. 1.\*  $p < .05$ ; \*\*  $p < .001$

2. # only C-SSRS used Spearman Correlation while others used Pearson Correlation

The interaction between self-criticism and dependency was nonsignificant in all regression analyses (with  $ps > .204$ ), however, significant interactions with gender were detected. Self-criticism significantly

interacted with gender on anxiety (RCMAS, with  $\beta = .24, p = .028$ ) and obsessive-compulsive symptoms (LOI, with  $\beta = .23, p = .044$ ). Dependency significantly interacted with gender on present suicidal ideation (C-SSRS-SI, with  $OR = 1.62, p = .014$ ). Gender incongruence patterns were then observed among the three clinical symptoms by conducting regression analysis separately and parallelly according to gender (Table 6). Self-criticism was determined to have a significant main effect on anxiety (RCMAS, with  $\beta = .25, p < .001$ ), obsessive-compulsive symptoms (LOI, with  $\beta = .19, p = .003$ ), and present suicidal ideation (C-SSRS-SI, with  $OR = 1.32, p = .018$ ) only among girls rather than boys (for RCMAS,  $\beta = -.03, p = .780$ ; for LOI,  $\beta = -.08, p = .530$ ; for C-SSRS-SI,  $OR = 1.30, p = .191$ ). By contrast, it was detected that dependency exerts a stronger significant effect on anxiety (RCMAS,  $\beta = .37, p = .001$ ) and obsessive-compulsive symptoms (LOI,  $\beta = .25, p = .038$ ) among boys rather than girls (for RCMAS,  $\beta = .15, p = .016$ ; for LOI,  $\beta = .19, p = .004$ ). Despite dependency exhibiting a non-significant effect on present suicidal ideation across gender, it tended to be associated with an increased risk of present suicidal ideation (i.e., the value of  $OR$  larger than 1) only among boys ( $OR = 1.37, p = .069$ ) rather than girls ( $OR = 0.85, p = .090$ ).

#### **2.3.4 Regression analysis for self-criticism, dependency, and interpersonal functioning**

The associations between personality variables and interpersonal functioning were investigated (Table 7 and 8). Only young-person-perceived family functioning (FAD) was a significant predictor for self-criticism, with  $\beta = .29, p = .005$ , suggesting that the more family functioning was perceived as being maladaptive by the young person, the higher their levels of self-criticism were. Young-person-perceived parenting and family functioning did not significantly predict dependency (with  $ps > .195$ ). Self-criticism, dependency, and their interaction with each other and with gender did not show significant predictions on participants' perceived quality of friendship (FQ, with  $ps > .435$ ).

Table 4 Multiple Regression Analysis for Variables Predicting Clinical Expressions

	MFQ		RCMAS		LOI		BC		RTSHIA-RT		RTSHIA-SH		HoNOSCA						
	B	SEB	B	SEB	B	SEB	B	SEB	B	SEB	B	SEB	B	SEB					
SC	4.97	1.26	<b>.42**</b>	-0.03	-0.42	0.67	-0.07	1.11	0.41	<b>.32**</b>	0.23	0.69	0.04	-0.53	1.52	-0.04	2.57	0.82	<b>.40**</b>
D	1.14	1.04	.12	<b>.38**</b>	1.14	0.56	<b>.24*</b>	-1.04	0.34	<b>-.37**</b>	0.53	0.57	.12	-0.77	1.26	-0.08	-1.64	0.66	<b>-.31*</b>
Gender	1.67	1.23	.07	0.07	-0.03	0.66	-0.00	-1.19	0.40	<b>-.17**</b>	0.03	0.66	.00	-0.57	1.45	-0.02	0.14	0.78	.01
SC*D	-0.78	0.84	-0.08	-0.10	-0.45	0.45	-0.09	0.04	0.27	.01	0.62	0.45	.13	-0.23	1.00	-0.02	0.15	0.53	.03
SC*gender	0.50	1.45	.04	<b>.24*</b>	1.56	0.77	<b>.23*</b>	-0.56	0.47	-0.14	-0.46	0.79	-0.07	0.36	1.74	.03	-1.34	0.93	-.18
D*gender	-1.10	1.19	-0.10	-0.19	-0.24	0.64	-0.04	0.76	0.39	.23	0.43	0.65	.08	1.78	1.44	.15	1.14	0.76	.18
SC*D*gender	0.05	1.02	.00	0.03	0.27	0.54	.05	0.21	0.33	.06	-0.97	0.55	-0.16	-0.71	1.22	-0.05	0.26	0.64	.04
R <sup>2</sup>	.26		.15		.11		.08		.04		.02		.02		.05				.05
F	<b>19.98**</b>		<b>10.80**</b>		<b>6.40**</b>		<b>4.56**</b>		1.97		0.86		<b>2.88**</b>						

Table 5 Regression Analysis for Variables Predicting C-SSRS Sub-scales

	SI-Present		SI-Lifetime		SB-Present <sup>#</sup>		SB-Lifetime	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
SC	<b>1.32*</b>	(1.04, 1.66)	1.03	(0.80, 1.34)	1.92	(0.50, 7.40)	<b>1.36**</b>	(1.10, 1.68)
D	0.85	(0.71, 1.03)	1.19	(0.97, 1.47)	0.79	(0.31, 2.02)	<b>1.20*</b>	(1.01, 1.43)
Gender	0.90	(0.61, 1.32)	0.74	(0.50, 1.10)	0.74	(0.25, 2.20)	0.71	(0.48, 1.04)
SC*D	1.12	(0.92, 1.36)	1.08	(0.86, 1.36)	0.59	(0.17, 2.13)	0.98	(0.82, 1.17)
SC*Gender	1.00	(0.64, 1.57)	1.19	(0.75, 1.88)	0.82	(0.19, 3.56)	0.94	(0.58, 1.53)
D*Gender	<b>1.62*</b>	(1.10, 2.39)	0.89	(0.60, 1.30)	1.27	(0.44, 3.64)	1.01	(0.68, 1.50)
SC*D*Gender	0.96	(0.68, 1.35)	0.88	(0.63, 1.23)	1.76	(0.45, 6.80)	0.99	(0.67, 1.45)
Chi-square of model fit	<b>17.51*</b>		13.82		<b>7.87</b>		<b>37.86**</b>	

Notes: 1.  $p < .05$ ;  $p < .001$ ;  $B/\beta$  = unstandardised/standardised regression coefficient;  $SE$  = standard error;  $OR$  = odds ratio;  $CI$  = confidence interval

2. S/D = self-criticism/dependency from modified DEQ-A; MFQ = Mood and Feelings Questionnaire; RCMAS = Revised Children's Manifest Anxiety Scale; LOI = Leyton Obsessional Inventory; BC = Behaviours Checklist; RTSHIA-RT/SH = The Risk-Taking and Self-Harming Inventory for Adolescents - Risk-Taking/Self-Harm; HoNOSCA = Health of the Nation Outcome Scale for Children and Adolescents; C-SSRS = Classification Suicide Severity Rating Scale; SI = suicidal ideation; SB =

Table 6 Regression Analysis for Variables Predicting RCMAS, LOI and Present C-SSRS-SI by Gender

	RCMAS						LOI						C-SSRS-SI-Present#					
	girls			boys			girls			boys			girls			boys		
	B	SE B	$\beta$	B	SE B	$\beta$	B	SE B	$\beta$	B	SE B	$\beta$	OR	95% CI	OR	95% CI	OR	95% CI
SC	2.09	0.52	<b>.25**</b>	-0.27	0.95	-.03	1.15	0.38	<b>.19**</b>	-0.42	0.66	-.08	<b>1.32*</b>	(1.05, 1.66)	1.30	(0.88, 1.93)		
D	1.05	0.43	<b>.15*</b>	2.60	0.79	<b>.37**</b>	0.91	0.32	<b>.19**</b>	1.14	0.54	<b>.25*</b>	0.85	(0.71, 1.03)	1.37	(0.98, 1.93)		
SC*D	-0.45	0.43	-.06	-0.71	0.64	-.12	-0.17	0.31	-.03	-0.45	0.44	-.12	1.12	(0.93, 1036)	1.07	(0.80, 1.42)		
R <sup>2</sup>	.13			.18			.11			.08			-			-		
F/ $\chi^2$	<b>14.59**</b>			<b>6.58**</b>			<b>11.59**</b>			2.68			<b>8.11*</b>			6.63		

Table 7 Regressions for Variables Predicting Personal Attributes and Friendship

	RRS			RSES			DES-PE			DES-NE			FQ		
	B	SE B	$\beta$	B	SE B	$\beta$	B	SE B	$\beta$	B	SE B	$\beta$	B	SE B	$\beta$
	SC	4.82	1.53	<b>.34**</b>	-2.95	0.52	<b>-.56**</b>	1.37	0.88	.27	-0.23	3.56	-.01	-0.71	1.32
D	4.04	1.29	<b>.35**</b>	-0.45	0.43	-.10	-0.89	0.81	-.21	3.91	3.25	.23	-0.11	1.10	-.02
Gender	2.43	1.49	.08	-1.39	0.51	<b>-.13**</b>	0.19	0.89	.02	-0.68	3.59	-.02	0.64	1.28	.05
D*SC	0.37	1.02	.03	0.00	0.35	.00	-0.70	0.55	-.16	1.27	2.22	.07	-0.04	0.76	-.01
D*gender	-1.62	1.47	-.12	0.48	0.50	.09	0.63	0.91	.13	-5.24	3.66	-.27	0.96	1.23	.16
SC*gender	-0.35	1.76	-.02	0.15	0.60	.02	-1.36	1.04	-.22	2.29	4.18	.09	-0.33	1.51	-.04
D*SC*gender	-0.69	1.24	-.05	0.48	0.42	.09	0.27	0.69	.05	-0.13	2.78	-.01	-0.70	.94	-.10
R <sup>2</sup>	.27			.36			.03			.02			.03		
F	<b>19.20**</b>			<b>29.58**</b>			0.90			0.50			0.75		

Notes: 1.  $p < .05$ ;  $p < .001$ ;  $B/\beta$  = unstandardised/standardised regression coefficient; SE = standard error; OR = odds ratio; CI = confidence interval

2. S/D = self-criticism/dependency from modified DEQ-A; RCMAS = Revised Children's Manifest Anxiety Scale; LOI = Leyton Obsessional Inventory; C-SSRS-SI = Classification Suicide Severity Rating Scale - suicidal ideation; RRS = Ruminative Responses Scale; RSES = Rosenberg's Self-esteem Scale; DES-PE/NE = Differential Emotion Scale - Positive Emotion/Negative Emotion; FQ = Friendship Questionnaire

3.. # Only C-SSRS-SI-Present used ordinal regression analysis, while others used linear regression analysis



Table 8 Regression Analysis for Variables Predicting Self-criticism and Dependency

	SC			D		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
FAD	0.04	0.01	<b>.29**</b>	0.02	0.02	.14
APQ-PP	-0.00	0.03	-.02	0.02	0.03	.05
APQ-ID	0.01	0.03	.02	0.03	0.03	.10
APQ-PS	0.02	0.03	.06	0.04	0.03	.09
<i>R</i> <sup>2</sup>		.11			.05	
<i>F</i>		<b>5.40**</b>			2.11	

Notes:  $p < .05$ \*  $p < .001$ \*\*; *B* / $\beta$ = unstandardised/standardised regression coefficient; *SE* = standard error

2. S/D = self-criticism/dependency from modified DEQ-A; FAD = Family Assessment Device; APQ-PP/ID/PS = Alabama Parenting Questionnaire-Positive Parenting/ Inconsistent Discipline/Poor Supervision

## 2.4 Discussion

To my knowledge, this is the first study to evaluate the structure validity and reliability of the short-term DEQ-A, and the first one to investigate the roles of self-criticism, dependency, as well as their interactions with each other and with gender on a wide range of indices of intrapersonal and interpersonal functioning by using a large sample of clinically depressed adolescents. The results have broadly supported the hypotheses. A two-factor structure of short-version of DEQ-A was emerged, and evidence supported the roles of personality vulnerabilities, especially self-criticism, on a range of psychological symptoms and functioning. In this section, results regarding the DEQ-A structure are first discussed, followed by four major sets of findings generated from the correlation and regression analysis.

### 2.4.1 Factor structure and reliability of the short-version DEQ-A

Of the two models tested, the theory-based two-factor and the one-factor model both initially showed rather poor model fits. Item 19 from the original self-criticism sub-scale (“the people in my family are very close to each other”) and item 2 from the original dependency sub-scale (“sometimes I feel very big, and other times I feel very small”) were subsequently deleted from the two tested models for their considerably low factor loadings. After refining the models, both modified models achieved acceptable model fits. Given that the modified two-factor model had a slightly better model fit compared to the

modified one-factor model, its structural validity has been supported and thus been regarded as the final model in the current analysis. The following measurement invariance analysis supported full configural and metric invariance for the modified two-factor model across gender. Partial scalar invariance was achieved after releasing two intercept constraints (items 17 and 16). Overall, results suggested that the concepts of dependency and self-criticism were consistent across gender with same measurement unit (i.e., factor loading) and origin (i.e., intercept), and thus qualified further comparisons and analyses on dependency and self-criticism between gender groups. Each factor demonstrated adequate internal consistency for the total sample, girls, and boys, supporting the reliability of the modified two-factor scale on the current sample.

It should be noted that the correlation between two latent variables of self-criticism and dependency was relatively high (.83) in the modified two-factor model. As discussed earlier, the relatively high correlation between the two concepts is not necessarily in conflict with the theoretical framework, as self-criticism and dependency are proposed to be developed in a synergistic interactive manner. However, the author is aware that overly high correlation between latent variables can be problematic as it may indicate inadequate discriminant validity. Although the definition of *high* correlation varies across sources, a commonly used criterion is the one proposed by Brown (2015), noting that a correlation between latent variables over .85 indicates poor discriminant validity. Indeed, although the correlation between the two constructs was relatively high (.83) in the present study, the modified two-factor model still demonstrated a better model fit compared with the unidimensional one-factor model. More importantly, by using the modified two-factor DEQ-A, the correlation and regression analysis detected distinct patterns in terms of dependency and self-criticism relating to clinical conditions and psychological functioning. These findings, therefore, supported the discriminant validity of the two factors in the modified DEQ-A.

#### **2.4.2 Self-criticism, dependency, intra- and inter-personal functioning for depressed youths**

Four major sets of findings were generated from correlation and regression analysis. Firstly, findings indicated a more prominent and detrimental impact of self-criticism on clinical expressions and functioning compared to dependency. Although both self-criticism and dependency were significantly correlated with depression, self-criticism was shown to be a more robust risk factor, as dependency was

no longer significant in predicting depressive symptoms after introducing self-criticism into the regression model. This finding is consistent with previous evidence which suggests self-criticism is more consistently associated with increased depressive symptoms across adolescent and adult populations (Abela et al., 2007; Cohen et al., 2013; Luyten et al., 2007; Smith et al., 2016). One possibility is that individuals with self-criticism may actively generate a more negative environment by assimilating life events into a self-critical schema (Blatt, 2004e). For example, Priel and Shahar (2000) followed 182 adults for nine weeks, and found while baseline dependency predicted later distress only after interpersonal stress, self-criticism was associated with increased distress over time. Moreover, it has been discussed before that self-criticism tends to generate a negative social context with lower levels of perceived social support (Dunkley et al., 2009). On the other hand, dependency is featured by intense fears of being abandoned and loneliness; therefore, individuals with dependent traits may tend to put considerable effort into establishing and maintaining close relationships and avoiding confrontational assertions (Santor & Zuroff, 1998). Such features may benefit those individuals to receive more social support compared to self-critical ones. Shahar and Priel (2003), for instance, followed 603 adolescents over 17 weeks to investigate their generated and perceived social environment. While both dependency and self-criticism predicted significant increases in negative life events, which, in turn, increased depressive symptoms, dependency also predicted significant increases in positive life events. Therefore, self-criticism seems to be a consistent vulnerability factor, while dependency seems to comprise both risk and protective factors (i.e., social support). This assumption may also help to explain previous findings on dependency, which propose it may be only deleterious when individuals have at-risk social support systems (Adams et al., 2009).

Consistent with the assumption regarding the different interpersonal patterns of the two expressions, self-criticism was significantly associated with increased antisocial behaviour, and more impaired general health and social functioning, while dependency showed significant preventative effects on the two functioning. While this finding again suggests the prosocial features of dependency, previous research on anger, a concept that is closely correlated with antisocial features (Hawes et al., 2016), may also help to explain the present findings. Abi-Habib and Luyten (2013) investigated 253 adults and found dependency was significantly associated with higher levels of directing anger towards to self and lower levels of directing anger towards others. Self-criticism, on the other hand, was associated with

higher levels of turning anger towards both self and others, and lower anger control. Studies on antisocial behaviour disorder have suggested that anger, as a negative emotion with the desire against others or obstacles by fighting or harming (Chow et al., 2008), significantly correlates with antisocial features such as aggression (e.g., Chow et al., 2008; Deater-Deckard et al., 2007; Hawes et al., 2016). Moreover, the proposed deficit on anger control among individuals with self-criticism may further differentiate their vulnerabilities in antisocial behaviour symptoms, as poor emotion regulation may limit individuals' ability to cope with frustrations and amplify their engagement in antisocial features (Gardner et al., 2008; Hawes et al., 2016). Further studies are needed to verify this assumption by directly investigating the relation of personality expressions, anger, and antisocial behaviour symptoms.

In line with the theoretical framework, self-criticism was also significantly associated with impaired self-esteem and maladaptive family functioning perceived by youths, while such effects were failed to be observed for dependency. Both self-criticism and dependency displayed similar associations with factors that have been implicated in adolescent depression, namely lifetime suicidal behaviour and rumination, which is consistent with previous research (e.g., Fehon et al., 2000; Spasojević & Alloy, 2001). It is possible that the overly high standards in self-criticism and/or concerns about loneliness and abandonment in dependency activate self-evaluation concerns, and thus increase individuals' likelihood of engaging in rumination. Again, further research is required to test this assumption, as it may help to shed light on the pathology of depression.

The second set of findings provided evidence to support the gender incongruence effect. Self-criticism was shown to be a stronger risk factor for anxiety, obsessive-compulsive symptoms, and present suicidal ideation among girls than boys, while the opposite pattern was observed for dependency. It is possible that having or displaying gender-incongruent personality features may lead to implicitly and explicitly external criticisms, which in turn, increases the risk of psychopathology (Blatt, 2004d; Luyten et al., 2007). This assumption may be particularly applied to disorders that are closely related to external criticism. For example, Pace et al. (2011) published a narrative review and focused on the role of external criticism on Obsessive-Compulsive Disorder (OCD). They argued that two crucial cognitive domains on OCD, that are, inflated responsibility and perfectionism, are driven by the desire to gain approval from others and the avoidance of external criticism. Indeed, Bhar and Kyrios (1999) analysed 152 non-

clinical adults and found that socially prescribed perfectionism, a concept reflecting concerns about evaluations from others, was significantly associated with OCD symptoms after controlling depressive symptoms. It is possible that gender-incongruent features may only be deleterious when the feature activates external judgement and/or criticism, which may help to explain the inconsistent reports on the gender incongruence effect in previous research. However, this is only a hypothetical proposition, and more research is needed to clarify the underlying mechanism of the gender incongruence effect and puzzles relating to it (e.g., no gender incongruence effect was observed in depression).

Thirdly, self-criticism and dependency exhibited weak associations with self-harming, risk-taking behaviour, and parenting styles perceived by participants. For example, although dependency was significantly correlated with risk-taking behaviour, the effect disappeared in the regression analysis. This may be a sample-specific finding, as the young people in the current sample seemed to show mild risk-taking and self-harming behaviours compared to other clinical adolescent samples (Vrouva et al., 2010). Another possibility of the detected weak associations is that the adopted short-version questionnaires may limit the study's capacity to explore participants' functioning more elaborately. For example, while the night-item, three-subscale APQ-9 could provide an overall profile of parenting styles (e.g., positive versus negative), it may be limited to capture specific types of problematic parenting (e.g., achievement-oriented versus dependent-oriented parenting), and thus weaken its associations with self-criticism and dependency in the present analysis.

Finally, friendship and emotional states were not associated with self-criticism and dependency in the present analysis. This observation may reflect the gap between clinical and non-clinical samples, as most studies (e.g., Santor & Zuroff, 1998) that exclusively focused on friendship/interpersonal relationships with significant findings used samples of college students. Another possibility is that the questionnaires that were used reflect only the general patterns of participants' functioning, such as item 2 "how often do you arrange to see friends other than at school or college" in the 8-item Friendship Questionnaire (FQ). Although such items are telling of participants' social resources, the FQ's exclusive focuses on friendships may weaken its capacity to in-depth assess the quality of social support or interactions in depth, which may lead to the gap between the current findings and previous ones regarding the more comprehensive concept of social support.

### **2.4.3 Limitations**

Although the present study yielded promising findings, several limitations need to be considered when interpreting the results. First, the present study adopted a cross-sectional design; therefore, the causal relationships between variables are unable to untangle. The term “predictors” was used only because it is a regression term. Moreover, although a wide range of clinical conditions and psychological functioning was examined, all the correlation and regression analyses were based on the sample diagnosed with moderate to severe depression. The potential impacts of the sample nature should be considered when interpreting findings relating to other clinical syndromes and functioning.

In addition, the present study exclusively focused on dependency and self-criticism without including broader personality traits (e.g., neuroticism). Coyne and Whiffen (1995) have criticised literature on personality vulnerabilities by proposing potential overlaps between neuroticism, self-criticism and dependency. In response to the criticism, considerable evidence has been developed and indicated the unique effects of dependency and self-criticism on psychopathology, especially on depression, over and above the impacts of neuroticism (e.g., Dunkley et al., 2006; Kopala-Sibley et al., 2017; Kopala-Sibley et al., 2015; Mongrain & Leather, 2006). Therefore, although including and controlling neuroticism may be benefitted the present study, the author argues for the validity of the present findings.

Finally, given that a wide range of psychological functioning has been investigated, the original IMPACT study adopted several brief measures (e.g., FQ and APQ) to ensure time efficiency. As aforementioned, although brief measures can reflect the overall and general evaluations for investigated functioning, they may be not sufficiently sensitive to detect the subtle, but meaningful, variation in functioning expressions. This may limit the study’s capacity to further elaborate findings regarding the impacts of dependency and self-criticism on certain investigated functioning. Further studies are suggested to adopt more comprehensive assessments to evaluate the roles of personality vulnerabilities on psychopathology and psychological functioning.

#### **2.4.4 Conclusions**

To my knowledge, the present study is the first to adopt a large clinical adolescent sample with depression diagnosis to evaluate the factor validity of the short-version of DEQ-A and the role of personality vulnerabilities of self-criticism and dependency in a wide range of symptoms and functioning. The results broadly supported the hypotheses and extends previous findings into the clinical adolescent population. Evidence first supported the validity and reliability of the short-version of DEQ-A on a clinically depressed adolescent sample. By utilising the modified DEQ-A, significant effects of personality vulnerabilities, especially self-criticism, were detected on a range of intrapersonal and interpersonal functioning. While self-criticism showed to be a robust vulnerability factor for a range of symptoms and functioning (e.g., depression), dependency seemed to yield more mixed effects. Evidence was also found to support the gender-incongruence effect on anxiety, obsessive-compulsive behaviour, and present suicidal ideation. Such findings indicate the value of considering adolescent personality vulnerabilities and the role of gender in psychopathology research. Further studies are required to investigate the proposed assumptions to further clarify the underlying mechanisms of psychopathology in light of personality vulnerabilities.

## **Chapter 3 The Impact of Pre-Treatment Self-Criticism and Dependency on the Treatment Outcome of Psychotherapy for Adolescent Depression**

### **3.1 Introduction**

Unipolar Major Depressive Disorder is a common mental disorder during adolescence associated with severe consequences including risk and suicidal behaviour (Glied & Pine, 2002; Naicker et al., 2013). Although a range of effective psychotherapeutic treatments for adolescent depression has been recognised, a substantial number of adolescents do not recover or show relapse after treatment (Avenevoli et al., 2015; Goodyer et al., 2017a), implying a need to further improve therapies and to identify predictors of treatment response. There has been a long tradition of research in adults suggesting that the theoretical-based and empirical-supported personality dimensions, self-criticism and dependency, are negatively associated with treatment outcome. This chapter presents the first study to investigate whether these personality dimensions are also related to treatment outcome in a large sample of depressed adolescents ( $n = 465$ ) undergoing short-term psychotherapies. In what follows, the author first discusses the psychotherapeutic treatment of adolescent depression, research on self-criticism and dependency in the treatment outcome of adults, and the aims and hypotheses of this study.

#### **3.1.1 Psychotherapeutic treatment of adolescent depression**

As discussed in the general introduction chapter, several meta-analyses and reviews support the effectiveness of psychotherapy for depression (e.g., Driessen et al., 2010; Klein et al., 2007; Midgley et al., 2017). For example, an observer-blind, randomised controlled superiority trial in the UK known as the Improving Mood with Psychoanalytic and Cognitive Therapies (IMPACT) study investigated the effect of short-term psychotherapy for adolescents with depression (Goodyer et al., 2017a). To this end, 465 depressed adolescents were randomly assigned to receive cognitive-behavioural therapy (CBT), short-term psychoanalytic psychotherapy (STPP), or brief psychosocial intervention (BPI). Findings suggest that these three psychotherapies were equally effective in reducing depression in young people at the end of treatment (36-week), and this effect persisted during an 86-week follow-up period. While this large-scale clinical trial supports the effectiveness of short-term psychotherapy, the remission rate across the treatment conditions at the treatment end was 62.77% as determined by a semi-structured diagnostic instrument (i.e., the Kiddie-Schedule for Affective Disorders and Schizophrenia Inventory), and 11% of the participants relapsed at the 86-week follow-up, which leaves much room for



improvement. Similar issues regarding treatment response and relapse can be found in other clinical trials targeting depression (Avenevoli et al., 2015; Dubicka et al., 2010; Goodyer et al., 2008), which stresses the need to further improve psychotherapies for adolescent depression and to identify predictors of treatment response.

### **3.1.2 Self-criticism and dependency in depression and treatment outcome of adults**

One way of conducting such an investigation is through a patient-centred approach that aims to determine whether patients' pre-treatment variables influence their therapeutic process and outcome. Indeed, two theoretical-based and empirical-supported personality expressions, self-criticism and dependency, have emerged as being significantly associated with depression and its treatment (Blatt, 2004d). As discussed in previous chapters, self-criticism is associated with a negative view of the self and others (Blatt & Zuroff, 1992). Individuals with self-criticism tend to engage in harsh self-evaluation and are haunted by feelings of failure, inferiority, and guilt. Driven by the fear of being criticised and losing autonomy, they also exhibit ambivalence or even hostility towards others (Blatt, 2004e). Dependency, on the other hand, is associated with an overemphasis on interpersonal issues (Blatt & Zuroff, 1992). Individuals with dependency are characterised by a fear of abandonment, insecurity about significant others, and an effort to maintain close relationships even at the cost of self-affirmation (Kopala-Sibley & Zuroff, 2014).

Longitudinal research and meta-analyses have consistently demonstrated that both self-criticism and dependency are associated with depression even beyond the broad bandwidth trait of neuroticism (e.g., Kopala-Sibley et al., 2017; Sherry et al., 2014; Smith et al., 2016). For example, Kopala-Sibley et al. (2017) followed a sample of 550 female adolescents for 18 months. The results suggest that self-criticism and dependency significantly predicted the first onset of depressive disorder, and self-criticism remained a significant predictor even after controlling for neuroticism. The stronger effect of self-criticism in relation to depression has been widely reported (e.g., Cohen et al., 2013; Kopala-Sibley & Zuroff, 2014; Sherry et al., 2014) and been identified in the previous investigation on the association between personality dimensions and a range of intrapersonal and interpersonal functioning. As discussed before, individuals with self-criticism may generate a more negative external context compared to individuals with dependency, as shown by the increased universal distress they perceive

(Priel & Shahar, 2000) and their more negative interpretations of frustration (Besser & Priel, 2011). Moreover, possibly to protect the vulnerable sense of self, individuals with self-criticism are suggested to associate with defensive interpersonal orientations (e.g., social isolation), resulting in a negative social context with less perceived social support, which may again increase the risk of mental distress and illness (Priel & Besser, 2000; Shahar & Priel, 2003).

In line with such assumptions, self-criticism, and to a lesser extent dependency, are also suggested to be associated with therapeutic outcome in short-term psychotherapy (Bulmash et al., 2009; de la Parra et al., 2017; Kane & Bornstein, 2019; Marshall et al., 2008). For example, Löw et al. (2020) conducted a meta-analysis based on 49 longitudinal studies with 3,277 adult patients (e.g., with mood disorders, eating disorder, and obsessive-compulsive disorder) to investigate the association between patients' pre-treatment self-criticism and multiple treatment outcomes (e.g., clinical symptom, interpersonal functioning, quality of life). Self-criticism was found to be significantly associated with poorer therapeutic outcomes with an average small to medium effect, and this negative effect was found across treatment modalities (e.g., CBT, interpersonal therapy, and psychodynamic therapy). Although the authors proposed that this significant association was not moderated by treatment duration, it should be noted that a majority of the studies considered by this meta-analysis included therapy that offered less than 20 sessions, suggesting that the finding is primarily applicable to short-term psychotherapies.

One of the first studies to investigate the impacts of patient personality expressions on treatment outcomes for depression was based on a re-analysis of data from the Treatment of Depression Collaborative Research Program (TDCRP), which investigated the treatment efficacy of a 16-week short-term treatment (e.g., CBT, interpersonal psychotherapy, and antidepressants) for 250 depressive adults (Elkin et al., 1989). While pre-treatment dependent traits showed non-significant positive associations with treatment outcomes, pre-treatment self-critical traits were found to significantly predict negative outcomes on both primary (i.e., depressive symptoms) and secondary measures (i.e., global functioning and social adjustment) across treatment conditions (Blatt et al., 1995). Further investigation concluded that the negative impact of self-criticism persisted throughout an 18-month follow-up period, and was apparent in outcomes rated by therapists, independent clinical evaluators, and

the patients themselves, suggesting its consistent detrimental role on therapeutic changes (Blatt et al., 1998).

Moreover, by utilising the data from 16 monthly assessments taken during the treatment, Blatt et al. (1998) determined that self-criticism began to impede upon the therapeutic gain in the later stages of treatment (i.e., between the ninth and twelfth week). It might be the case that patients with intense self-criticism were sensitive to the externally imposed “fixed” randomized controlled trial settings. For example, the passivity involved in accepting the predefined date of treatment end may lead patients with high levels of self-criticism to feel as though they are being controlled or rejected, which may potentially threaten their sense of autonomy and self-control (Blatt & Zuroff, 2005). Therefore, as the treatment approached its end, patients with high levels of self-critical traits might experience an increasing sense of dissatisfaction and disillusionment towards the treatment, thereby compromising the therapeutic process. This assumption is aligned with the findings of Kay-Lambkin et al. (2017), which reported that adult patients who suffered from depression and substance use, while simultaneously exhibiting high levels of pre-treatment self-critical traits, tended to have less depressive symptoms compared to those who were low in self-criticism after receiving an online self-help intervention. It is possible that attending such an online intervention, a programme that merely depends on patients’ active agent, provided greater flexibility and a sense of agency to individuals with self-criticism, which potentially satisfied their developmental needs and thus increased their therapeutic gain.

This series of findings, especially the analyses using TDCRP data, appear to be promising in terms of identifying the detrimental role of self-criticism and providing insight into when and how self-criticism may interfere with the therapeutic process. However, whether these findings can be generalised to the adolescent population remains unclear. Furthermore, as discussed in the previous chapter, gender may also play a role in the relationship between personality dimensions and depression. In short, it has been found that gender-incongruent features (e.g., higher levels of dependency in men or self-definition in women) tend to be associated with an increased risk of depression and broader psychopathology (Blatt, 2004d), as displaying such features may lead implicitly and/or explicitly external judgement or criticism. Indeed, the investigations on the associations between personality expressions and a range of pre-treatment distress and functioning also provided evidence for such an effect. However, few studies

related to therapeutic changes have tested the gender incongruence hypothesis, suggesting further research is needed.

### **3.1.3 The present study**

In light of the above, the present study aimed to expand upon the potential role of pre-treatment personality vulnerabilities in predicting therapeutic outcome in depressed adolescents by using data from the IMPACT study. More specifically, this research set out to determine whether depressed adolescents' self-criticism and dependency would influence the treatment outcome of short-term psychotherapies. The gender incongruence effect on therapeutic changes was also investigated by testing the interaction between personality expressions with gender on treatment outcome. To provide a relatively more comprehensive analysis, young people's self-report depressive symptoms as well as general and social functioning were both included as indicators for the primary and secondary treatment outcome, respectively. Lastly, although previous findings suggest that the effects of self-criticism and dependency on outcome in short-term psychotherapies tend to be stable across treatment modalities, this study tested whether this finding can be extended to the adolescent population, that is, whether the potential impacts of personality dimensions would vary across treatment modalities (i.e., CBT, STPP, and BPI). Based on the theoretical framework and empirical findings in the adult population, adolescents' pre-treatment personality vulnerabilities, especially self-criticism, were expected to negatively predict treatment outcome across the treatment conditions. Given the hypothesis of gender incongruence, the interactive effects of personality variables and gender on outcome were also expected, in which self-criticism on girls and dependency on boys were assumed to associate with worse outcome.

## **3.2 Methods**

### **3.2.1 Participants**

The present study drew on the IMPACT sample, consisting of 465 adolescents who were diagnosed with DSM-IV major depression. The detailed inclusion criteria of the IMPACT study were discussed in the previous chapter. Overall, 470 adolescents were recruited and randomly assigned (1:1:1) in three psychotherapy arms (CBT, STPP and reference BPI), with stochastic minimisation by age, gender, self-reported depressive sum score and region. Five adolescents withdrew from the study after randomisation, leaving 465 participants who were included in the analysis. All treatments were manualised, and the

average duration of psychotherapy was 24.9 sessions for CBT, 27.9 for STPP, and 27.5 for BPI (Goodyer et al., 2017a). Outcome assessments were conducted during treatment (at baseline, 6-, 12-, and 36-week) and long-term follow-up (52- and 86-week post-randomisation).

Participants in the current sample were aged from 11.30 to 17.99 years at the baseline (mean = 15.61, standard deviation, standard deviation, SD = 1.42). There were 348 female participants (mean age = 15.72, SD = 1.31), and 117 male participants (mean age = 15.28, SD = 1.67). The majority of the participants (80.7%) were Caucasian and British. As illustrated in the previous chapter, there were 225 participants (48%) who received comorbid psychiatric diagnoses, and 86.67% of whom had less than two comorbidities. The most frequent comorbidities that account for over 80% of the diagnoses were generalised anxiety disorder, social phobia, oppositional defiant disorder, specific phobia, post-traumatic stress disorder, and separation anxiety disorder.

### **3.2.2 Measures**

#### ***3.2.2.1 Self-criticism and dependency***

The short-version Depressive Experiences Questionnaire-Adolescent version (DEQ-A, Fichman et al., 1994) was adopted to measure patients' pre-treatment personality variables of self-criticism and dependency. It is a 7-point, 20-item scale that consists of the sub-scales of Self-criticism (8 items), Dependency (8 items) and Efficacy (4 items). The first two sub-scales were adopted in the present study. As discussed in the previous chapter, the validity of this two-factor structure was evaluated by using confirmatory factor analysis. After deleting Item 19 from the Self-criticism sub-scale and Item 2 from the Dependency sub-scale, the theoretical-based two-factor solution showed an acceptable and better model fit compared to the alternative one-factor model, and demonstrated measurement invariance across genders. Based on the baseline data, both modified sub-scales have adequate reliability, with Cronbach's  $\alpha$  for Self-criticism of .67 and Dependency of .72. In the IMPACT study, the DEQ-A was administered at baseline and the follow-up stages. Only the baseline DEQ-A data were used in the present study to reflect the adolescents' pre-treatment personality expressions.

### ***3.2.2.2 Primary treatment outcome***

Participants' primary treatment outcome of depressive symptoms was measured by the self-report Mood and Feelings Questionnaire (MFQ; Costello & Angold, 1988). The MFQ was designed according to the DSM-IV criteria for an episode of unipolar major depression (Costello & Angold, 1988; Costello et al., 1996). It consists of 33 items that assess the depressive symptoms that children and young people aged between 6 and 17 years present over the past two weeks. With a 3-point Likert scale, the sum scale of the MFQ ranges from 0 to 66, and the higher the score, the greater the likelihood of increased severity of depressive symptoms. The MFQ demonstrated good test-retest reliability (Wood et al., 1995), and high criterion validity for discriminating depressive episodes (Burleson Daviss et al., 2006; Kent et al., 1997). Following the original IMPACT study analytical protocol, the adopted cut-off point of the MFQ for a clinical depressive episode was 27 (Goodyer et al., 2017b). The MFQ was administered on all 6 assessment occasions in the IMPACT study; all the data were used in the present analysis. Based on the data collected at baseline, the MFQ demonstrated high internal consistency (Cronbach's  $\alpha = .95$ ).

### ***3.2.2.3 Secondary treatment outcome***

Participants' secondary treatment outcome of general and social functioning was measured by the Health of the Nation Outcome Scales for Children and Adolescents (HoNOSCA; Gowers et al., 1999). This 13-item self-reported questionnaire for children and adolescents was designed to assess general mental health and social functioning, including symptomatic, behavioural, and social impairment domains. With a 4-point Likert scale, the higher total scale scores of the HoNOSCA reflect more severe levels of overall mental health problems. The HoNOSCA was administered on all six assessment occasions in the IMPACT study; all the data were used in the present analysis. Based on the data collected at baseline, its Cronbach's  $\alpha$  for internal consistency was .59. As discussed in the previous chapter, the fairly poor internal consistency of the HoNOSCA has been reported by previous research (Harnett et al., 2005), and can be interpreted as resulting from the fact that this scale captures functioning across a number of independent psychological domains.

### **3.2.3 Strategy for statistical analysis**

The IMPACT data reflected a hierarchically nested structure (e.g., repeated measures nested within participants), corresponding to an analysis of growth curve modelling (GCM). GCM is also known as a

form of multilevel modelling. It involves fitting a trajectory or a curve by using each individual's repeated measurements. Then, higher levels of variables (e.g., pre-treatment personality expressions) can be introduced to explain the captured patterns of change. Compared with traditional repeated measures analysis (e.g., repeated ANOVA), GCM offers several clear advantages (Curran et al., 2010; Hesser, 2015). For example, it views individual changes as a continuous developmental process, can handle dependence among repeated measures, and provides relatively robust estimations with missing data under unrestrictive missing data assumptions. Notably, the research design of the IMPACT study allows for conducting a three-level analysis as repeated measures (level 1), nested within participants (level 2), and nested within therapists (level 3). However, since the majority of participants (69.74%) had either one unique therapist or missing the therapist code, adding a third level can only marginally increase the model fit. The present study, therefore, adopted a two-level analysis to explore whether participants' pre-treatment personality dimensions could explain the changes in the trajectories of treatment outcomes. Maximum likelihood estimation was adopted for the analysis of GCM, and all analyses were carried out on Stata version 15.

The analytical steps proposed by Steele (2014) regarding GCM for continuous repeated measures were followed. The first stage of this two-stage analysis was to model the change trajectories of treatment outcomes over six repeated measurement occasions. Therefore, analysis in this stage only involved the variables of time to formulate an unconditional growth model for the two outcome measures. Individuals with repeated measures less than or equal to one time were excluded, as they did not contribute to the model formulation. Following the suggestions of Biesanz et al. (2004), three coding strategies for measurement points of baseline, 6-, 12-, 36-, 52- and 86-week were compared: (a) -5, -4, -3, -2, -1, and 0 to reflect the six measurement points; (b) -43, -40, -37, -25, -17, and 0 to reflect the time intervals; and (c) 0, 6, 12, 36, 52, and 86 to reflect actual assessment points. The generated results yielded almost identical results. Since the first coding strategy (i.e., from -5 to 0) produced estimates that can be more readily interpreted, this coding of time was adopted for the present analysis. As the last occasion was coded as zero, the intercept could be interpreted as a mean MFQ/HoNOSCA score at the last assessment point (i.e., 86 weeks).

A linear, quadratic, and cubic time variable accompanied by their corresponding random effects (i.e., a random intercept and slope) was subsequently added and compared to formulate the unconditional growth model. When considering both the random intercept and random slope of a time variable for model estimation, it implies that the variance in treatment outcomes and within-individual correlation both depended on the time. Therefore, an estimation of the covariance matrix which reflects the correlation between random intercepts and slopes was adopted (i.e., “unstructured” covariance in Stata). Several key parameters were included for the evaluation of the models. The Intra-class Correlation Coefficient (ICC) was adopted to investigate the proportion of total variance that can be attributed to between-individual variance for GCM on repeated measurements (Steele, 2008). The value of the ICC ranged from zero (no between-individual difference) to one (no within-individual difference). The likelihood ratio (LR) test was employed to compare the model fits. The LR test assessed the null hypothesis that there is no group difference between the two competing models (Steele, 2008). Rejection of the null hypothesis indicates a statistically significant difference between models, providing evidence to support a substantial improvement in model fit.

After establishing valid unconditional growth models for the change trajectories of the two outcome measurements, the second stage of analysis explored whether adding research-targeted variables could further explain the captured variability in outcomes over time. Firstly, the main effects of self-criticism and dependency, their interactive effects, and their interactions with gender were introduced to test whether the between-individual variability of outcomes was dependent upon these explanatory variables. Secondly, to explore whether pre-treatment personality vulnerabilities predicted the growth rates in the MFQ and HoNOSCA scores across measurement occasions, the interactions between both personality dimensions and time variables were tested. Finally, once a significant explanatory variable or interaction was identified, its interaction with the treatment condition was tested to explore whether the impact of personality dimension differs across therapeutic modalities. To reduce multicollinearity, self-criticism and dependency were centred on the mean before generating the interaction term. To model systematic differences, a set of fixed pre-specified prognostic variables was controlled. The selection of variables was based on the analytic strategy in the original IMPACT study when modelling the change of the MFQ and HoNOSCA, including baseline anxiety, obsessional-compulsive behaviour, antisocial behaviour, treatment arm, region, sex, age at randomisation in years, and use of



antidepressants of Selective Serotonin Reuptake Inhibitors (Goodyer et al., 2017b). Given the debate on standardised methods on multilevel data (i.e., multiple sets of means and standard deviations across levels), the unstandardised coefficient ( $B$ ), its significance, and standard errors ( $SE$ ) were reported to reflect the strength of associations between variables.

#### **3.2.4 Missing data**

There was 16.99% of missing data on DEQ-A. The mean proportion of missing data across measurement occasions for the MFQ and HoNOSCA was 24.84% ( $SD = 12.54\%$ ) and 35.63% ( $SD = 14.75\%$ ) respectively. The missing pattern was investigated by using an independent  $t$ -test in combination with the effect size to compare cases with complete datasets and with missing datasets (Enders, 2010). Following the recommendation of Nicholson et al. (2017), study-related variables (e.g., self-criticism, dependency, and MFQ) instead of demographic variables were employed to indicate the missing pattern. The results pointed to the difference between missing and complete cases on study-related variables being non-significant with less than a small effect size, providing evidence to support that data were missing completely at random. It has been argued that multilevel modelling is robust in dealing with missing data under the assumptions of missing completely at random and missing at random (Centre for Multilevel Modelling, 2019; Curran et al., 2010; Hesser, 2015). For example, by using multilevel modelling, a longitudinal study obtained similar results for non-imputed and imputed data (by multiple imputations) across conditions of missing 12% to 52% of data (Smits et al., 2019). Therefore, the current analysis was based on cases with complete datasets.

### **3.3 Results**

#### **3.3.1 Unconditional growth models for the MFQ and HoNOSCA**

A null model without any explanatory variables was initially established. Based on this null model, the estimated ICCs were .32 for the MFQ and .24 for the HoNOSCA, suggesting that 32% and 24% of the variance in the corresponding measurements were due to the difference between individuals, and accordingly, the proportions of within-individual variance were estimated as 68% and 76%, respectively. Therefore, a non-independent pattern and multilevel structure was present.

To establish a valid unconditional growth model for the MFQ scores over the course of the treatment and follow-up period, a linear, quadratic, and cubic time variable accompanied by their random effects was subsequently added to the null model. While a baseline linear model with a random intercept was established, adding a random slope significantly improved the model fit ( $\chi^2(1) = 175.80$   $p < .001$ ), just as adding a quadratic time variable with its random effects did ( $\chi^2(4) = 166.93$ ,  $p < .001$ ). The model with a cubic time variable was not convergent, indicating that the data likely have a poor fitting. Therefore, the final model for the MFQ included both linear and quadratic components for time with their random intercepts and slopes (Table 9).

Table 9 Summary and Comparison of Unconditional Growth Models of MFQ and HoNOSCA

	MFQ		HoNOSCA	
	Linear Model	Quadratic Model	Linear Model	Quadratic Model
Fixed effects				
Intercept ( $B_0$ )	20.76 (0.83)**	23.31 (0.83)**	6.95 (0.34)**	7.80 (0.34)**
Linear slope ( $B_1$ )	-4.44 (0.18)**	-0.61 (0.50)	-2.04 (0.08)**	-0.84 (0.28)*
Quadratic slope ( $B_2$ )	—	0.75 (0.09)**	—	0.23 (0.05)**
Random effects				
Level 1				
Residual	84.57 (3.38)	69.37 (3.31)	22.90 (1.04)	19.11 (1.04)
Level 2				
Intercept	221.81 (19.90)	199.72 (19.60)	24.14 (3.32)	17.84 (3.15)
Linear slope	6.89 (0.91)	33.31 (7.36)	0.93 (0.21)	8.57 (2.84)
Quadratic slope	—	0.96 (0.25)	—	0.33 (0.08)
Intercept – $B_1$ covariance	32.21 (3.84)	19.85 (9.12)	2.71 (0.72)	-0.14 (2.02)
Intercept – $B_2$ covariance	—	-2.09 (1.53)	—	-0.58 (0.37)
$B_1$ – $B_2$ covariance	—	4.94 (1.31)	—	1.56 (0.43)
Model fit				
Likelihood-ratio test	—	166.93(4)**	—	85.45(4)**

Note. 1. \*\*  $p < .001$

2. The table displays estimates with standard errors in parentheses.

3. MFQ = Mood and Feelings Questionnaire; HoNOSCA = Health of the Nation Outcome Scales for Children and Adolescents.

A similar estimation procedure was conducted to model the change in the HoNOSCA scores over time. A model with both linear and quadratic time variables, including their random effects, was once more considered as the final model as it demonstrated a better model fit (Table 9). The cubic time variable was again not included in the model due to its non-significance ( $p = .342$ ). The estimated fixed and random effects for the initial linear and the final quadratic model of the MFQ and HoNOSCA are reported and compared in Table 9. The observed and estimated change trajectories of the MFQ and HoNOSCA based on their final models are presented in Figure 1.

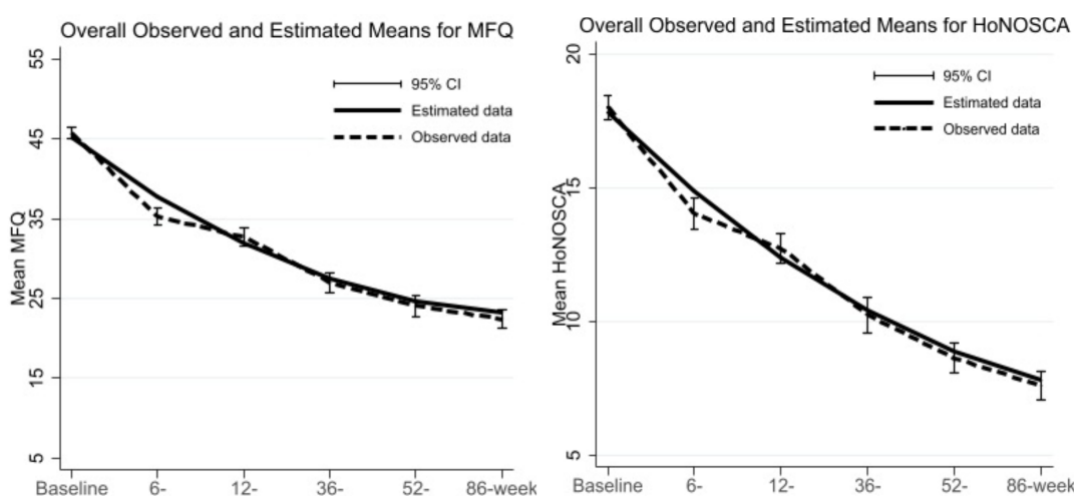


Figure 1 Estimated Trajectory of MFQ and HoNOSCA Scores Over Time

*Note.* MFQ = Mood and Feelings Questionnaire; HoNOSCA = Health of the Nation Outcome Scales for Children and Adolescents; CI = Confidence Interval.

In quadratic models, the change of rate (slope) is not fixed and varies across measurement occasions, since its value is dependent on the values of the time variable. The equation for the estimated rate of change of a quadratic model at a given occasion is  $B_1 + 2B_2t$  (a detailed interpretation of the equation can be found in Steele, 2014). The  $B_1$  refers to the coefficient of the linear time variable, the  $B_2$  refers to the coefficient of the quadratic time variable, and  $t$  refers to the time value. Table 10 presents the estimated rate of change in the MFQ and HoNOSCA at different measurement points, showing that the outcome scores primarily decreased during treatment, with only small further reductions during the follow-up stage.

Table 10 Rate of Change and the Estimated Mean MFQ and HoNOSCA Scores Across Measurement

	Occasions							
	MFQ				HoNOSCA			
	Observed	Estimated			Observed	Estimated		
Mean	Slope	Mean	95% CI	Mean	Slope	Mean	95% CI	
Baseline	45.67	-8.11	45.17	44.15, 46.19	17.99	-3.14	17.82	17.23, 18.41
6-week	35.24	-6.61	37.79	36.73, 38.85	14.04	-2.68	14.88	14.34, 15.42
12-week	32.73	-5.11	31.92	30.64, 33.20	12.73	-2.22	12.41	11.79, 13.03
36-week	27.01	-3.61	27.55	26.17, 28.92	10.24	-1.76	10.40	9.78, 11.03
52-week	24.07	-2.11	24.58	23.28, 26.08	8.63	-1.30	8.87	8.29, 9.44
86-week	22.43	—	23.31	21.69, 24.94	7.60	—	7.80	7.13, 8.47

*Note.* MFQ = Mood and Feelings Questionnaire; HoNOSCA = Health of the Nation Outcome Scales for Children and Adolescents; CI = Confidence Interval.

### 3.3.2 The impacts of pre-treatment personality dimensions on MFQ

After establishing a valid unconditional growth model for MFQ scores over time (i.e., the quadratic model with random effects), research-targeted explanatory variables were introduced. The main effects of self-criticism and dependency, their interaction with both each other and with gender, were included in the model. To further investigate whether self-criticism and dependency predicted the change of rate of the MFQ across measurement points, their interactions with time variables were also investigated. Initially, only self-criticism demonstrated a significant main effect on the change trajectory of the MFQ ( $B = 3.47, p = .020$ ); all of the interaction terms were non-significant ( $ps > .429$ ).

This model was then successively trimmed by omitting non-significant interactions with a higher-level polynomial time variable (i.e., the quadratic time variable). Subsequently, a significant main effect of self-criticism on the MFQ, with  $B = 4.10, p = .006$ , was again identified (Table 11). This demonstrated that, on average, an increase of a one-point scale score in self-criticism predicted a rise of 4.10 points in the MFQ score when holding other variables constant. A significant interaction between self-criticism and the linear time variable was also identified, with  $B = -0.52, p = .030$  (as elaborated in the later paragraph). The main effect of self-criticism and its interaction with the linear time variable remained significant after controlling for the set of pre-specified prognostic variables (Table 11). Their interactions with treatment conditions were then investigated. None of the interactive terms was significant with and without controlling for pre-specified variables ( $ps > .135$ ), therefore, it could be

assumed that the effects of self-criticism were consistent across the treatment conditions. In addition, non-significant difference was found for the treatment effectiveness across treatment conditions on the MFQ scores ( $ps > .083$ ), suggesting the change in MFQ scores tended to be similar across the three treatment conditions.

Table 11 Effects of Pre-treatment Variables on Outcomes of MFQ and HoNOSCA

	Predicting MFQ		Predicting HoNOSCA	
	(+ control variables)		(+ control variables)	
SC	<b>4.10 (1.49)**</b>	<b>4.12 (1.41)*</b>	<b>1.58 (0.68)</b>	<b>1.18 (0.68)*</b>
D	-1.16 (1.23)	-1.97 (1.22)	-0.47 (0.57)	-0.61 (0.58)
SC × D	-1.00 (1.02)	-0.81 (0.97)	-0.54 (0.48)	-0.37 (0.47)
SC × gender	-1.92 (1.65)	-2.73 (1.54)	-0.69 (0.69)	-0.65 (0.68)
D × gender	1.62 (1.36)	1.85 (1.28)	0.82 (0.58)	0.82 (0.57)
D × SC × gender	1.08 (1.18)	0.98 (1.10)	0.10 (0.49)	0.01 (0.48)
SC × linear time	<b>-0.52 (.19)*</b>	<b>-0.53 (.18)*</b>	-0.11 (0.11)	-0.12 (0.12)
D × linear time	0.02 (0.15)	0.05 (0.15)	<b>0.24 (0.09)*</b>	<b>0.24 (0.09)*</b>
SC × D × linear time	0.13 (0.14)	0.11 (0.14)	-0.13 (0.09)	-0.12 (0.09)
Gender	4.49 (1.42)*	4.11 (1.35)*	1.11 (0.59)	1.32 (0.59)*
Therapy arm				
CBT	—	-2.22 (1.28)	—	-1.04 (0.56)
STPP	—	-1.15 (1.26)	—	-0.83 (0.55)

Note. 1. \* $p < .05$  \*\* $p < .001$

2. This table displays estimates with standard errors in parentheses. Considering the long list of pre-specified prognostic variables, only estimates of key effects (i.e., the treatment condition) were reported in this table.

3. MFQ = Mood and Feelings Questionnaire; HoNOSCA = Health of the Nation Outcome Scales for Children and Adolescents; SC/D = The short-version Depressive Experiences Questionnaire-Adolescent version – Self-criticism/ Dependency subscale; CBT = Cognitive Behaviour Therapy; STPP = Short-term Psychoanalytic Psychotherapy.

4. The reference group is " Brief Psychosocial Interventions (BPI)" for "therapy arm", and the reference group is "boy" for "gender".

To illustrate the interactive effect between self-criticism and the linear time variable, the observed change trajectory of the MFQ scores was plotted for participants with high (one SD above the mean, +1 SD) and low (one SD below the mean, -1 SD) pre-treatment self-criticism scores (Figure 2). It appeared

that although participants with high levels of self-criticism tended to have consistently more severe depressive symptoms compared to those who scored low in self-criticism, the rate of change in MFQ scores seemed to differ between the two groups. Compared to young people who scored low in self-criticism, the negative impact of self-criticism seemed to slow down as the therapy progressed for those with intense self-criticism. In fact, although participants in the high self-criticism group ( $n = 68$ ) had significantly higher MFQ scores at baseline compared to those in the low self-criticism group ( $n = 63$ ) as showed by independent t-test, with  $t(104.40) = 14.38, p < .001$ , by the final assessment point of 86 weeks, the group difference was non-significant. Specifically, the binary logistic regression suggested that although those in the high self-criticism group still tended to have clinical depression according to the clinical cut-off score of MFQ in 86 weeks, the associated increased risk was only marginally significant (odds ratio = 1.94,  $p = .084$ , 95% CI [0.91, 4.16]).

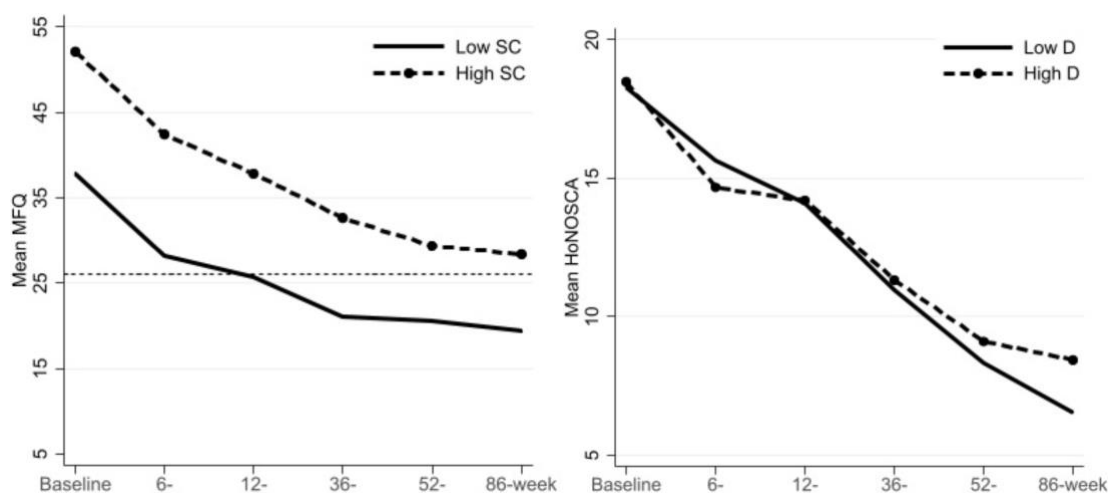


Figure 2 The interaction between self-criticism/dependency and the linear change of outcomes

*Note.* 1. MFQ = Mood and Feelings Questionnaire; HoNOSCA = Health of the Nation Outcome Scales for Children and Adolescents; SC/D = The short-version Depressive Experiences Questionnaire-Adolescent version – Self-criticism/ Dependency subscale

2. High/Low self-criticism/dependency is based on one standard deviation above or below the mean
3. The reference line in the figure regarding the change in MFQ scores refers to its cut-off point of 27.

### 3.3.3 The impacts of pre-treatment personality dimensions on HoNOSCA

A similar analytical procedure was conducted for the HoNOSCA scores. The same set of explanatory variables in the analysis of MFQ scores (i.e., self-criticism, dependency, and their interactions with each

other/gender/time variables) was introduced to the unconditional growth model for the HoNOSCA (i.e., the quadratic model with random effects). Initially, only self-criticism demonstrated a significant main effect on the change trajectory of the HoNOSCA scores over time ( $B = 1.87, p = .017$ ), while all interactions were non-significant ( $ps > .115$ ). After omitting non-significant interactions with a higher-level polynomial time variable (i.e., the quadratic time variable), a significant main effect of self-criticism ( $B = 1.58, p = .020$ ) was again identified, as well as a significant interaction between dependency and the linear time variable, with  $B = 0.24, p = .012$  (as elaborated in the later paragraph). The main effect of self-criticism and the interaction between dependency and the linear time variable remained significant after controlling the set of pre-specified prognostic variables (Table 11). Their interactions with the treatment modality were then investigated, and none of the interactive effects was significant ( $ps > .323$ ), suggesting that self-criticism and dependency tended to have a similar effect on the HoNOSCA scores across treatment conditions. Again, the treatment modality showed non-significant effects on HoNOSCA scores ( $ps > .056$ ), suggesting the change in HoNOSCA scores tended to be similar across the three treatment conditions.

To illustrate the interactive effect of dependency and the linear time variable, the observed change trajectory of the HoNOSCA scores was plotted for participants with high (+1 SD) and low (-1 SD) pre-treatment dependency scores (Figure 2). It appeared that while participants with low dependency exhibited a stable improvement in general and social functioning over time, young people with high dependency had a rather unstable changing pattern. They tended to show rapid improvement after entering the therapy, however as the therapy progressed and approached its end, participants high in dependency tended to eventually show more impairments in social and general functioning.

### **3.4 Discussion**

In an attempt to investigate the effects of pre-treatment personality dimensions of self-criticism and dependency on treatment outcome in short-term psychotherapy for adolescent depression, the present study presented further analyses of the IMPACT data. Consistent with findings in adults, self-criticism was associated with more severe depressive symptoms and impairments in functioning over time and across the treatment modalities (i.e., CBT, STPP and BPI), while results for dependency were more mixed. In addition, as might be expected, participants' severity of depressive symptoms and

impairments in general functioning tended to decrease as the therapy progressed. The therapeutic improvement was primarily achieved during the treatment, and with further changes during the follow-up stage, although at a slower rate of change compared to the changes during the treatment. Participants' therapeutic changes in both outcome measures were suggested to be similar across the treatment modality, which is consistent with the findings of the IMPACT study (Goodyer et al., 2017a).

### **3.4.1 The negative impact of self-criticism on treatment outcome**

Self-criticism demonstrated a significantly negative main effect on both primary and secondary outcome measures. Participants with higher levels of pre-treatment self-criticism tended to show more severe depressive symptoms and greater impairments in general and social functioning across measurement occasions compared to those who scored low on self-criticism. This is in line with previously identified associations between self-criticism and a range of pre-treatment clinical symptoms including depression (i.e., findings from the previous chapter). Controlling for a set of pre-specified prognostic variables yielded similar effects of self-criticism and its interaction with the linear time variable on outcomes. The negative effect of self-criticism on outcomes also appeared to be consistent across the three treatment modalities. Such results suggest the robustness of the detrimental role of self-criticism, and the findings are consistent with suggestions that self-criticism is a transtheoretical predictor of outcome in the treatment of depression (e.g., Blatt, 2004d; Blatt et al., 1995; Blatt & Zuroff, 2005; Löw et al., 2020).

Although participants with high levels of self-criticism consistently had more severe depressive symptoms, the present findings indicate that this effect may be mitigated, as the negative effect of self-criticism seemed to slow down as the therapy progressed. This result is partially aligned with previous findings in adults (Blatt et al., 1998; Rice et al., 2015). This finding also points to the possibility that young people with intense self-criticism may require longer treatment to reduce their distress to a non-clinical level. As previous studies in adults have reported (Blatt, 1992; Blatt et al., 1988), patients with self-criticism tend to have greater therapeutic gain from long-term psychotherapies, particularly when a given therapy or technique is better adapted to their underlying personality features or needs (e.g., more interpretive-oriented instead of interpersonal-oriented psychotherapy). It is possible that driven by the desire to defend and preserve their sense of self, young people with self-criticism may need considerably



more time to consolidate and internalise the new perspectives or understandings of themselves generated from therapy. Further investigations are needed to test this assumption.

Participants in the high self-criticism group were more likely to meet the criteria for clinical depression compared to those with low self-criticism even by the 86-week of follow-up. Therefore, it is also possible that while young people with intense self-criticism can respond to therapy, they may experience difficulties in engaging with the therapy and benefitting from it. It has been proposed that individuals with self-criticism show increased sensitivity to failure, rejection, and loss of autonomy (Blatt & Zuroff, 1992). Consequently, to preserve their vulnerable sense of self, individuals with self-criticism tend to have difficulties disclosing their inner life, displaying mistrust in close relationships, and ambivalence or even hostility towards others (Abi-Habib & Luyten, 2013; Zuroff & Fitzpatrick, 1995). Such features may challenge young people's capacity to establish strong and trustful relationships with therapists, as well as to engage in a comprehensive exploration of their problems. Indeed, Zuroff et al. (2000) found that the negative association between pre-treatment self-criticism and therapeutic gain was partially mediated by the patient's failure to contribute to an adaptive therapeutic alliance in the TDCRP study. It is possible that young people in the current sample also experienced such difficulties in engaging with therapists, compromising their therapeutic gain. These assumptions will be tested in the next chapter in an attempt to further untangle the reported negative association between self-criticism and treatment outcome.

### **3.4.2 The mixed effects of dependency on treatment outcome**

Dependency showed a tendency to associate with a better treatment outcome (e.g., more reduction in depressive symptoms), although this main effect was non-significant, which is in line with previous findings in depressed adults (Blatt et al., 1995). Dependency was found to significantly influence the rate of change in general and social functioning. Contrary to participants with low dependency who showed stable improvement over time, the improvement for those with intense dependency seemed to be rather unstable. Young people with high levels of dependency seemed to respond to the treatment fairly quickly after entering the therapy (e.g., the first six weeks). Yet, after the end of therapy, they seemed to eventually show more impairments in general and social functioning. It is possible that for young people with intense dependency, the therapy and/or the therapist can act as a stable other who

can provide unconditional regard and compassion, which satisfies their need for closeness and being cared for, resulting in a rapid improvement in their functioning even at the early stage of treatment. However, the end of treatment may again activate their concerns about interpersonal separation and the sense of being abandoned. These assumptions are consistent with findings reported by Rost et al. (2019), which reported an association between dependent traits and relapse after the treatment in a study of a longer-term psychodynamic treatment for chronic depression. Such findings may reflect the mixed nature of dependency. For example, while the pro-social features associated with dependency may indeed help youths to connect with their therapists, they may also conceal these young people's fear of losing closeness and the approval of their therapist, which may in turn impede their chance to examine the underlying difficulties and the development of autonomy and agency (Rost et al., 2019). From this perspective, high levels of unsolved dependency at the end of treatment may be a predictor of relapse. More studies are needed to investigate such assumptions to better understand the potential longer-term effect of dependency on therapeutic outcomes.

### **3.4.3 Limitations**

Although the present study yields promising findings in identifying the consistent negative effect of self-criticism and the rather mixed effects of dependency on treatment outcomes, it is important to consider several limitations when interpreting the results. Firstly, the original IMPACT study adopted the short version of DEQ-A to ensure time efficiency. However, further analyses using the full version of DEQ and DEQ-A revealed that the dependency factor seemed to assess attitudes or reactions toward disruptions of interpersonal relatedness at two developmental levels (Blatt et al., 1996a; Zuroff et al., 2004a). One captures more maladaptive and generalised fears of abandonment, and another one relates feelings of loss for a particular person. Although the factor structure and reliability of the short-version of DEQ-A were confirmed using the current sample, this version may not be sufficiently sensitive to detect the subtle, but meaningful, variations in personality expressions, and thus may be limited to the capacity to elaborate findings regarding the impacts of dependency.

Moreover, the use of self-report symptoms and functioning measures as indexes of treatment outcomes may also be limited in certain regards. For example, it has been proposed that outcome measures should reflect a person-centred approach and take what matters for young people and their families into

consideration, such as family functioning and personal growth (Krause et al., 2021). It is therefore recommended that future studies combine multiple indexes of therapeutic outcome from different sources (e.g., clinician- and observer-rated measures) to assess the impacts of personality vulnerabilities on young people's therapeutic outcomes more comprehensively. Finally, the current analyses were based on cases with complete datasets, which may introduce potential bias. However, since the analysis of the missing pattern demonstrated the limited impacts of missing data, and multilevel modelling is robust in handling missing data under the assumptions of missing completely at random and missing at random (e.g., Curran et al., 2010; Hesser, 2015), the author argues the validity of the current analysis.

#### **3.4.4 Conclusions**

This study explored the impact of depressed young people's pre-treatment personality dimensions of self-criticism and dependency on their treatment outcomes during short-term psychotherapy. The findings suggest that while self-criticism was significantly associated with more severe depressive symptoms and impaired general and social functioning across measurement occasions and treatment modalities, dependency seemed to yield more mixed effects on the treatment outcome. It may be that young people with self-criticism experienced greater difficulties in engaging with short-term therapy and might need considerable time to consolidate the new perspectives that are generated from the therapy. For dependency, while the proposed pro-social features might enable participants to respond to the therapy quickly, as shown by their improvement in social and general functioning in the early stage of therapy, their underlying fears of abandonment and losing closeness might eventually impede the therapeutic process (e.g., being activated by the end of treatment). Although those assumptions need to be further tested, such findings indicate the value of considering adolescents' personality features in both research and clinical practice. Further comprehensive studies of the therapeutic process are required to explore how personality dimensions may interact with the therapeutic process.

## **Chapter 4 Self-Criticism, Dependency, and the Therapeutic Alliance in Short-Term Psychotherapies for Adolescent Depression**

### **4.1 Introduction**

Unipolar major depression is one of the leading causes of disability among adolescents worldwide (World Health Organization, 2008). More than four decades of research suggest that the theoretical-based and empirical-supported personality dimensions of self-criticism and dependency negatively influence treatment outcomes for depression (e.g., Blatt, 2004f). Yet, the mechanisms through which these personality dimensions influence treatment outcome are still poorly understood. Studies in adults suggest that these personality dimensions, and self-criticism in particular, may negatively influence the therapeutic alliance, which in turn, ultimately lead to negative therapeutic outcome (e.g., Shahar, 2015; Zuroff et al., 2000). However, the extent to which the findings can be generalised to adolescents remains unclear. The present study, therefore, used data from a large sample of depressed adolescents ( $n = 465$ ) undergoing short-term psychotherapy to examine the impacts of personality dimensions on the therapeutic alliance rated by both participants and therapists, and whether these potential associations could explain the effects of these personality dimensions on treatment outcome. In what follows, evidence for the role of the therapeutic alliance in the association between personality and treatment outcome is first discussed. This is then followed by a discussion of the aims and hypotheses of the present study.

#### **4.1.1 Self-criticism, dependency, and treatment outcome in short-term psychotherapy**

As elaborated in previous chapters, self-criticism is thought to reflect an overemphasis on self-definitional issues, such as an excessive preoccupation with self-worth and autonomy (Blatt & Luyten, 2009). Dependency, on the other hand, is characterised by maladaptive concerns regarding interpersonal relatedness, such as fear of being abandoned and a preoccupation with past, current, and future disruptions in close relationships (Blatt & Zuroff, 1992). Consistent with longitudinal studies (e.g., Blatt et al., 1995; Blatt et al., 1998; Bulmash et al., 2009; Marshall et al., 2008), recent meta-analyses suggest a more consistently negative impact of self-criticism on therapeutic outcome compared to dependency (Kane & Bornstein, 2019; Löw et al., 2020). As mentioned in the previous chapter, Löw et al. (2020) conducted a meta-analysis based on 3,277 adult patients and demonstrated that self-criticism showed a negative effect on a range of treatment outcomes (e.g., clinical symptoms, interpersonal functioning,

quality of life) across treatment modalities (e.g., cognitive behaviour therapy, interpersonal therapy, and psychodynamic therapy). Findings concerning the impact of Dependency, on the other hand, have been more mixed as shown in a meta-analysis based on 3,807 patients (Kane & Bornstein, 2019), such as being associated with more positive outcomes in general functioning and in psychodynamic therapy but not in symptom reduction in cognitive behavioural therapy (CBT). Indeed, in the previous chapter, the analysis based on a large sample of depressed adolescents ( $n = 465$ ) from the Improving Mood with Psychoanalytic and Cognitive Therapies (IMPACT) study also found that young people's pre-treatment self-criticism was consistently associated with more severe depressive symptoms and impairments in general functioning across the treatment condition (i.e., CBT, short-term psychoanalytic psychotherapy, and brief psychosocial intervention), and the effect remained significant after controlling for a set of pre-specified prognostic variables. Dependency, on the other hand, showed a relatively weak or mixed effect on general and social functioning, as youths with greater dependency showed improvement in functioning during treatment but also a tendency to relapse after the end of treatment.

#### **4.1.2 Personality dimensions, the therapeutic alliance, and treatment outcome**

One possible explanation for the more consistently negative impact of self-criticism is that self-critical features may impede the establishment and maintenance of a positive therapeutic relationship. Individuals with self-criticism have been noted to associate with avoidant attachment, such as fear of disapproval and criticism from others as well as mistrust in close relationships (Luyten & Blatt, 2011). Accordingly, they tend to be socially isolated and experience difficulties in disclosing aspects of their inner life (Blatt & Zuroff, 1992; Zuroff & Fitzpatrick, 1995). Indeed, data from samples of college students and communities have indicated that self-criticism is associated with negative interpersonal features, such as concerns about others' reactions, emotional distance from others, social avoidance, self-concealment, and less positive emotional expressions (Alden & Bieling, 1996; Andrews, 1989; Luoma & Chwyl, 2020; Zuroff et al., 1995). Thus, individuals with self-criticism may extend their negative relational schema to the therapeutic setting, limiting their capacity to develop a trustful therapeutic relationship and to collaborate with the therapists to work on their difficulties and ingrained negative self-beliefs.

This proposed association has been supported by a series of studies based on further analyses of the Treatment of Depression Collaborative Research Program (TDCRP, Elkin et al., 1989), which is a large clinical trial that investigated the efficacy of short-term treatments on 250 depressive adults. Zuroff et al. (2010) utilised multilevel modelling to model within-therapist variance in TDCRP data. It was found that, within a therapist's caseload, patients with higher levels of self-critical traits tended to perceive fewer "Rogerian conditions" from their therapist (e.g., therapist's empathy, positive and unconditional regard), which signifies that self-criticism may interfere with individuals' capacity to perceive a positive emotional bond with their therapists. In addition, Zuroff et al. (2000) used independent observers to evaluate patients' and therapists' contribution to the establishment and maintenance of the therapeutic alliance in the early (session 3), middle (session 9), and late (session 15) stages of treatment. While pre-treatment dependent traits were unrelated to both parties' contributions to the alliance, self-critical traits were significantly associated with fewer patients' contributions to the alliance in the late stage of treatment.

Further analyses revealed that self-criticism was not only associated with patients' reduced contribution to the alliance, but also related to a less positive social network, and these associations fully mediated the significant effect of self-criticism on outcome (Shahar et al., 2004a). This finding is in line with Shahar et al. (2003), as they found while self-criticism and risk factors of personality disorder features were related to poorer therapeutic outcome, only self-criticism significantly predicted patients' contribution to alliance and their satisfaction with social relations. Thus, self-criticism appears to be crucial in understanding the therapeutic process. It seems to impede patients' capacity to establish and maintain adaptive social relationships both within and outside of the therapy, which in turn, prevented them to benefit from the therapy more profoundly. Studies other than TDCRP ones have also replicated these findings. Whelton et al. (2007), who examined 169 outpatients in a community clinic, reported that self-criticism was significantly associated with poor therapeutic alliance rated by patients throughout the therapeutic course. Similarly, van der Kaap-Deeder et al. (2016) found a negative association between pre-treatment self-criticism and therapeutic alliance after three months of treatment in a sample of 53 adults with eating disorder.

While promising evidence seems to support the association between self-criticism and therapeutic alliance, there is a particular need for studies to be conducted in young people, as all of the research reviewed above focused on adult patients. Moreover, existing research could be improved in three aspects. First, previous studies mainly utilised data from patients' perspectives, such as therapeutic alliance rated by patients or patients' contribution rated by independent researchers. However, the therapeutic process involves interactions between patients and therapists, which means that patients' maladaptive personality expressions may also influence therapists' attitudes and evaluations of the therapeutic alliance. This was highlighted in findings from Hewitt et al. (2008a). It was discovered that clinicians not only displayed significantly less preference for participants who scored high on self-critical traits during a clinical interview, but also tended to be unwilling to see them as patients. Likewise, by analysing clinical supervision sessions of the therapeutic work with patients with self-criticism, Hennissen et al. (2022) found that therapists had negative reactions in facing patients' self-critical features, as they showed more impatience, resignation, and a sense of being criticised. As discussed before, the analysis using TDCRP data identified a non-significant association between patients' self-critical traits and therapists' contribution to the alliance as rated by independent researchers (Zuroff et al., 2000). However, it is possible that independent observers may be hard to capture the potentially subtle and negative perceptions from the therapists. Hence, further research is needed to investigate whether patients' pre-treatment personality expressions influence the therapeutic alliance rated by both young people and therapists themselves. It follows that it would be worthy to examine whether patients' maladaptive personality traits lead to a negative experience in the therapeutic alliance from not only the patients' perspectives, but also the therapists' ones, ultimately resulting in poorer treatment outcome.

Furthermore, the therapeutic alliance is not a static given but rather dynamic, as it may considerably fluctuate during the therapeutic process. Therefore, it is essential to consider not only the overall between-individual difference in the therapeutic alliance, but also the changes in therapeutic alliance across different stages of treatment (i.e., the within-individual variance). While previous research has largely focused on the association between personality dimensions and the between-participant difference in the alliance at a given stage (e.g., the early, middle, and/or later stage), it is important to explore whether young people's personality styles may influence the alliance over time.

### **4.1.3 The present study**

The present study, therefore, aimed to investigate (1) the associations between patients' pre-treatment self-criticism and dependency, and both patient-rated and therapist-rated therapeutic alliance, and (2) whether these associations explained the relationship between patients' personality vulnerabilities and therapeutic outcome. This study drew on the IMPACT data set, which contains data from 465 clinically depressed adolescents who received short-term psychotherapies of CBT, short-term psychoanalytic psychotherapy (STPP) and brief psychosocial interventions (BPI). In the IMPACT study, participants' and therapists' ratings on the therapeutic alliance were collected at 6-, 12- and 36-week of treatment end. This qualifies the present study to adopt a multilevel analytical approach (i.e., growth curve modelling and multilevel mediation analysis) to capture the impact of self-criticism and dependency on the therapeutic alliance and outcome over time.

In addition, as discussed in previous chapters, studies in adults (Blatt, 2004d; Luyten et al., 2007) and the analyses of the IMPACT data found that gender-incongruent features (i.e., higher levels of dependency in men and higher levels of self-criticism in women) were associated with increased risk for psychopathology. The present study therefore also had the goal of investigating this potential gender incongruency effect in the associations among personality dimensions, the therapeutic alliance and outcome. Lastly, since previous research using the IMPACT data found a significant difference in both patient-rated and therapist-rated therapeutic alliance across the three treatment modalities (Cirasola et al., 2021), this study also tested whether the impact of patients' personality dimensions on the therapeutic alliance differed across the treatment conditions. It was expected that young people's pre-treatment self-critical levels, and to a lesser extent dependency, would be negatively associated with the therapeutic alliance as rated by both young people and their therapists, and that these negative associations would mediate the relationship between these personality dimensions and treatment outcome. It was also assumed that gender-incongruent personality features would be negatively associated with the alliance as rated by both young people and their therapists.



## 4.2 Methods

### 4.2.1 Participants

The present study drew on the IMPACT sample of 465 adolescents diagnosed with DSM-IV major depression. The detailed inclusion criteria of the IMPACT study were discussed in the previous chapter. In total, 470 adolescents were recruited from 15 National Health Service child and adolescent mental health service clinics across three regions of the UK: East Anglia, North London and North-west England. Participants were randomly assigned (1:1:1) to three psychotherapy arms (CBT, STPP, and BPI) with stochastic minimisation by age, gender, self-reported depressive sum scores, and region. Five adolescents withdrew after randomisation, leaving 465 participants who were included in the analysis. All treatments were manualised, and the average duration of psychotherapy was 24.9 sessions for CBT, 27.9 for STPP, and 27.5 for BPI. There were six measurement occasions in the IMPACT study: baseline, 6-, 12-, and 36-week (treatment end), and follow-ups at 52- and 86-week. Since the present study focused on the therapeutic process, only data collected during the course of treatment were used (i.e., from baseline to 36 weeks).

Participants in the current sample were aged from 11.30 to 17.99 years (mean = 15.61, standard deviation, SD = 1.42) at baseline. There were 348 female participants (mean age = 15.72, SD = 1.31), and 117 male participants (mean age = 15.28, SD = 1.67). The majority of the participants (80.7%) were Caucasian and British. As discussed in previous chapters, there were 225 participants (48%) who received comorbid psychiatric diagnoses; 86.67% of whom had less than two comorbidities. The most frequent comorbidities that account for over 80% of the diagnoses were generalised anxiety disorder, social phobia, oppositional defiant disorder, specific phobia, post-traumatic stress disorder, and separation anxiety disorder.

### 4.2.2 Measures

#### 4.2.2.1 *Self-criticism and dependency*

The short-version Depressive Experiences Questionnaire-Adolescent version (DEQ-A, Fichman et al., 1994) was used to measure the participants' pre-treatment personality expressions of self-criticism and dependency at baseline. The DEQ-A is a 7-point, 20-item scale comprising the sub-scales of Self-criticism (eight items), Dependency (eight items), and Efficacy (four items). The first two subscales

were adopted in the present study. As discussed in the previous chapter, the validity of this two-factor structure was evaluated by using confirmatory factor analysis. After deleting Item 19 from the Self-criticism sub-scale and Item 2 from the Dependency sub-scale, the theoretical-based two-factor solution showed an acceptable and better model fit compared to the alternative one-factor model and demonstrated measurement invariance across genders. Based on the baseline data, both modified sub-scales have adequate reliability, with Cronbach's  $\alpha$  for Self-criticism of .67 and Dependency of .72.

#### ***4.2.2.2 The therapeutic alliance***

The adolescent-rated and therapist-rated therapeutic alliance was measured using the Working Alliance Inventory – Short version (WAI-S, Tracey & Kokotovic, 1989) at 6 weeks post-randomisation (within the first four sessions of treatment), 12 weeks (mid-treatment), and 36 weeks post-randomisation (after completing treatment or in the late stage of treatment in some cases). This 12-item scale is based on the conceptualisation of the working alliance developed by Bordin (1979), which proposes that the working alliance is represented by a combination of the affective bond between client and therapist, an agreement on therapeutic goals amongst both sides, and an agreement on how to achieve those goals. In the present study, the therapist and patient versions of the WAI-S were adopted, and the sum WAI-S scale score was used to reflect the quality of the therapeutic relationship. With a 7-point scale ranging from 1 to 7, the sum scores of WAI-S for Patients (WAI-S-P) and WAI-S for Therapists (WAI-S-T) both range from 7 to 84, and higher scores indicate a stronger therapeutic alliance. Based on the data collected at 6 weeks post-randomisation, both WAI-S-P and WAI-S-T demonstrated high internal consistency (both Cronbach's  $\alpha = .83$ ).

#### ***4.2.2.3 Treatment outcome***

Self-reported depressive symptoms were considered as the indicator for treatment outcome, and the symptoms were measured using the Mood and Feelings Questionnaire (MFQ; Costello & Angold, 1988) during the course of treatment. The 3-point Likert scale MFQ was designed according to the DSM-IV criteria for an episode of unipolar major depression (Costello & Angold, 1988; Costello et al., 1996). The 33 items assess depressive symptoms presented by children and young people aged between 6 and 17 years over the previous two weeks. The sum scale of the MFQ ranges from 0 to 66; the higher the

score, the more depressive symptoms are present. Based on the data collected at baseline, the MFQ demonstrated high internal consistency (Cronbach's  $\alpha = .95$ ).

#### **4.2.3 Statistical analysis**

Multilevel analytical approaches using maximum likelihood estimation were adopted. The analysis was carried out with Stata Version 15. Growth curve modelling (GCM) was used to address the first research question, that is, whether young people's pre-treatment personality dimensions influence the therapeutic alliance over time, as rated by young people and therapists. As discussed in the previous chapter, GCM involves fitting a trajectory using repeated measurements for each individual and then introducing explanatory variables to elucidate the captured patterns of change. Therefore, it fits in with the current data structure and is suitable to address the research questions.

The GCM analysis was based on the analytical steps proposed by Steele (2014). The unconditional growth model of the therapeutic alliance was first established to model its trajectory of change over measurement occasions. Individuals with repeated measures less than or equal to one time were excluded, as they did not contribute to the model formulation. The repeated measurements at 6, 12, and 36 weeks were coded as -5, -4, and 0 to reflect the time intervals. To establish the unconditional growth model, a linear and quadratic time variable with their corresponding random effects (i.e., a random intercept and slope) was subsequently added and compared to identify the best model fit. Similar to the GCM analysis in the previous chapter, this analytical approach implies a correlation between the random intercept and slope, and thus the unstructured covariance matrix in Stata was again adopted. The intra-class correlation coefficient (ICC) was used to investigate the proportion of total variance attributable to between-individual variance for GCM in repeated measurements (Steele, 2008). The likelihood ratio (LR) test was employed to compare the model fit of each model, with a significant result indicating a statistically significant difference between models and providing evidence for a substantial improvement in model fit.

After establishing a valid unconditional growth model, the main effects of participants' pre-treatment personality variables, their interactive effect with each other and with gender, were introduced to test whether the between-individual variability of the therapeutic alliance assessed by the WAI-S was

dependent upon these explanatory variables. The interactions between both personality dimensions and the time variable were also tested to establish whether pre-treatment self-criticism and dependency predicted the growth rates in the WAI-S scores across measurement occasions. Once a significant effect was identified, the treatment condition was introduced into the model and was tested whether the personality dimensions interacted with it. It was to test whether the significant effect of personality dimension differed across the therapeutic modality. To reduce multicollinearity, self-criticism and dependency were centred on the mean before interaction terms were created. Given the debate on standardised methods on multilevel data (i.e., multiple sets of means and standard deviations across levels), the unstandardised coefficient ( $B$ ), its significance, and standard errors ( $SE$ ) were reported to reflect the strength of associations between variables.

The second research question tested the mediation effect of the therapeutic alliance on the associations between personality dimensions and treatment outcome (i.e., depressive symptoms). Following the framework for a mediation model proposed by Baron and Kenny (1986), the mediator is essentially associated with the dependent variable beyond the significant paths from the independent variable to the mediator and the dependent variable. Therefore, this analysis also investigated whether the patient-rated and therapist-rated therapeutic alliance influenced the change trajectory of the participants' depressive symptoms. Again, GCM was adopted here, and details of the establishment of the unconditional growth curve model for depressive symptoms (i.e., the MFQ scores) can be found in the previous chapter. Both between- and within-individual variance in the WAI-S scores were considered. Specifically, the main effects of between- and within-individual variance in the WAI-S scores and their interactive effects with the time variables on the unconditional growth model for MFQ scores were tested. To assess the between-individual variance in the WAI-S scores, a level-2 variable (i.e., the participant level) was computed corresponding to each person's mean WAI-S score across the treatment; the higher the value, the better the overall therapeutic alliance rated by the individual. To assess the within-individual variance in the WAI-S scores, a level-1 variable (i.e., the level of repeated measurements) was computed representing the difference between a person's WAI-S score at each measurement occasion and their overall mean WAI-S score. A higher value for this variable implies that the person tended to have a better rating of the therapeutic alliance on that occasion compared to their average rating.

The multilevel mediation model of the personality dimensions, therapeutic alliance, and outcome was then assessed by generalised structural equation modelling (GSEM). GSEM extends the standard structural equation modelling (SEM) which can only be used for single-level structured data (Huber, 2013). GSEM, therefore, not only has all the functionality of SEM but can also be applied to evaluations of multilevel structured data (e.g., repeated measurements nested within individuals, Tang et al., 2022). The present study followed the GSEM analysis for multilevel mediation models proposed in the Stata manual (Stata Press, 2015). Specifically, this study conducted multilevel GSEM that takes account of random effects of time-varying variables (i.e., WAI-S and MFQ scores) to reflect the multilevel variance when estimating estimators for the mediation model. The size and significance of the path coefficient estimate were adopted as indicators of the model fit as Stata does not permit the derivation of fit statistics in the cases of GSEM (e.g., the root mean square error of approximation). Indirect, direct, and total effects of the mediational model were also reported.

#### **4.2.4 Missing data**

There was 16.99% missing data on the DEQ-A. The mean proportions of missing data across measurement occasions for WAI-S rated by young people, WAI-S rated by therapists, and MFQ were 48.82% ( $SD = 2.62\%$ ), 76.70% ( $SD = 8.77\%$ ), and 23.70% ( $SD = 15.88$ ), respectively. The large proportion of missing data in therapist-rated WAI-S is likely because of the significant difference in its data collection among regions, as the average missing data of this variable was 82.13% in North West, 63.77% in East Anglia, and 45.13% in North London. Missingness was also investigated using an independent *t*-test to compare cases with complete datasets and missing datasets across measurement occasions (Enders, 2010). Following the suggestion of Nicholson et al. (2017), study-related variables (e.g., dependency, self-criticism, and MFQ) were employed to indicate the missing pattern. The difference between missing and complete cases on study-related variables was non-significant, providing evidence that the missing had limited impacts on the current research questions. The present analysis was therefore based on cases with complete datasets. Considering that the missing data in therapist-rated WAI-S differed remarkably among regions, the region variables were controlled in all analyses relating to WAI-S scores rated by the therapists. In the following sections, although this controlling is not particularly mentioned, it should be noted that when reporting results that answer the

research questions, all estimators relating to the therapist-rated WAI-S were generated after controlling for the region variable.

### 4.3 Results

#### 4.3.1 The impact of pre-treatment personality dimensions on the therapeutic alliance

##### 4.3.1.1 Unconditional growth models for patient- and therapist-rated WAI-S

Table 12 displays the descriptive and primary inferential statistics regarding the therapeutic alliance. On average, WAI-S scores rated by young people tended to be relatively stable throughout the treatment, while therapists' ratings tended to increase as the therapy progressed. Therapists had significantly higher ratings on the therapeutic alliance compared to young people at 36 weeks of the treatment end ( $t = 3.82$ ,  $p < .001$ ). The difference between the two perspectives provided evidence to further justify the need to include both young people's and the therapists' ratings in the subsequent analysis.

Table 12 The therapeutic Alliance Rated by Young People and Therapists Across Time

	6-week		12-week		36-week	
	WAI-S-P	WAI-S-T	WAI-S-P	WAI-S-T	WAI-S-P	WAI-S-T
Mean	52.61	52.8	52.21	53.85	53.79	59.24
SD	13.36	9.4	13.81	9.89	15.08	8.11
<i>n</i>	232	142	252	120	230	63
Correlation <i>r</i>	.50**		.48**		.45**	
Independent <i>t</i> -value	-0.16		-1.31		-3.82**	

Note: 1. \* $p < .05$ ; \*\* $p < .001$

2. SD: = standard deviation; WAI-S-P/T= Working Alliance Inventory – Short Version for Patients/Therapists.

A null model that only accounted for a between-participant effect on the WAI-S for Patients/Therapists (WAI-S-P/T) without any explanatory variables (e.g., repeated measurement units) was initially tested. Based on the null models, the estimated intraclass correlation coefficients (ICCs) were .67 for WAI-S-P and .64 for WAI-S-T, suggesting 67% and 64% of the variance in the corresponding measurements were due to the difference between individuals, and accordingly the proportions of within-individual variance were estimated as 33% and 36%, respectively. A non-independent pattern and multilevel structure was therefore present.

A linear and quadratic time variable accompanied by their random effects was subsequently added to the null model for WAI-S-P to establish an unconditional growth model. Although the linear time variable was non-significant, adding its random slope to the linear random intercept model significantly improved the model fit ( $\chi^2(2) = 8.6, p = .014$ ). The model with a quadratic time variable was not convergent, indicating that the data was likely to have a poor fit. Therefore, the final model for the WAI-S-P included a linear time variable with its random intercepts and slopes. A similar estimation procedure was conducted to model the change in the WAI-S-T scores over time. A linear model with a random intercept was considered as the final model as adding the random slope failed to significantly improve the model fit ( $\chi^2(2) = 2.17, p = .338$ ). The estimated fixed and random effects of the final model for WAI-S-P/T are reported in Table 13. The observed and estimated change trajectories of the WAIS-P/T scores based on their final models are presented in Figure 3.

Table 13 Summary of the Final Unconditional Growth Models for the Therapeutic Alliance

	WAI-S-P	WAI-S-T
Fixed effects		
Intercept ( $B_0$ )	54.14 (1.00)**	57.62 (1.03)**
Linear slope ( $B_1$ )	0.25 (0.17)	0.77 (0.19)**
Random effects		
Level 1		
Residual ( $\sigma^2_e$ )	52.01 (5.85)	30.04 (3.33)
Level 2		
Intercept ( $\sigma^2_{u0}$ )	170.20 (22.68)	54.92 (9.18)
Linear slope ( $\sigma^2_{u1}$ )	1.84 (0.80)	–
Intercept – $B_1$ covariance ( $\sigma_{u01}$ )	8.83 (3.29)	–

Note. 1. \*  $p < .001$

2. The table displays estimates with standard errors in parentheses

3. WAI-S-P/-T = Working Alliance Inventory – Short Version for Patients/Therapists

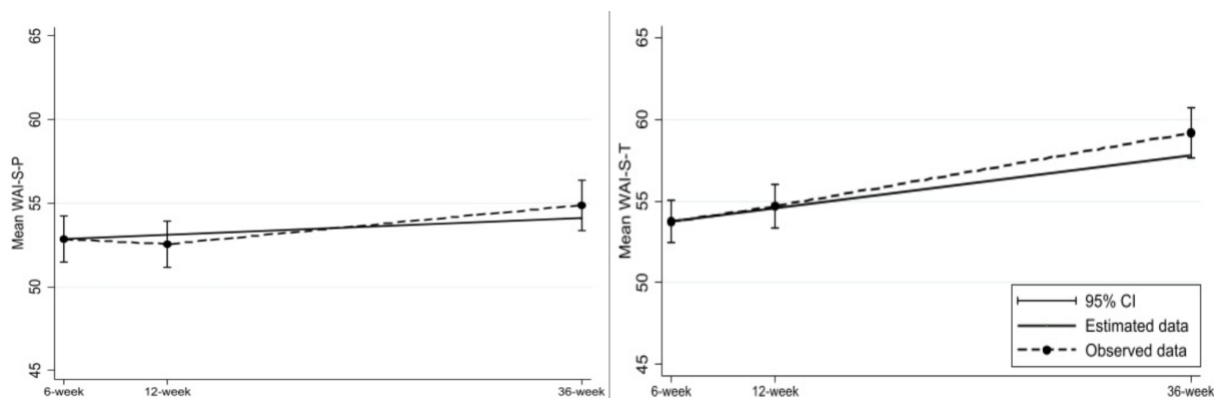


Figure 3 Estimated and Observed Trajectories of WAI-S Scores Over Time

Note: WAI-S-P/-T = Working Alliance Inventory – Short Version for Patients/Therapists; CI = Confidence Interval

#### 4.3.1.2 The impacts of pre-treatment personality dimensions on the patient-Rated therapeutic alliance

Self-criticism, dependency, as well as their interaction with each other, with gender, and with the time variable were introduced to the unconditional growth model for WAI-S-P. Initially, none of the predictors was significant (absolute  $B = 0.02$  to  $3.03$ ,  $ps > .191$ ). Since the present study primarily focused on the impact of personality dimensions on the therapeutic alliance and its rate of change, the model was trimmed by omitting non-significant interactions with gender. Subsequently, although neither the main effect of dependency ( $B = 1.01$ ,  $p = .377$ ) nor any of the interaction effects (absolute  $B = 0.16$  to  $0.21$ ,  $ps > .442$ ) was significant, a significant main effect of self-criticism on participant-rated WAI-S was identified ( $B = -2.99$ ,  $p = .029$ ). This demonstrated that, on average, an increase of a one-point scale score in self-criticism predicted a decrease of 2.99 scale score in WAI-S when holding other variables constant. The treatment modality was then added to the model. After controlling for the treatment conditions, the main effect of self-criticism remained significant ( $B = -3.40$ ,  $p = .012$ ). However, non-significant interactions between self-criticism and treatment conditions were then identified, with  $B = -1.76$ ,  $p = .396$  for self-criticism  $\times$  CBT, and  $B = -0.87$ ,  $p = .678$  for self-criticism  $\times$  STPP when treating BPI as the reference group.



#### ***4.3.1.3 The Impact of Pre-treatment Personality Dimensions on the Therapist-Rated Therapeutic Alliance***

A similar analytical procedure was followed for WAI-S-T. The same set of explanatory variables in the analysis for WAI-S-P was introduced to the unconditional growth model for therapists' ratings on the therapeutic alliance. Dependency again failed to show a significant main effect ( $B = -1.60$ ,  $p = .318$ ), however, a significant main effect of self-criticism ( $B = -3.94$ ,  $p = .048$ ), a two-way interaction between self-criticism and dependency ( $B = -6.85$ ,  $p = .001$ ), and a three-way interaction between self-criticism, dependency, and gender ( $B = 5.99$ ,  $p = .005$ ) were identified. The treatment modality and its interactive effects with both personality dimensions were subsequently introduced into the model. Considering that the smaller sample size of therapist-rated WAI-S likely limited the statistical power, when testing the effects of the treatment condition, the non-significant interactions with the time variable were omitted. After controlling for the treatment conditions, the main effect of self-criticism and the identified three-way interaction remained marginally significant, with  $B = -2.83$ ,  $p = .090$ , and  $B = 3.46$ ,  $p = .082$  respectively, and the identified two-way interaction remained significant ( $B = -4.25$ ,  $p = .014$ ). None of the personality dimensions significantly interacted with the treatment condition, with  $B = -2.46/-1.97$ ,  $p = .341/.408$  for self-criticism  $\times$  CBT/STPP,  $B = 3.02/0.80$ ,  $p = .172/.654$  for dependency  $\times$  CBT/STPP, and  $B = -0.89/-1.58$ ,  $p = .725/.498$  for self-criticism  $\times$  dependency  $\times$  CBT/STPP when treating BPI as the reference group.

To elaborate on the significant interactions, the change trajectories of WAI-S-T scores for boys and girls in four combinations of self-criticism and dependency were plotted: (1) for those with high levels of both pre-treatment self-criticism and dependency scores (i.e., with corresponding scores higher than one SD above the mean, +1 SD); (2) for those with high self-criticism (+1 SD) and low dependency scores (-1 SD); (3) for those with low self-criticism (-1 SD) and high dependency scores (+1 SD); and (4) for those with low levels of both self-criticism and dependency scores (-1 SD). Again, because of the smaller sample size of therapist-rated WAI-S (e.g., only a total of 120 observations for boys), this study conducted an exploratory analysis based on estimated WAI-S-T scores in the four combinations across gender. The procedure of plotting the estimated values was adapted from Dawson and Richter (2004). Based on this exploratory analysis, evidence for a gender incongruence effect was observed (Figure 4). It seemed that the therapists tended to rate the therapeutic alliance as less positive for girls who had

higher levels of self-criticism, regardless of their levels of dependency. Dependency seemed to play a role only among boys. The evidence seems to suggest a grading effect where boys with high levels of dependency and low levels of self-criticism (i.e., “pure” dependency) tended to have the highest or best ratings on WAI-S from their therapists, followed by young people with lower levels of dependency in combination with high and low levels of self-criticism, respectively, and finally the group of young people with high levels of both dependency and self-criticism.

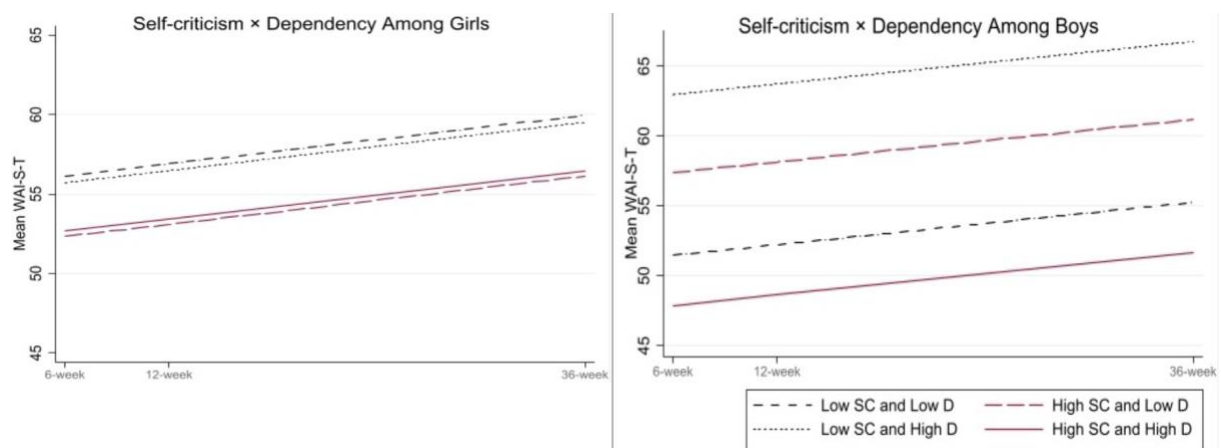


Figure 4 Interaction of Self-criticism and Dependency in the Therapist-Rated Alliance and Gender  
*Note.* WAI-S-T = Working Alliance Inventory – Short Version for the Therapist; SC = Self-criticism; D = Dependency; low/high scores = scores lower/higher than one SD above the mean

### 4.3.2 The mediation model of personality dimensions, the therapeutic alliance, and outcome

#### 4.3.2.1 The impact of the therapeutic alliance on treatment outcome of depressive symptoms

The impact of the therapeutic alliance rated by young people on treatment outcome was first investigated. The variables representing between- and within-individual variance in patient-rated WAI-S scores and their interactions with time variables were introduced to the unconditional growth model for depressive symptoms (MFQ). Both the between- and within-individual variance in patient-rated WAI-S showed significant main effects on MFQ, with  $B = -0.35, p < .001$  and  $B = -0.47, p = .001$ , respectively. The two effects remained significant after controlling for the treatment conditions ( $B = -0.37, p < .001$  and  $B = -0.45, p = .001$ , respectively). This suggests that participants who reported an overall better therapeutic relationship, and when they reported having a more positive alliance, also reported reduced depressive symptoms. A similar procedure was conducted to test the effects of both between- and

within-individual variance in therapist-rated therapeutic alliance on depressive symptoms. However, none of the predictors showed significant effects ( $p > .264$ ).

#### 4.3.2.2 *The mediation model of personality dimensions, the therapeutic alliance, and treatment outcome*

Based on the results so far, a multilevel mediation model for self-criticism, the patient-rated therapeutic alliance, and depressive symptoms was then designed. The analysis revealed a significantly partial mediation model (indirect effect = 0.59,  $p = .020$ ), suggesting that the negative effect of self-criticism on treatment outcome (i.e., depressive symptoms) was partially mediated by a poorer quality of the therapeutic alliance as reported by young people. Further analysis testing of the mediational models with between- and within-individual variance in WAI-S-P separately found that only the between-participant variance in the patient-rated therapeutic alliance was a significant mediator (Figure 5), while the within-participant variance failed to show significance (indirect effect = .38,  $p = 1.00$ ). Therefore, it appeared that the significant mediation effect of the working alliance was driven primarily by the overall individual differences in participants' perceptions of the therapeutic alliance as a function of self-criticism.

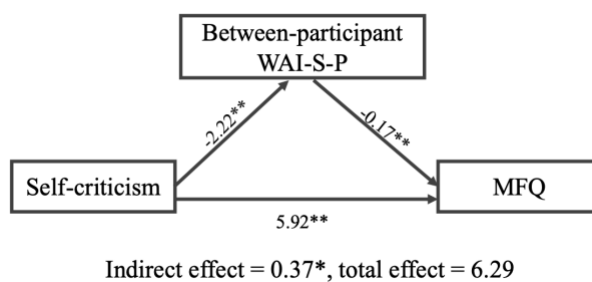


Figure 5 The Mediation Model of Self-criticism, Between-Participant Variance in the Patient-Rated Working Alliance, and Depressive Symptoms

Note: 1. \*  $p < .05$ , \*\*  $p < .001$

2. WAI-S-P = Working Alliance Inventory – Short Version for Patients; MFQ = Mood and Feelings Questionnaire

## **4.4 Discussion**

To the best of my knowledge, this is the first study to investigate the relation between the personality dimensions of self-criticism and dependency, the therapeutic alliance, and treatment outcome based on a large sample of depressed adolescents. A particular strength of this study is that it assessed both patient-reported and therapist-reported therapeutic alliance throughout a 36-week treatment and took account of both between- and within-individual variance in the therapeutic alliance over time. The results mainly suggest the negative effect of self-criticism on the development of a positive therapeutic alliance, especially as reported by the young people, and such an association appeared to explain in part the negative effects of self-criticism on youth-reported treatment outcome. In addition, there was evidence to suggest a gender-incongruent effect in the therapist-rated therapeutic alliance. Three major sets of findings are discussed as follows.

### **4.4.1 Personality dimensions, the youth-rated therapeutic alliance, and treatment outcome**

As expected, self-criticism was the only significant predictor for the youth-rated therapeutic alliance. The significant main effect of self-criticism suggests that the higher the levels of pre-treatment self-criticism reported by young people, the poorer their perception of the quality of the therapeutic alliance. This effect remained significant after introducing the treatment condition. Although there was a trend that self-criticism seemed to be more negatively associated with the alliance in CBT compared to STPP and BPI, none of these interaction effects was significant. The general detrimental impact of self-criticism on youth-rated therapeutic alliance in short-term psychotherapies is in keeping with previous findings in adults (e.g., Blatt et al., 1996b; Kannan & Levitt, 2013; Miller et al., 2017; van der Kaap-Deeder et al., 2016; Whelton et al., 2007; Zuroff et al., 2000).

Although Zuroff et al. (2000) noted that self-critical traits impeded patients' contribution to the therapeutic alliance at the late stage of treatment, the present findings seem to indicate that self-criticism showed a rather stable effect across the different treatment stages, as a non-significant interaction between self-criticism and the time variable was observed. A possible explanation is that the young people in the present sample tended to perceive a limited improvement in the therapeutic alliance, as demonstrated by an average increase of only 1.18 WAI-S scores over the course of treatment. The small variance may limit the statistical power to detect the potentially different effects of self-criticism on the

therapeutic alliance across treatment stages. However, it is also possible that self-criticism might indeed impair the young people's capacity in establishing and maintaining a strong therapeutic relationship throughout the treatment process. Based on clinical interviews with 90 adult patients, for example, Hewitt et al. (2008b) noted individuals with higher levels of self-critical traits tended to perceive therapists as judgemental and negative, and were overly distressed about the clinical interactions. Similarly, Whelton et al. (2007) identified the adverse effects of self-criticism on the therapeutic alliance in the early stage of treatment can be explained by participants' hostility and less positive affect. It is possible that individuals with self-criticism may bring their criticism and negative schema on social interactions into therapy, showing negative assumptions that the therapists would be judgemental and critical of them. This may lead to hostility and prevent young persons to form a trustful therapeutic relationship.

Moreover, driven by harsh self-evaluation, individuals with self-criticism are suggested to be sensitive to failure and rejection (Blatt, 2004c, 2004g), thus potentially making them hard to maintain a strong alliance or recover from therapeutic ruptures. For instance, to progress the therapeutic work, therapists and youths inevitably need to work together to explore their vulnerability such as the experience of failure and discuss or challenge youths' negative or unreasonable self-beliefs. This may be perceived as a threat to the sense of self for those people. Indeed, after analysing speech segments from 230 therapeutic sessions, Valdés and Krause (2015) noted that compared to those with dependent traits, patients with higher levels of self-criticism tended to refuse new content proposed by therapists during change episodes and resigned during stuck episodes. These assumptions will be tested in the next chapter by further elaborating on the expressions of self-critical features in the therapeutic process using Interpretative Phenomenological Analysis on interviews with youths who had intense self-criticism.

The mediation analysis suggested that the negative effect of self-criticism on the youth-rated therapeutic alliance significantly explained its negative impact on treatment outcome (i.e., associating with worse depressive symptoms), which is consistent with findings from Zuroff et al. (2000) in depressed adults. Moreover, the significant mediational effect of the alliance was driven principally by the between-participant difference in the therapeutic alliance as a function of self-criticism. Again, the weak effect of within-participant changes may be due to young people's limited improvement in their ratings on the

alliance over the course of the treatment. Only a partial mediation model was identified, suggesting the presence of other mediators. For instance, as discussed before, Shahar et al. (2004a) analysed TDCRP data and revealed that participants' self-critical traits were also associated with less positive social networks, which in turn, related to poorer treatment outcomes. These two mediators of the therapeutic alliance and social networks fully accounted for the significant part of the effect of self-criticism on outcome in the TDCRP sample (Shahar et al., 2004a). Future research in adolescent depression is needed to test these proposed mediators both within and outside the therapeutic setting to further untangle the mechanism of the negative impacts of self-criticism on outcome.

#### **4.4.2 Personality dimensions and the therapist-rated therapeutic alliance**

The significant main effect of self-criticism and its interaction with dependency and gender were found in the therapist-rated therapeutic alliance. The exploratory analysis suggests a gender incongruence effect. It seemed that therapists tended to rate the therapeutic alliance as less positive when they worked with girls with high levels of self-criticism regardless of the levels of dependency, while dependency seemed to influence therapists' ratings only amongst boys. This gender-congruency effect was only detected in therapists' ratings of the alliance, which implies that the therapists possibly were more sensitive to and felt more challenged by working with youths who had gender-incongruent features. This seems to accord with the previous presumption that having or displaying gender-incongruent features may increase implicit and explicit disapproval or criticism from others (Blatt, 2004d; Luyten et al., 2007).

It is interesting to note that evidence suggests a more complex interactive pattern for boys. Boys with "pure" dependency seemed to have the highest ratings on the alliance from their therapists. It is possible their emphasis on relatedness and social closeness may facilitate therapists' work in connecting and working with them. Boys with low levels of dependency in combination with self-criticism seemed to receive medium levels of ratings on the alliance from their therapists, and boys with higher levels of both dependency and self-criticism appeared to have the worst therapist-rated therapeutic alliance. It is possible that, while boys in the last group had an intense desire for closeness, they also had negative assumptions and attitudes towards the therapists, such as fear of being judged and criticised. This might increase their struggle to rationalise their conflicting needs, showing them as having more difficulties

in working with the therapists compared to other groups. This seems to relate to the previous findings in dependency and treatment outcome in the previous chapter. It may be the case that dependency may bring an increased risk once the dependent needs are thwarted, for example, either by endogenous barriers of self-criticism or by exogenous changes such as the end of treatment. Again, such assumptions need to be further investigated using a more comprehensive study design with adequate statistical power.

#### **4.4.3 The therapeutic alliance and treatment outcome**

The findings revealed a discrepancy between the patient- and therapist-rated therapeutic alliance. Therapists tended to rate the alliance better than young people, and this discrepancy reached statistical significance at the late stage of treatment. The findings, however, need to be interpreted with caution, as a smaller proportion of therapists reported their ratings compared to young people, and youths in the current sample seem to have lower ratings on the therapeutic alliance compared to other clinical adolescent samples (Hawley & Garland, 2008; Karver et al., 2008). Nevertheless, the divergence between patients and therapists has been frequently reported (Hersoug et al., 2001; Nissen-Lie et al., 2015; Shick Tryon et al., 2007). One possibility is that therapists and patients focus on different therapeutic aspects. Nissen-Lie et al. (2015), for example, suggest that therapists' ratings on the therapeutic alliance are influenced by their experience of the therapeutic flow, whereas patients are more focused on emotional reactions from therapists. Similarly, Hersoug et al. (2001) observed that therapeutic skills and professional progress predict therapists' ratings on the alliance, while therapists' interpersonal responses predict youths' ratings. Therefore, when the treatment approaches the end, therapists might tend to perceive a successful or completed therapeutic flow, thus leading to better ratings on the therapeutic alliance.

Although the current evidence suggests that therapists tend to have more positive ratings of the alliance and their ratings of the alliance increased during treatment, it was the young people's perception of the therapeutic alliance that was significantly associated with treatment outcome (i.e., depressive symptoms). Specifically, participants who tended to perceive overall better therapeutic relationships, and when they reported having a more positive alliance, tended to report fewer depressive symptoms. This finding is consistent with previous research on the positive association between patient-perceived therapeutic alliance and treatment outcome (e.g., Gullo et al., 2012; Horvath & Symonds, 1991; Huppert

et al., 2014; Piper et al., 1991). On the one hand, the finding emphasises the need for a patient-centred approach that prioritises patients' difficulties, needs, and experiences of the therapy, as it is possible that better outcome is associated with young people's feelings that they are being genuinely cared for and understood. On the other hand, it should be noted that the study employed a patient-report measure to assess depressive symptoms, which might have made it more difficult to detect the effects of the therapists' perspectives on outcome. Further research is needed to investigate this association by using more comprehensive outcome measurements from different sources.

#### **4.4.4 Implications and limitations**

The findings from the present study have several important clinical implications. Firstly, they highlight the detrimental role of self-criticism on the therapeutic alliance and outcome. Therapists, therefore, need to be aware of the fact that young people with high levels of self-criticism may have difficulties in maintaining a stronger therapeutic alliance, as they may be hostile to the therapists and resistant to self-disclosure. Secondly, although only exploratory analysis was provided, the present evidence implies that therapists might be liable to be more sensitive to gender-incongruent features. While the findings might reflect the actual difficulties in working with those young people, therapists are also suggested to reflect on the therapeutic work to minimise potential bias relating to gender-incongruent features. Finally, while more comprehensive investigations on the association between the therapist-rated alliance and outcome are needed, the present results stress the need to prioritise young people's perception and experience of the therapy.

Several important limitations need to be considered when interpreting the results. Firstly, a large proportion of missing data was noticed in WAI-S, especially in the therapist-rated ones. Although the missingness has been investigated, and the relevant variable was controlled, this likely limited the statistical power. For example, the findings suggested a trend that the impacts of personality dimensions on the therapeutic alliance somewhat differed in the three treatment conditions, however, in the present study, no evidence suggested the difference was statistically significant and thus was not driven by chance. Likewise, the limited statistical power needs to be considered in the exploratory analysis of the interaction effect on the therapist-rated therapeutic alliance. These findings need to be replicated and confirmed using a study design with adequate statistical power. Secondly, the present study centred on



the general concept of the therapeutic alliance, so particular components of the therapeutic alliance such as emotional bonds, therapeutic goals, and task agreement might be investigated further. Furthermore, only the primary outcome measurement (i.e., self-report depressive symptoms) was used as an indicator for treatment outcome. More comprehensive measurements from different perspectives (e.g., treatment outcomes rated by therapists, carers, or independent observers) might further clarify the role of personality dimensions and the therapeutic alliance. Finally, as discussed in the previous chapter, the original IMPACT study adopted the short version of DEQ-A to ensure time efficiency. Although its factor structure and reliability were tested in chapter two, this version may not sufficiently sensitive to detect the subtle, but meaningful, variations in dependency which have been detected in studies using the full version of DEQ and DEQ-A (e.g., Blatt et al., 1996a; Zuroff et al., 2004a). This may be limited the study's capacity to elaborate findings regarding the impacts of dependency.

#### **4.4.5 Conclusions**

The present study used a large clinical sample of depressed adolescents to investigate the relation of patients' pre-treatment personality dimensions of self-criticism and dependency, the therapeutic alliance as rated by both the young people and their therapists, and treatment outcome. In line with previous findings in adults, results from the present multilevel analysis suggest that self-criticism significantly impedes young people's experience of a positive therapeutic alliance, which in turn, was associated with more severe depressive symptoms. Findings also imply a gender-incongruent effect on the therapeutic alliance as rated by therapists. Therapists seem to rate the therapeutic alliance as less positive when working with girls who suffer from intense self-criticism, while dependency seems to play a more important role when working with boys. The study further supports the patient-centred approach and highlights the importance of considering young people's personality vulnerabilities in both clinical practice and research. Although limitations need to be considered, the present findings provide insights into the mechanism of the well-documented negative role of self-criticism on therapeutic change among depressed adolescents. Future research is needed to test the proposed assumptions and to investigate how exactly the personality features are expressed and interfere with the therapeutic process.

## **Chapter 5 The Experience of Young People with High Levels of Self-criticism of Short-Term Psychotherapy for Depression: A Qualitative Study**

### **5.1 Introduction**

The personality dimension of self-criticism has consistently emerged as a vulnerability factor for depression which also negatively influences therapeutic outcomes in short-term psychotherapies (Blatt, 2004f; Löw et al., 2020). Research indicates that the negative association between self-criticism and therapeutic gain can be explained by the poorer therapeutic alliance as perceived by individuals with self-criticism (e.g., Shahar, 2015; Zuroff et al., 2000). A number of hypotheses have been formulated in this regard. For example, it is possible that individuals with self-criticism may bring their criticism and negative expectations regarding social interactions (e.g., mistrust of others and fear of self-disclosing) to the therapeutic setting, which may impede the development of the therapeutic alliance and subsequently negatively influence therapeutic outcome (Blatt & Zuroff, 2005; Hewitt et al., 2008b; Miller et al., 2017). While there is some evidence for these hypotheses, it is yet largely unclear how exactly self-critical features are expressed in the therapeutic process and how they might impede therapeutic progress. There is thus a need for more qualitative research focusing on the experience of therapy of individuals with high levels of self-criticism. The present qualitative study, therefore, aimed to further clarify the impact of self-criticism in brief psychotherapy of adolescent depression. The therapeutic experience of depressed young people with high levels of self-criticism was explored in the context of a large-scale clinical trial focusing on short-term psychotherapy for depressed adolescents. In what follows, existing evidence of the impact of self-criticism on depression and its treatment outcome is discussed, followed by an overview of the present study.

#### **5.1.1 Self-criticism, depression, and its treatment outcome**

As discussed in previous chapters, self-criticism refers to a distorted overemphasis on the development of self-definition (Blatt & Shichman, 1983). Individuals with self-criticism generally present negative self-beliefs and are haunted by deep-seated feelings of guilt, failure, inferiority, and worthlessness (Blatt & Luyten, 2009). Accordingly, those individuals tend to experience an intense need of being recognised, admired, and respected, and be sensitive to stressors relating to failure and wounded self-esteem (Blatt, 2004e). This may lead to an ambivalent attitude towards interpersonal relationships, as people with self-criticism desire approval and admiration while also fear disapproval and loss of autonomy (Blatt &

Zuroff, 1992). Thus, individuals with self-critical features can be fearful of intimacy, mistrustful of close relationships, and experience difficulties in disclosing aspects of their inner life (Zuroff & Fitzpatrick, 1995). Indeed, Luoma and Chwyl (2020) examined a community sample of 303 adults and found significant associations between self-criticism and expressive suppression, self-concealment, and reduced levels of positive emotional expressions.

The proposed sensitivity to criticism and the impairments in the social network may put individuals with self-criticism at greater risk of depression and negative treatment outcomes. Both cross-sectional, longitudinal studies, and recent meta-analyses have consistently indicated that self-criticism is not only associated with elevated levels of depression in both adolescents and adults (e.g., Kopala-Sibley et al., 2017; Smith et al., 2016; Werner et al., 2019), but also associated with negative treatment outcomes in short-term psychotherapy for depression (e.g., Blatt et al., 1995; Löw et al., 2020). It is possible that individuals with self-criticism bring maladaptive interpersonal patterns (e.g., self-concealment, fear of intimacy) to therapy, and as a result, may lack the capacity to develop a positive therapeutic relationship. In fact, based on data from the Improving Mood with Psychoanalytic and Cognitive Therapies (IMPACT) study (Goodyer et al., 2017b), in the previous chapters the findings suggest that adolescents' pre-treatment self-criticism was significantly associated with more severe depressive symptoms and impaired general and social functioning over the course of study. This association was in part explained by the poorer quality of therapeutic alliance reported by the young people with higher levels of self-criticism. The finding is in line with studies of adult patients with depression (Shahar et al., 2004a; Zuroff et al., 2000), which suggests that self-criticism negatively influences therapeutic outcomes by limiting patients' capacity to establish adaptive relationships both within (i.e., the therapeutic alliance) and outside of the therapy.

The findings in previous chapters and the results from adult patients (e.g., Shahar et al., 2004a; Zuroff et al., 2000) both suggest that it was the patient-reported therapeutic alliance that significantly mediated the association between self-criticism and outcome. This points to the importance of examining the impact that young people's experience has on their treatment. Moreover, the findings in previous chapters suggest that the detrimental impact of self-criticism on the therapeutic alliance might manifest across the different treatment stages. Indeed, Whelton et al. (2007) reported that self-criticism was

associated with increased hostility and less positive affect during therapy and that such negative affect states explained the negative association between self-criticism and the therapeutic alliance in the early stage of therapy. Moreover, by analysing speech segments from 230 therapeutic sessions, Valdés and Krause (2015) observed that possibly to preserve a consolidated sense of self, patients with high levels of self-criticism exhibited confrontational communication styles during stuck sessions compared to those with dependency. Evidence also suggests that the strength of the therapeutic alliance as perceived by patients significantly predicts changes in their self-critical traits during the therapy, which, in turn, predicted reductions in depressive symptoms (Hawley et al., 2006). These findings emphasise the role of self-criticism during the therapeutic process. As discussed before, it is conceivable that, driven by critical beliefs regarding the self and others, individuals with self-criticism may view psychotherapy as a potential threat to their “wounded self”, which may generate distrust, hostility, and resistance to the therapeutic process because it is a process that requires them to share and face vulnerable experiences and feelings. This may particularly apply to short-term psychotherapies, as the rather fixed and somewhat arbitrary treatment duration may be incompatible with their need for control (Blatt & Zuroff, 2005).

### **5.1.2 The present study**

Although current quantitative studies have shed considerable light on the negative impact of self-criticism on therapeutic alliance and outcomes, the underlying mechanism of how self-criticism interferes with the therapeutic process remains understudied. One way to understand the process by which these associations are established is through qualitative research which focuses on the subjective experiences of patients during their therapy. In-depth investigations on how adolescents with high levels of self-criticism experience their therapy could provide crucial insights into how self-critical features are expressed and interfere with the therapeutic process.

In light of this, the present study aimed to explore the therapeutic experience of depressed young people with high levels of self-criticism via qualitative methodology. This study focuses on young people's perspectives of therapy, since the findings in the previous chapters suggest youth's perspectives are more important to understand their therapeutic changes. Moreover, considering the transferability of research findings into clinical practice, it is important to investigate, from young people's perspective,

which therapeutic elements may facilitate or impede their ability to benefit from the therapy. To address these research questions, interviews of young people's therapeutic experiences were analysed using Interpretative Phenomenological Analysis (IPA, Smith et al., 2022). On the one hand, IPA attempts to understand how participants make sense of major life experiences and thus emphasizes experiences, perspectives, and interpretations. On the other hand, IPA recognises the “hermeneutic turn” (Smith et al., 2022, p. 28), which acknowledges that the interpretative or analytical process inevitably involves both the participant and researcher, and thus can provide meaningful interpretations of participants' experiences in relating to research questions. Together, these two aspects make IPA a suitable approach for addressing the current research question.

## **5.2 Method**

### **5.2.1 The study setting**

The current investigation drew on data from the IMPACT-My Experience (IMPACT-ME, Midgley et al., 2014) study, which is a longitudinal qualitative study nested within the large-scale IMPACT study (Goodyer et al. 2017). As mentioned in previous chapters, the IMPACT study investigated the effectiveness of short-term psychological therapies, including cognitive behavioural therapy (CBT), short-term psychoanalytic psychotherapy (STPP), and brief psychosocial interventions (BPI) for adolescents with major depressive disorder. IMPACT-ME gathered interviews with a sub-sample of young people, their caregivers, and therapists at pre-treatment, post-treatment, and one-year post-treatment. In this study, interviews with young people post-treatment were used.

### **5.2.2 Participants**

The initial participant pool consisted of young people who were interviewed at the end of their treatment ( $n = 81$ ). Given that the present study focused on the experience of young people with high levels of self-criticism, the participants' levels of pre-treatment self-criticism were determined using the short-version of the Depressive Experiences Questionnaire-Adolescent version (DEQ-A, Fichman et al., 1994). The DEQ-A is a 7-point, 20-item scale that consists of sub-scales of Self-criticism, Dependency, and Efficacy, with higher sub-scale scores implying higher levels of corresponding personality expressions/functioning. As discussed in the previous chapter, the two-factor (i.e., self-criticism and dependency sub-factor) structure validity has been evaluated using confirmatory factor analysis. After

deleting item 19 from the original Self-criticism sub-scale and item 2 from the Dependency sub-scale, the two-factor solution showed an acceptable and better model fit compared to the alternative one-factor model and demonstrated measurement invariance across genders. Based on the baseline data from the IMPACT study, both modified sub-scales had adequate reliability, with a Cronbach's  $\alpha$  for Self-criticism of .67 and Dependency of .72.

The case selection was based on the following criteria. First, to investigate how young people with high levels of self-criticism experience their therapy, participants who had self-criticism scale scores higher than one standard deviation (SD; 0.90) above the mean (5.08) were included. This led to an initial selection of seven participants from a total of 81 in the participant pool. Secondly, to avoid the potential confounding effects of dependency, participants who had dependency scores higher than one SD (1.10) above the mean (4.85) were excluded, resulting in the further exclusion of two participants. Therefore, the final group of participants consisted of five young persons. This number is considered appropriate when conducting an IPA, as IPA is normally conducted based on a homogeneous sample (i.e., a sample consisting of participants with similar natures or experiences) made up of around four to eight people (Smith et al., 2022). The present study placed no restrictions on the psychotherapy modalities because it aimed to explore the general therapeutic experience of young people with self-criticism. It is also because previous findings using the IMPACT data indicate similar effectiveness across the three treatment modalities (Goodyer et al., 2017b), and the treatment modality did not influence the impact of self-criticism on participant-rated therapeutic alliance and outcome (discussed in the previous chapters). Although the treatment condition was not considered as one of the selection criteria, the three psychotherapy modalities happened to be represented in the present analysis. Table 14 illustrates the demographic data, treatment modality and key clinical characteristics of the current sample.

### **5.2.3 Data collection**

The interviews were conducted by using a semi-structured Experience of Therapy Interview (Midgley et al., 2011, unpublished manuscript)<sup>2</sup>, which covers: (1) the difficulties that brought the young person into treatment, (2) the changes over the course of treatment, (3) participants' understanding of

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<sup>2</sup> This semi-structured interview is given in Appendix 3.

therapeutic factors contributing to these changes, and (4) young people's general experience of therapy and research (e.g., their relationships with therapists, attitudes towards therapy and research). All of the interviews were conducted by IMPACT-ME research assistants, who were all post-graduate psychologists independent of the present study. The interviews were carried out in a clinic or the participants' homes. The average interview duration for the current group of participants was 66 minutes (ranging from 40 to 96 minutes). The interviews were audio-recorded and transcribed verbatim. Potential identifying details (e.g., name, places, addresses) were omitted in the transcripts. Participants were able to select a pseudonym for themselves, and in the case that no pseudonym was provided by participants, a pseudonym was assigned.

Table 14 Demographic Features, Type of Therapy Followed, and Scores on Self-criticism, Dependency and Depression for Participants Included in This IPA

Pseudonym	Age	Gender	Ethnicity	Therapy type	Sessions offered/ attended	Key Pre-treatment Clinical Expressions			Treatment Outcome Indicators	
						SC	D	MFQ depression scores	MFQ (recovery)	Drop-out
Arianna	17	Female	Asian or Asian British	CBT	10/8	6.71	5.86	60	18 (Y)	N
Jennifer	17	Female	White British	CBT	18/10	6.29	5.57	51	18 (Y)	Y
Steven	17	Male	White British	STPP	16/8	6.29	4.29	48	43 (N)	Y
Mary	15	Female	White British	STPP	30/25	6.14	4.43	43	23 (Y)	N
John	15	Male	White British	BPI	15/11	6	5.14	53	26 (Y)	N

*Note.* 1. S = self-criticism; D = dependency; MFQ = Mood and Feelings Questionnaire (Costello & Angold, 1988), and the higher the score, the greater the likelihood of increased severity of depressive symptoms; CBT = Cognitive Behaviour Therapy; STPP = Short-term Psychoanalytic Psychotherapy; BPI = Brief Psychosocial Interventions; Y/N in the column “recovery” = recovered/not recovered based on the MFQ clinical cut-off score 27; Y/N in the column “Drop-out” = dropped out/ discharged by mutual agreement

2. Indicators of treatment outcome used data collected at the end of therapy (i.e., 36 weeks)

#### **5.2.4 Data analysis**

Data analysis followed the IPA protocol proposed by Smith et al. (2022), and involved generating Personal Experiential Themes (PETs) for each individual, followed by developing the overall Group Experiential Themes (GETs). To generate PETs for each individual, a four-step analysis was needed. First, the author Y.B. repeatedly listened to the audio-recorded interviews and read the transcripts. This step was intended to immerse the author in the original data and enable them to gain an overall understanding of the interview. The second step involved generating detailed exploratory notes for a given interview. Descriptive, linguistic, and conceptual features of data in relation to the research question were noted. The author particularly noticed materials or aspects that relate to young people's attitudes or beliefs towards themselves, and how those attitudes or beliefs might affect their interaction with others (e.g., the therapist) and their attitudes or experiences with therapy. During this process, the author continuously reflected upon the analysis to avoid pre-determining themes or assumptions, and noted anything that seemed significant, interesting, and related to the research question. Next, exploratory notes were consolidated and crystallised into experiential statements to articulate the most important features of the exploratory notes. The final step of individual case analysis consisted of determining the connections across experiential statements and formulating PETs for the given case or interview. This four-step analysis was carried out case by case to generate unique PETs for each participant. Following this, meaningful connections between the PETs of the cases were sought out to develop the overall Group Experiential Themes (GETs) of the whole sample.

Data analysis was carried out by the author Y.B., assisted by M.D., who acted as a research assistant, and supervised by N.M. and P.L.<sup>3</sup>. While Y.B. and P.L. were acquainted with literature regarding self-criticism, N.M. and M.D. had no particular theory-driven expectations. To ensure that the statements and themes were grounded in the data, the generation of PETs and GETs was closely audited by N.M. and discussed weekly between Y.B. and M.D. to cross-check materials among transcripts, statements, and themes. To guarantee that the themes offered meaningful interpretations that were relevant to the research question instead of merely descriptive participants' experiences, PETs and GETs were

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<sup>3</sup> A description of analytical stages is given in Appendix 4.



discussed in-depth among the authors. The GETs were also discussed with researchers from the broader IMPACT research group to verify their validity and quality.

### 5.3 Results

The analysis produced five GETs. Given that the five themes reflected the participants' experience of therapy in relation to self-criticism across different therapeutic stages, they were presented as a working model to reflect the participants' journey through therapy (Figure 6). Each GET is described using transcript extracts to illustrate the complexity of the shared aspects of individual cases. Again, participants' demographic data and key clinical expressions before and after the therapy can be found in Table 14.

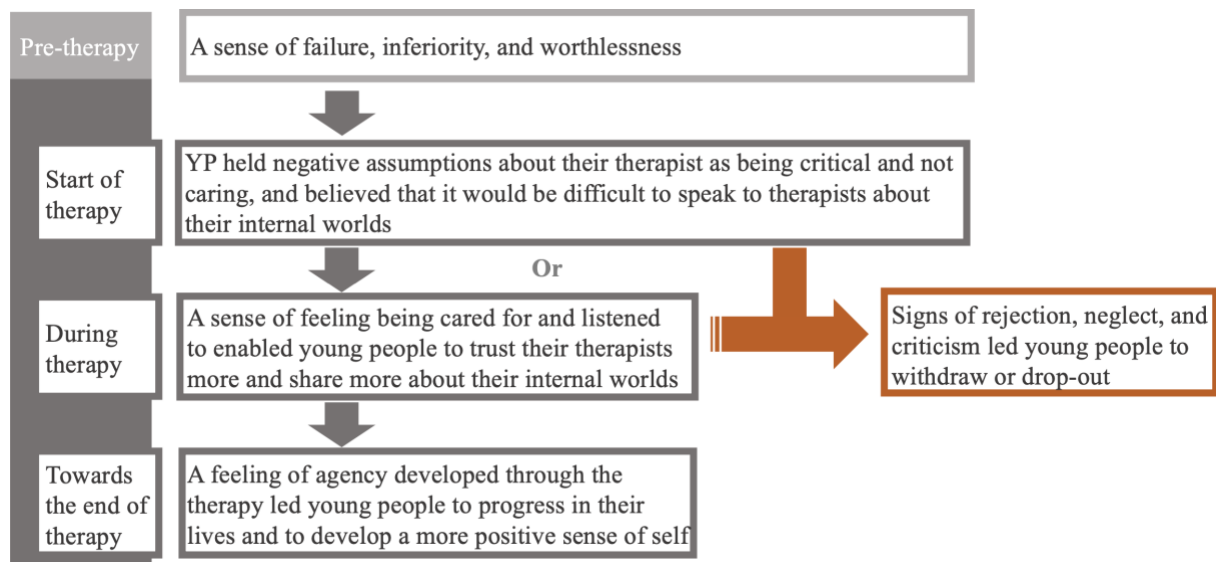


Figure 6 Working Model Based on Group Experiential Themes (YP = young people)

#### 5.3.1 Before entering therapy: a sense of failure, inferiority, and worthlessness

This theme describes young people's understanding of their difficulties before entering treatment. As could be expected, all young people in the present study presented with self-criticism before the start of treatment. Themes focusing on self-definitional issues including being a failure, having low self-worth, and impaired self-esteem dominated their narratives. The primary source of the sense of failure and inferiority appeared to be frustrations with schoolwork and personal achievement. For example, Mary mentioned: "I think schoolwork was a big part of me feeling down." She also expressed a sense of self-

criticism or incapability: “I was like trying so hard, but I felt like it wasn’t going anywhere.” Similar concerns regarding personal achievement could be found in other cases, for example, Steven mentioned: “my grades have been quite poor. I don’t really see why I should apply for university”, while Arianna stated: “I just thought I was like an underachiever.” Along these lines, Jennifer described her failure on a maths exam that led her to engage in self-harm: “I was so stressed out that I couldn’t work out any of the problems, and getting a protractor and doing my wrist with that.” The negative perceptions about personal ability led Mary and Arianna to believe that they had “low self-esteem”.

Frustrations about peer and family relationships also seemed to contribute to participants’ negative feelings towards the self. Three of the participants spoke about being bullied, and this seemed to contribute to their sense of low self-esteem and self-criticism. For example, Steven described that it was “hurtful” to be rejected by his former friends and felt that he was not being valued or cared about: “they’re not willing to talk to me. They just talked to me to make me stop talking to them.” However, he seemed to blame himself for being unable to solve this interpersonal frustration: “I thought it was something wrong with myself in the fact that I couldn’t just go up there and try to sort things out.” The feelings of being disliked, under-valued, and criticised by family members were linked to Jennifer's self-destructive behaviours (e.g., suicidal attempts), as she described that "one of the other things that led [me] to self-harm", such as "do [my] wrists and throat", was to receive "snide" comments from her family about how she "wasn't doing things right", was "stupid", and "should just die".

### **5.3.2 Start of therapy: young people held negative assumptions about their therapist as being critical and not caring, and believed that it would be difficult to speak to therapists about their internal worlds**

This theme describes young people's general experience during the early stage of therapy. This theme is elaborated in young people’s primary assumptions about therapists and struggles in interactions with their therapists.

First, all participants expressed worries or concerns that their therapists would not understand them and would be critical of them. Hence, there was a negative expectation about their therapist and an expectation of not being understood, being criticised or rejected, and/or even not being cared for. For

example, John seemed to believe that his therapist was “old” and that they had “different ways of thinking about things”. Jennifer expressed self-critical concerns towards herself, and worried about whether the therapist would be helpful or just be critical of and reject her: “I was thinking in my head like are they actually going to be able to help me? Am I a nutter? Are they gonna call me a nutter? Are they gonna send me away?” Steven and Jennifer went so far as to assume that their therapists would not even listen to and care for them. For instance, based on an implicit reading of the therapist's decision, Steven expressed a strong belief that the therapist did not care about him: “I just didn’t think she really cared because a lot of the time, she would cut the session short by about 10 minutes. She didn’t really care or wasn’t too bothered really”. Similarly, Jennifer seemed to regard the therapist's greetings as “sarcasm”: “I didn't like the way she was just constantly saying ‘how are you feeling today’, like with sarcasm.”

Such negative expectations seemed to lead four out of five young people to report difficulties in opening up, that is, they found it difficult to openly discuss or share their thoughts and feelings. This was exemplified by Mary, who described the therapist as being “scary at first”. She expressed having struggled with interacting with the therapist and having selectively elaborated on topics: “I was nervous ‘cause I didn't really know what I should say and what I shouldn’t say.” Similarly, John spoke of his difficulties in sharing thoughts within and outside the therapeutic setting: “I’d never really spoken about problems, [I] didn’t really understand it.” This self-concealment feature was also reflected by concerns about boundaries, expressed in feelings of intrusiveness. Three of the participants mentioned that they felt uncomfortable with or even irritated by their therapist’s explorations and interpretations of their feelings and experiences at the beginning of the therapy. For example, John seemed to be sensitive about this and rejected his therapist on such grounds: “I felt annoyed. I thought she just thinks she knows me. You know straight away like. But [I] didn’t like the idea of thinking about them thinking they knew all of my thoughts”. Notably, the rejection of the therapists' explorations did not seem to derive from incidents that happened during therapy. This is suggested by John’s description of his resistance as “general feelings” towards the therapist.

### **5.3.3 During therapy: a sense of feeling being cared for and listened to enabled young people to trust their therapists more and share more about their internal worlds**

As therapy progressed, several therapeutic strategies or interventions emerged as being beneficial to the participants. This theme focuses on young people's feelings of being cared for and listened to, and how these feelings were linked to their need or capacity for being able to talk.

Although participants tended to have negative assumptions and attitudes towards their therapists, being cared for and listened to seemed to enable some young people to develop trust in their therapists and as a consequence to share more about themselves. This was exemplified by three participants (Arianna, Mary, and John), who reported progress in establishing a positive therapeutic relationship after they felt that they were being cared for, which corresponds to their recovery or borderline recovery as measured by MFQ at the end of therapy (Table 14). The other two participants (Steven and Jennifer) did not report a positive therapeutic relationship, as they consistently showed mistrust and felt they were not being listened to by the therapists, which also corresponds to their decisions to drop out of treatments (Table 14). These two cases are elaborated in the last theme. In the current theme, the sense of being cared for and able to talk, which emerged in the cases of Arianna, Mary and John, is discussed. For example, Arianna used the word "lovely" to describe her therapist, explaining that the feeling of being listened to made her feel safe and able to more openly speak about herself: "it's really important that she would listen to me, and that I could talk to her as well. Like I wasn't scared of being judged or anything." Similarly, feelings of being cared for and listened to seemed to enable Mary to overcome her initial mistrust towards her therapist (e.g., thinking the therapist was "scary at first" and selectively elaborating on topics) and to develop a trustful relationship with her: "she wasn't like just having to do her job by listening to me, but like that she actually cared about what I said. It felt like really good".

Being able to talk and share appeared to be beneficial for young people, as this seemed to enable them to talk more openly about their negative feelings. This was shown by John, who expressed relief when he was able to share his feelings: "sharing with someone made me feel a bit more at ease." Likewise, when commenting on the therapy, Mary emphasised the importance of "letting out" feelings: "probably the most helpful thing would be having a place to let out your feelings." Talking about feelings and experience can also be regarded as a way of explaining and justifying themselves for young people.

Although Steven did not develop a trustful relationship with his therapist (as discussed in the last theme), he mentioned that he thought talking to someone could be a helpful way of justifying himself: “it may be relieving to have someone know why I was upset rather than people just assuming that I’m always grumpy.” In a similar vein, Arianna emphasised the need of being recognised: “someone would listen to me and think that I was significant.”

Despite the progress, young people’s self-report narratives in the interview seem to imply that their self-critical beliefs might only have been deactivated but not fundamentally changed by the feeling of being cared for and being able to talk. For example, despite Mary’s acknowledgement that the therapy “definitely helped” her in “letting out” feelings, her self-critical beliefs appeared unchanged at the end of therapy: “I’d probably say my self-esteem hasn’t changed, and the way I feel about myself hasn’t changed.” In John’s case, even though he admitted that sharing with others was “helpful”, his difficulties in doing so or interacting with others seemed to remain: “it’s helpful, but it’s not the most natural I think.” This again corresponds to their recovery status as measured by MFQ, as their MFQ scores at the end of therapy were 23 and 26, which indicates borderline recovery, given that 27 or above is considered the clinical cut-off score for depression on the MFQ.

#### **5.3.4 Towards the end of therapy: a feeling of agency developed through the therapy led young people to progress in their lives and to develop a more positive sense of self**

According to the participants’ narratives in the interviews, the possibility of experiencing more pronounced therapeutic change seemed to depend upon whether their need of developing a more strong and positive sense of self was met. This theme first discusses participants’ expressions of their needs in relation to having a strong sense of self, followed by therapeutic strategies or interventions that appeared to be helpful to meet such needs.

Three out of five of the participants emphasised a sense of control of the therapeutic process and a sense of success during the treatment. The emphasis on the sense of control was exemplified by John, who seemed to imply that he was the one who was controlling the therapy’s progression. John appeared to believe he made the therapy work instead of recognising the mutual contribution of both him and the therapist. For example, even though he recognised that he was being “listened to” by the therapist, he

attributed his willingness to share feelings to himself as being in a “happier than normal” state. Furthermore, John believed that he “helped” make the therapist feel more “relieved” by being “willing to answer questions” instead of “being hostile”. In this way, John seemed to emphasise his active engagement with or control over the therapeutic process, and he seemed to have the need to assign the therapist a more passive role in the process, which is akin to how he described his interpersonal relationships: “I used [to be the] dominant one [in] my friendship groups.”

In addition, the participants demonstrated a strong wish to understand the origins of their own thoughts and difficulties, which also might be seen as reflecting their need for mastery and self-control. For instance, Jennifer spoke of a desire to “understand more about feelings, and being depressed, and doing wrists.” Arianna also consistently reflected on her thoughts and behaviours, and was keen to understand her difficulties, such as her intense impulse to shop: “why am I constantly buying all this stuff that I don’t need?” The adolescents also tended to emphasise the importance of having a sense of success from attending the therapy. For example, Arianna expressed a wish or expectation to see an “immediate change” in therapy, while John highlighted how difficulties had to be tolerated in order to succeed in therapy: “I didn’t see the point in working backwards. I decided to carry on with staying happy.”

Several therapeutic interventions seemed to be helpful to respond to these needs. To begin with, the adolescents identified that it was helpful to monitor the progress and impact of therapy, as it might bring them a sense of success and control. Arianna expressed how she preferred “more structure” in therapy, as it helped her to be “aware of the changes that should happen.” She also emphasised the importance of monitoring the impact of therapy on her life: “it made sure that there’s an actual link between therapy and the rest of my life, so that’s how I could actually make an impact [on my life].” Interestingly, Jennifer described how attending the IMPACT research meetings was sometimes more helpful than going to therapy. On the one hand, this might be because of her negative experience of the therapeutic relationship (discussed in the next theme). On the other hand, it seemed that the research meetings enabled Jennifer to have a sense of control and agency through understanding the research plan and foreseeable progress: “They [IMPACT researchers] discussed the same thing and ask you the same questions. You could know how much it’s [the symptoms] changed.”

In addition, providing young people with explanations of their difficulties and therapeutic techniques appeared to be helpful, possibly because it helped them to gain a certain sense of autonomy and self-control. This was implied when Jennifer qualified the therapy as being “educational” and suggested that it only helped her to enhance her understanding of her difficulties: “you understand things that are going on [that] you wouldn’t normally understand, like being depressed.” Likewise, Arianna was satisfied when the therapist explained the therapeutic techniques being used: “she’ll tell me [about CBT techniques] using examples. I’d be like it’s not just talking about something. This does actually work.”

Based on Arianna’s narrative in the interview, her therapy seemed to be particularly successful in helping her to develop a strong and more positive sense of self. Compared to other cases, she described how the therapist successfully helped her to “dispel” the “myth” she had constructed about her self-worth compared to others (e.g., “I just had this fixation that doctors were like a better person [or] entirely better breed than me”). More importantly, she described how receiving encouragement from the therapist empowered her to take action in overcoming difficulties and concerns in her life, such as being able to “ask [her] teacher for help.” In her words: “She [the therapist] wouldn’t just talk to me about that. She’d be like, ‘what’s a good and bad thing if you did do it’.” The therapist’s positive feedback on Arianna’s actions further strengthened her sense of confidence and agency: “I’d come back and tell her [the therapist], and she’d be like, ‘you know that was really good that you actually did it’, and then I would do other stuff as well.” Eventually, Arianna described how she was able to act in a more “active” and “confident” manner in her daily life.

### **5.3.5 During/towards the end of therapy: signs of rejection, neglect, and criticism led young people to withdraw or drop-out**

According to Arianna’s narratives, she seemed to have not only developed a trustful relationship with her therapist, but also to have achieved positive changes in her self-beliefs. However, continued heightened sensitivity to signs of neglect, rejection, and criticism was exhibited by the four other participants, which seemed to lead them to display certain levels of withdrawal, or, in the case of two participants (Steven and Jennifer), to drop out from the therapy.

Regardless of Mary and John's recognition that the therapy was helpful in terms of providing a space to talk, the end of therapy seemed to re-activate feelings of rejection and criticism. For example, Mary described that in early sessions, "there was enough to say and sometimes she'd [the therapist] have to stop me and say 'it's finished'." However, when the therapy approached its end, Mary seemed to stop bringing topics up during the sessions (e.g., "I probably [needed] like half an hour sessions 'cause I didn't have that much to say"), even though she was aware that she was still being troubled by issues of self-esteem and self-recognition (e.g., "I'd probably say my [low] self-esteem hasn't changed, and the way I feel about myself hasn't changed"). It may be that approaching the end of therapy is a signal of potential rejection and frustration in the perception of young people that activates their emotional withdrawal from the therapy.

In more extreme cases, such as those of Steven and Jennifer, it seemed that their activated critical self-object dyads (e.g., having heightened sensitivity to signs of being neglected, rejected, and criticised) prevented their engagement with therapists and therapy and led them to drop out of the therapy. These signs could be merely based on their subjective reading of the therapists. This was exemplified by Steven, who demonstrated a strong belief that his therapist was uncaring and did not value him, without being able to provide specific examples or evidence to support that belief. This negative feeling led him to drop out of the therapy: "I just stopped going 'cause I thought maybe she [the therapist] didn't want to see me. I think she wasn't too bothered if I came back to the sessions." In Jennifer's case, the signs of neglect and rejection seemed to be derived from misunderstandings during sessions. She believed that the therapist's explorations of her experience were "constantly reminding" her of her painful history and increasing her desire "to self-harm". Therefore, she expressed a strong resistance towards such explorations: "I don't want you [the therapist] to be sitting there talking about my past constantly every week." She was also convinced that the therapist had ignored her request because the therapist kept bringing up painful topics: "I went to see her. She spoke about it [the painful experiences] again, and I told her again that I don't want to be hearing this again." This seemed to directly lead to the disruption of the therapeutic relationship, as Jennifer described the therapist as being "really annoying", and dropping out of the therapy: "I just stopped going because I didn't want to be hearing everything, and I just couldn't handle it anymore". Both the young people's narratives fit in with the record of their



treatment status, as they dropped out and only attended around half of the sessions offered to them (Table 14).

## **5.4 Discussion**

Through an Interpretative Phenomenological Analysis of semi-structured interviews with five participants from the IMPACT-ME study after the end of their treatment, this study explored how depressed adolescents with intense self-criticism experienced their therapy. In total, five Group Experiential Themes (GETs) were identified that reflected their therapeutic experience across the different treatment stages, and these were combined to form a working model of their therapeutic process (Figure 6). In short, all adolescents expressed concerns regarding self-definitional issues (e.g., the sense of failure, inferiority, and unworthiness) before therapy. On entering therapy, they tended to hold negative assumptions about their therapists (e.g., that they would be critical) and to experience difficulties in disclosing their inner world. Young people seemed able to trust their therapists more and open up if they felt cared for and listened to. However, more progress in their lives seemed to be facilitated by meeting their need of developing a positive sense of self, which happened when they felt that the therapist not only genuinely cared for them but also helped them to obtain a sense of active control or agency within and outside the therapeutic setting. During the therapeutic process, if young people's self-criticism was re-activated, leading to often strong feelings of being rejected, neglected, and criticised by their therapist, they tended to emotionally withdraw or even drop out of therapy.

### **5.4.1 Expressions of self-criticism before the treatment**

When looking more closely, the first GET captures the participants' understanding of their difficulties before entering therapy. All of them expressed intense mental distress and symptoms (e.g., self-harm and suicidal behaviour), which corresponded with their diagnosis of depression. Notably, however, the distress participants described was generally clustered with or driven by concerns and frustrations with self-definitional issues, including a sense of failure, low self-worth, and impaired self-esteem. Such expressions consist of self-critical features of "feelings of unworthiness, inferiority, failure and guilt" (Blatt & Zuroff, 1992, p. 528). Therefore, this theme not only confirmed the criteria used for the case selection procedure, but also provides further support for the validity of the modified short-version of the DEQ-A as a way of capturing the self-critical features of depressed adolescents referred for

psychotherapy. Moreover, participants' impaired sense of self was not only derived from life distress that was directly related to self-achievement issues, but also reflected in frustrations with peer and family relationships. It is possible that struggles in the interpersonal domain may confirm these young people's feelings of being a failure or being worthless, and further feed into their tendency to be both self-critical and expect others to be critical of them. For instance, the experience of being bullied seemed to feed into Steven's sense of self-criticism, as he blamed himself for being incapable of coping with such frustration. This finding also supports the idea that individuals with self-criticism tend to assimilate a range of life events into a self-critical schema (Blatt, 2004e), and is in line with previous empirical findings which showed that self-criticism was associated with increased general distress when compared to dependency, a personality dimension which was more uniquely associated with interpersonal distress (Priel & Shahar, 2000).

#### **5.4.2 Therapeutic experiences for depressed young people with intense self-criticism**

Four GETs were identified to capture key aspects of young people's experience after entering therapy. When thinking back on the early stages of treatment, participants generally held negative assumptions and attitudes towards therapists, having worried about being judged and rejected by the latter, whom they believed would be judgemental, critical, and/or even uncaring and unwilling to understand them. This is in agreement with the previously reported negative association between self-criticism and the therapeutic alliance (e.g., Kannan & Levitt, 2013; Miller et al., 2017; Shahar et al., 2004a). For example, Zuroff et al. (2010) analysed within-therapist caseloads, and reported that patients who were high in self-criticism tended to perceive their therapist as being more judgmental and less empathic than other patients would.

It has been noted that individuals with elevated self-criticism tend to engage in harsh critical self-evaluations (Blatt & Luyten, 2009; Luyten & Blatt, 2013) and demonstrate attachment avoidance, manifesting as discomfort with or fear of closeness and distrust of others (Luyten & Blatt, 2011; Sibley, 2007). Closeness with others may be not felt as pleasant but provoke anxiety and ambivalent feelings in highly self-critical individuals, as talking about thoughts and particularly emotions may be considered to be weak, a feature that young people endeavour to avoid because they fear being criticized when they show weakness or vulnerability. This may lead to self-critical young people's difficulties disclosing

their inner worlds (e.g., selectively elaborating on topics) as observed in the present study, a feature that has also been reported in community individuals with high levels of self-criticism (Luoma & Chwyl, 2020). The fearful feeling that others are intrusive, criticising, and/or rejecting may also lead to aggression. For example, John and Jennifer seemed to transfer or project their self-criticism onto their therapists, seeing their therapists as not understanding and rejecting, which seemed to lead to their resistance and irritation towards their therapists' explorations and interpretations. These findings fit in with previous research concerning the association between self-criticism and coping strategies such as rejection and confrontation (Dunkley et al., 2006).

Although the participants initially demonstrated difficulties in engaging with the therapy, they seemed to be able to develop trust towards their therapists and open up when feeling cared for and listened to. Being able to trust their therapist and speak openly appeared to be crucially important for these young people. It not only provided an opportunity for them to consider negative feelings, but also enabled more positive therapeutic experiences in the cases of Arianna, Mary, and John, whereas the other two participants, Jennifer and Steven, who failed to establish a trustful therapeutic relationship seemed to not to benefit from the therapy. This observation corresponds to the indicators of treatment outcome listed in Table 14, as Jennifer and Steven dropped out from treatment. Also, as expected, a greater reduction in MFQ depressive scores was observed in Arianna (from 60 to 18, recovery), Mary (43 to 23, borderline recovery), and John (53 to 26, borderline recovery), but not in Steven (48 to 43, clinical depression). Although based on Jennifer's narratives and record she was labelled as dropping out, she reported a major reduction in MFQ scores (51 to 18, recovery). It should be noted Jennifer seemed to receive strong support and felt cared for by her partner and the partner's family (e.g., "he [the partner] has been helping me. He's always been there for me."). Although this is beyond the scope of the present study, this seems to fit in with previous findings that the association between self-criticism and outcome can also be mediated by the social network outside the therapeutic setting (Shahar et al., 2004a), and also supports previous findings that some depressed young people may drop out of therapy because they felt they "got what I needed" (O'Keeffe et al., 2019).

The theme that highlights the importance of being able to trust the therapists and talk also fits in with the assumption that meaningful therapeutic changes are possible only if patients' epistemic mistrust is

restored (see detailed discussion in Fonagy et al., 2019). Epistemic mistrust refers to the incapacity for trusting others as a source of knowledge about the world, and can be manifesting as pervasive mistrust in social interactions (Fonagy et al., 2017; Fonagy et al., 2014). This may be particularly featured among patients with high levels of self-criticism, as they tend to have a negative schema of self and others with difficulties in establishing social networks and trust in others. From this social learning perspective, Fonagy et al. (2019) proposed that effective psychotherapy necessarily consists of three aspects of a communication process: the epistemic match, improving mentalizing (e.g., a capacity to understand self and others in terms of intentional mental states), and the re-emergence of social learning. This process seems to be observed in the present study, as young people were able to trust the therapists and engage with the therapy only after feeling that they were recognised and understood as an agent (i.e., epistemic match). Although more in-depth exploration is needed, this finding suggests the importance of addressing the potential epistemic mistrust in young people with self-criticism to enable them to receive new knowledge and perspectives more openly from the therapeutic process (Li et al., 2022).

Being able to talk and engage with the therapy alone seemed to be insufficient to change young people's self-critical features profoundly (e.g., Mary's low self-esteem was unchanged at the end of the therapy). Possibly as Fonagy et al. (2019) proposed, more positive changes in young people's functioning require the re-emergence of their capacity of mentalizing and social learning about knowledge that is significant and relevant to the individual, in this case, to learn and develop a stronger and positive sense of self. Participants tended to emphasise self-functioning during therapy, including a sense of controlling or active involvement (e.g., John's emphasis on his impact on the therapy), success or agency (e.g., Arianna's wish to see immediate changes), and an emphasis on cognition and causality rather than on affects and feelings (e.g., Jennifer's desire to understand the cause of her behaviours), which is consistent with the typical cognitive style associated with self-criticism (Blatt & Luyten, 2009). Accordingly, helping young people to break down their rigid self-critical tendencies and satisfy their need for developing a positive sense of self seems important. According to participants' narratives, Arianna was the only one who described having acquired a positive sense of self (i.e., being more confident and active) in her daily life after attending therapy. She attributed this not only to how her therapist clarified her negative self-beliefs (e.g., 'dispel' the 'myth' regarding her negative self-recognition), but also to the therapist's encouragement and positive feedback regarding her attempts at overcoming difficulties

in her life. This observation fits in with young people's recovery status after therapy, as Arianna had an MFQ score (18) that is clearly under the clinical cut-off of 27. Such findings can also be related to works from Thoma and Abbass (2022). They propose that patients with self-critical traits require a less confrontational approach to navigate their own experience instead of simply feeling emotions, which is alike to the observation that young people need to be first and foremost recognised and understood. By gradually applying pressure to assist patients to feel underlying feelings and regulating the evoked anxiety, a process that seems to involve learning and clarifying their negative self-beliefs, Thoma and Abbass (2022) suggest that these patients are finally able to build the capacity to process and accept underlying unprocessed, anxiety-provoking emotions.

Another possibility for the limited gain from the therapy that was noted among the narratives of the four cases other than Arianna may be their sensitivity to signs of neglect, rejection, and criticism during the therapeutic process, which is consistent with self-critical features of being sensitive to failure and frustrations (Blatt, 2004c, 2004g). Again, it is possible that participants' negative template of self and others whom they believe would criticise and neglect them, has not been fundamentally changed, therefore young people's mistrust in the therapists and therapy might be easily activated if they sense potential failure and rejection. For example, Mary's awareness of the therapy's approaching end seemed to hinder her ability to continue actively engaging with it. It is conceivable that the treatment ending, especially in a time-limited therapy (e.g., in a randomised controlled clinical trial) in which the ending could be more fixed and compulsory, may act as a signal of potentially uncontrolled frustration or rejection. As Blatt and Zuroff (2005) proposed, the end of therapy may be perceived by individuals with self-criticism as a threat to self-control and self-worth, activating a behaviour of withdrawal in them. In more extreme cases (i.e., John and Jennifer), the participants' mistrust of the therapists and sensitivity to negative signs seemed to make it difficult for them to recover from therapeutic misunderstandings and resulted in their decision to drop out of therapy. This was the case with Jennifer's belief that her therapist was ignoring her desire not to explore her painful past, which made her feel rejected and irritated, leading her to directly drop out of the therapy. This identified pattern corresponds to previous findings that point to self-criticism being associated with higher dropout rates compared with dependency (de la Parra et al., 2017). The pattern of easily withdrawing or dropping out also highlights the fragility of participants' engagement in short-term or time-limited psychotherapy.

### **5.4.3 Clinical implications**

Based on the present findings, this study has several clinical implications. First, it may be difficult to engage young people with intense self-criticism in therapy because of their negative expectations about their therapists and self-concealing patterns. To develop a trustful relationship and a safe environment that enables young people to talk and stay in their therapy, therapists may not only need to be empathic and compassionate, but also need to recognise young people as an agent (e.g., a being unique and worthwhile). When working with young people with high levels of self-criticism, the task is probably to see the world from the young person's perspective and to normalize and validate their perspective as an understandable adaptation strategy to an invalidating environment. Also, it may be important for therapists to be aware of and prepared for the re-activation of self-critical features during the therapeutic process, that is, their expectation that the therapist would criticise, reject, or not care about them may become re-activated if they sense any signs of neglect or rejection (e.g., when the ending of treatment approaches). As Hennissen et al. (2022) have argued, therapists' increased understanding of the difficulties and suffering that patients with self-criticism have experienced can mitigate therapists' negative responses during sessions (e.g., impatience, resignation, or feeling of being rejected by patients), which may benefit the therapeutic work overall.

Secondly, when working with young people who experience high levels of self-criticism, therapists may need to be attentive to young people's need of strengthening their sense of self. To assist with this, attempts could be made to increase young people's awareness of their self-critical beliefs and improve their self-assertiveness. Although some of the participants (i.e., Arianna and Jennifer) expressed a preference for more structured therapy instead of "just talking", as it may bring them a certain sense of agency and control, the author argues that therapists from different therapeutic modalities can help young people in different ways. For example, a therapist who uses a psychodynamic approach can help young people to be aware of their unconscious self-critical beliefs and integrate more positive understandings of themselves (Kannan & Levitt, 2013). Alternatively, a therapist from a cognitive behavioural therapy background can help young people to recognise their self-criticism by clarifying the negative attribution of self and increasing self-assertiveness. Eventually, psychotherapy is essentially a collaborative process between young people and therapists, and therefore the two sides

need to work together and embark on a journey of therapeutic change. As Fonagy et al. (2019) proposed, it is likely that regardless of the treatment modalities, effective psychotherapy requires therapists to explore and recognise young people's experience and desires and re-activate young people's capacity to trust and learn from their social context, both within and beyond the therapy.

#### **5.4.4 Limitations**

Although key themes were generated to reflect young people's experience of therapy in relation to self-criticism across different treatment stages, several limitations need to be considered when interpreting the results. To begin with, in order to answer the research question, a homogeneous sample with all participants demonstrating high levels of self-criticism was selected. This may have limited the capacity to distinguish features or experiences that were unique to young people with self-criticism from others who may not experience high levels of self-criticism. For example, withdrawal ruptures have been reported in other cases from the IMPACT sample (Cirasola et al., 2022; O'Keeffe et al., 2020). Hence, it is worth exploring the potentially different meanings of withdrawal behaviour relating to self-critical beliefs and other difficulties in more depth. Moreover, to capture the self-critical expressions efficiently, this study included participants with relatively high levels of self-criticism (i.e., with self-criticism scores one standard deviation above the mean). The potential difference between the current groups and others (e.g., with moderate levels of self-criticism, or with a mixed picture of high self-criticism and high dependency) may need to be further explored.

In addition, to best reflect the research aim, the case selection procedure was based on participants' levels of self-criticism and was not based on their treatment outcomes. Therefore, Arianna was shown to be the only case that demonstrated positive changes in self-beliefs following the therapy. Furthermore, since participants' self-criticism scores/levels were not collected at the end of treatment in the IMPACT study, this study was unable to provide further evidence to suggest whether self-criticism changed following the therapy. Research utilizing cases with different treatment outcomes and with self-criticism scores collected over the whole course of therapy is suggested to improve the understanding of the change mechanism of self-critical beliefs during therapy. Lastly, the current analysis was focused on short-term psychotherapy for depressed adolescents with an average of 12.4 sessions. Correspondingly, the identified themes pertained to the obstacles and effective therapeutic factors of participants'

engagement with short-term therapy with this particular client group. To better understand the experience of young people with different presenting problems, or with increased self-criticism in long-term psychotherapies, more research is required.

#### **5.4.5 Conclusions**

This study has been an in-depth exploration of the therapeutic experience of depressed adolescents who reported high levels of self-criticism. Five GETs were identified to describe their experience of therapy in relation to self-criticism across therapeutic stages. All of the participants demonstrated concerns relating to self-definitional issues before entering the treatment. They tended to display difficulties in engaging in the therapy, engaging in negative affects towards the therapists and self-concealment features. While feeling listened to and cared for enabled some of them to trust the therapists and engage with the therapy, it seems more positive changes may be required to meet their need of strengthening the sense of self. During the therapeutic process, the young people appeared to be sensitive to signs of failure and rejection, and their mistrust of the therapists could be re-activated. Thus, when working with young people with self-criticism, therapists may need to be aware of and prepared for the potential challenges, demonstrate sufficient empathy and compassion, and recognise young people's experience and needs to develop a strong therapeutic bond with them through feeling recognised and cared for in a genuine way. Although more studies are required to further investigate the change mechanism of self-critical beliefs, the present findings suggest that enhancing the positive sense of self of adolescents may be one key element of enabling them to undergo more pronounced therapeutic changes.



## **Chapter 6 General Discussion**

This PhD study is, to the best of my knowledge, the first to systematically explore the impact of the personality dimensions of self-criticism and dependency on the therapeutic process in short-term psychotherapies for depression. It was carried out in the context of a large-scale multi-site randomised controlled trial involving 465 adolescents who were diagnosed with depression. As expected, self-criticism was more consistently associated with maladaptive pre-treatment functioning (e.g., depression) and difficulties in engaging with the therapy (e.g., poor ratings on the therapeutic alliance and mistrust in the therapists), which, in turn, were associated with poorer outcomes over time. Findings for dependency were more mixed, as dependency was associated with improvements in general and social functioning during the treatment, but also with the tendency to relapse after the end of treatment. This study also provided some evidence for a gender-incongruent effect, as self-criticism in girls and dependency in boys tended to be associated with poorer functioning and poorer alliance as rated by therapists.

The discussion in this chapter focuses on five major sets of findings from the studies reported in this PhD thesis. First, the association between self-criticism and young people's clinical symptoms and functioning before the treatment is discussed. This is followed by a discussion of how self-criticism may interfere with the therapeutic process. Thirdly, based on present research, therapeutic strategies that are potentially effective in addressing self-criticism are discussed. The fourth set of findings is in relation to the mixed effects of dependency on young people's clinical symptoms and their therapeutic outcomes. Lastly, evidence that highlights the effect of gender-incongruent features on young people's symptoms and the therapeutic process is discussed. The theoretical and clinical implications as well as the main limitations of the studies are also discussed.

### **6.1 The negative role of self-criticism: pre-treatment symptoms and functioning**

The analysis of both quantitative and qualitative data consistently suggested that self-criticism was associated with a range of mental distress and maladaptive functioning before the start of treatment in young people diagnosed with depression. For example, multiple regression analyses using data collected at baseline suggested that self-criticism was significantly associated with impaired self-esteem and an elevated risk of lifetime suicidal behaviour. These findings were also reflected in the participants'

narratives of their difficulties before attending treatment as evidenced in the qualitative study. For instance, Mary was aware that she had “low self-esteem”, and Jennifer talked about her self-harming behaviours such as “doing my [her] wrist”. These findings highlight the harmful effect of self-criticism and may capture differences in the severity of self-critical expression. For instance, a young person who has self-critical beliefs may have deep-seated impaired self-esteem, which under certain circumstances, such as feelings of intense failure and frustration, may escalate into self-destructive behaviour or suicidality.

Another possibility is that self-criticism may be a multidimensional concept (Gilbert et al., 2004; Thompson & Zuroff, 2004). For example, Gilbert et al. (2004) proposed two forms of self-criticism. One arises from a sense of inadequacy; attacking oneself or evaluating oneself harshly here serves as a way to correct or regulate oneself for failing to meet internalised high standards. The other form of self-criticism arises from self-hate or self-disgust; self-attacking here relates to the desire for purity or to get rid of the part of the self that is seen as “bad”. This form of self-criticism is suggested to associate with coercive strategies towards both self and others (Castilho et al., 2015), such as exhibited by people who self-harm. These two forms of self-criticism may echo the findings reported by Thompson and Zuroff (2004). While they recognised that the DEQ subscale of self-criticism demonstrated high internal consistency, they proposed that it may reflect a broad characterisation which has two developmental levels. The first level is comparative self-criticism, characterised by an unfavourable comparison of the self with others, who are seen as hostile and untrustworthy. The second level is internalised self-criticism, which is more self-directed and defined by a negative sense of self in comparison with internalised high standards and a global sense of worthlessness.

The proposed two levels of self-criticism may help to interpret the present findings regarding the negative social schema in relation to self-criticism among depressed young people. Self-criticism was significantly associated with not only impaired general social functioning but also increased antisocial behaviours before youths attended the treatment. Such social impairments were observed in the young people’s narratives of their early relationships with the therapists. For example, while Mary and Steven tended to adopt subtle or defensive strategies to keep a social distance from their therapists (e.g., selectively elaborating on topics and implicitly reading the therapist’s decision on controlling the

duration of sessions), Jennifer and John seemed to be more irritated by and have more hostile attitudes towards the therapists (e.g., describing themselves as being “hostile” and regarding the therapist’s greetings as “sarcasm”). Considering that these young people received similar self-criticism scores at baseline (ranging from 6.00 to 6.29), the differences in their reactions may echo the argument of Thompson and Zuroff (2004). However, this is only one possible interpretation of the present findings. The proposed differences in developmental forms of self-criticism need to be further examined by using a research design that is more appropriate to address this research question.

Nevertheless, the findings suggested that self-criticism was associated with young people’s negative schemas regarding both self and others, consistent with previous research (e.g., Aube & Whiffen, 1996; Blatt, 2004e; Dunkley et al., 2006; Dunkley et al., 2009). As discussed in the previous chapters, such a wounded self and impaired social network may explain the consistently adverse effects of self-criticism on depression and broader functioning. Briefly, a self-critical manner (e.g., feeling inferior to others and/or evaluating oneself harshly) is likely to be associated with hypersensitivity to stressful events relating to feelings of failure and frustration (e.g., Abela et al., 2007; Kopala-Sibley et al., 2015; Mongrain & Zuroff, 1995), which can actively provoke emotional distress and exacerbate individuals’ risk of depression (Kopala-Sibley et al., 2015). Impaired social functioning, meanwhile, may further increase the risk of depression and a broader range of psychopathologies by limiting the social support perceived and received by individuals who are self-critical (Blatt & Association, 2004; Blatt & Homann, 1992; Dunkley et al., 2009; Zuroff et al., 2005).

## **6.2 The negative role of self-criticism: the therapeutic alliance and outcomes**

Self-criticism seemed to have a detrimental impact beyond baseline symptoms and functioning for young people with clinical depression. Self-criticism demonstrated a significant negative main effect on the change trajectories of depressive symptoms as well as general and social functioning over the course of treatment and follow-up period. Young people with higher levels of self-criticism tended to experience more severe depressive symptoms and impairments in general and social functioning across observation occasions and treatment modalities. Further mediation analysis revealed that the association between self-criticism and more severe depressive symptoms was partially mediated by a poorer therapeutic alliance as reported by the young people, consistent with findings for adult populations (e.g.,

Löw et al., 2020; van der Kaap-Deeder et al., 2016; Whelton et al., 2007; Zuroff et al., 2000). The significant mediation effect of the working alliance was driven primarily by the overall individual differences in participants' perceptions of the therapeutic alliance as a function of self-criticism. Therefore, it appeared that self-criticism limited young people's general capacity in perceiving a positive therapeutic alliance, which in turn, predicted a less promising therapeutic gain compared to those who scored low in self-criticism.

Difficulties in engaging with therapy were indeed revealed in the interviews with young people with depression and intense self-criticism, as evidenced in the qualitative study. When thinking back on the experiences at the early stage of treatment, all five participants included in the qualitative analysis recalled feeling distrustful of their therapists and worried about being judged and rejected by their therapists, whom they feared would be judgemental, critical, or uncaring and unwilling to understand them. Again, such observations reflect negative mental representations of self and others in relation to self-criticism (Blatt, 2004f), and highlight young people's difficulties in establishing a positive emotional bond with therapists, which is consistent with previous findings in adults (Hewitt et al., 2008b; Zuroff et al., 2010).

Possibly due to the fear of rejection and criticism from the therapists, young people's difficulties in trusting their therapists and opening up were observed in their narratives on the therapeutic experience. As discussed in previous chapters, this observation essentially reflects two features of self-criticism. One is that individuals with self-criticism likely suffer from epistemic mistrust, which refers to the incapacity for trusting others as a source of knowledge about the world (Fonagy et al., 2017; Fonagy et al., 2014). Another is the self-concealment pattern, which has been widely reported in community individuals with high levels of self-criticism (Alden & Bieling, 1996; Andrews, 1989; Luoma & Chwyl, 2020; Zuroff et al., 1995). It is possible that closeness with others may provoke anxiety and ambivalent feelings in highly self-critical young people, as talking about thoughts and emotions may be considered to be weak, a feature that they endeavour to avoid because they fear being criticised when they show weakness or vulnerability. Such features may limit young people's capacity in establishing a trustful and strong therapeutic alliance which is essential to the exploration of their previous experience and negative self-beliefs. Moreover, driven by deep-seated negative perceptions of themselves and others,

the participants' mistrust of their therapists seemed to be easily re-activated if they sensed signs of neglect, rejection, or criticism from the therapists. This made it difficult for the participants to recover from therapeutic misunderstandings and remain in therapy. Therefore, as discussed in more detail in the previous chapters, the findings of both the quantitative and the qualitative analysis suggested that self-criticism interfered with the young people's capacity to perceive, develop, and maintain a positive and strong therapeutic alliance, limiting their therapeutic gain from short-term psychotherapies.

### **6.3 Potentially effective therapeutic strategies to address self-criticism**

Although participants with high levels of self-criticism consistently had more severe depressive symptoms over the course of the IMPACT study, its significant interaction with the linear change of depressive symptoms indicated that this effect may be mitigated, as the negative effect of self-criticism seemed to reduce as the therapy progressed. Indeed, qualitative analysis of the interviews with young people who had intense self-criticism illustrated that the participants were able to develop trust in their therapists and open up if they felt that they were cared for and recognised as an agent (e.g., being unique and worthwhile) by their therapists. Being able to trust their therapist and speak openly appeared to be crucially important for these young people. It not only provided an opportunity for them to consider negative feelings (e.g., "having a place to let out your feelings" from Mary), but also enabled more positive therapeutic experiences (e.g., Arianna's feeling of being recognised).

However, being able to talk and engage with the therapy seemed, on its own, insufficient to substantively redress the young people's tendency for self-criticism. This is exemplified in the cases of Mary and John, who still described difficulties relating to self-criticism at the end of treatment such as the unchanged low self-esteem. Illustrated by Arianna's narratives of her therapeutic experiences, helping young people to break down their rigid tendency for self-criticism and develop a positive sense of self seems to be vital to enhance young people's functioning in their lives. As discussed in previous chapters, possibly in line with the therapeutic strategies or principles proposed by Fonagy et al. (2019) and Thoma and Abbass (2022), when working with young people with self-critical traits, the tasks may be beyond being empathic and compassionate, but to recognise them as agents, to see the world from their perspectives, and to validate their perspectives as a strategy for adaptation to an invalidating environment. Moreover, therapists may need to be attentive to young people's need to strengthen their sense of self. To this end,

based on the present findings, therapists could seek to increase young people's awareness of their self-critical beliefs and improve their self-assertiveness. As Fonagy et al. (2019) proposed, to improve young people's functioning, it may be necessary to strengthen their capacity for social learning in terms of knowledge that is significant and relevant to the individual; in this case, learning about and developing a stronger positive sense of self.

#### **6.4 The mixed effects of dependency on symptoms and treatment outcome**

Dependency showed mixed effects on young people's pre-treatment functioning and treatment outcomes according to studies reported in this PhD thesis. Findings from analyses using baseline data suggested that although dependency was associated with young people's clinical symptoms such as depression and lifetime suicidal behaviour, it was also related to better general and social functioning and less antisocial behaviours. Such mixed impacts of dependency were also found on treatment outcomes. Young people with high levels of dependency seemed to respond to the treatment fairly quickly, as shown by their improvement in social and general functioning in the early stage of therapy (e.g., in the first six weeks). Yet, after the end of therapy, they seemed to eventually show more impairments in general and social functioning compared to those who scored low in dependency, indicating a tendency for relapse. Such mixed or inconsistent effects of dependency on clinical symptoms and treatment outcomes have been reported in previous research with adolescent and adult samples (Kopala-Sibley et al., 2017; Kopala-Sibley et al., 2015; Rost et al., 2019; Shahar & Gilboa-Shechtman, 2007).

As discussed in previous chapters, dependency is associated with an intense need for interpersonal closeness and chronic fear of being abandoned (Blatt & Zuroff, 1992). This feature may be manifested as having more pro-social behaviours and an active social network as reported in previous research (e.g., Priel & Shahar, 2000). While such pro-social features may indeed bring more social support and help young people to connect with others, their intense desire for closeness may eventually interfere with their social interactions. In fact, in a study that followed a sample of college students and their roommates for nine months (Hokanson & Butler, 1992), compared to students with self-critical traits, those with dependent traits were initially better able to develop relationships with their roommates such as having more shared activities. However, their roommates eventually reported declining satisfaction,

increasing hostility, and a tendency to withdraw from the relationship. This may be the case in the present findings. It is possible that while the pro-social features associated with dependency may help youths to connect with their therapists, their underlying fear of separation may be re-activated by the approaching end of treatment if their underlying difficulties in relation to dependency failed to be examined and addressed during the therapy. From this perspective, unresolved high levels of dependency at the end of treatment may be a predictor of relapse. More studies are needed to examine the mixed effects of dependency and better understand its long-term impact on therapeutic outcomes.

### **6.5 The effect of gender-incongruent features on symptoms and the therapeutic process**

The findings reported in this PhD thesis provided evidence to support the gender incongruence effect. Specifically, based on analyses using data collected at baseline, self-criticism had stronger associations with young people's anxiety, obsessive-compulsive symptoms, and present suicidal ideation among girls than boys, while the opposite pattern was observed for dependency. One possible explanation is that gender-incongruent personality features may elicit implicit and explicit criticism from others, increasing the risk of psychopathology (Blatt, 2004e; Luyten et al., 2007). For example, the findings suggest an association between gender-incongruent features and obsessive-compulsive symptoms, a disorder that has been proposed to be closely associated with the desire to gain approval from others and to avoid external criticism (Pace et al., 2011).

The findings regarding the therapist-rated therapeutic alliance also seemed consistent with the assumed role of external criticism in the gender-incongruent effect. In contrast with the young people, who tended to rate lower for the therapeutic relationship if they had higher levels of self-criticism, regardless of gender, the therapists tended to rate the alliance as less positive when they worked with girls with high levels of self-criticism, while dependency seemed to influence therapists' ratings only amongst boys. On the one hand, these findings might reflect therapists' actual difficulties in working with those young people. For example, intense dependency may have increased the struggle to engage in therapy for boys who also had high levels of self-criticism compared with girls. On the other hand, the findings may imply that the therapists may have been more sensitive to and felt more challenged by working with youths who had gender-incongruent features. However, the findings were generated from exploratory

analysis; research with adequate statistical power is needed to further examine the gender effect on the association between personality dimensions and therapist-rated therapeutic alliance.

## **6.6 Implications for further research**

Based on the present findings, several implications for further research are proposed. First, this series of studies reveal that self-criticism has a significant negative impact on depressed youths' clinical symptoms and treatment outcomes. Therefore, researchers should further investigate whether self-criticism changes over the therapeutic process, and if so, whether and how these changes influence therapeutic outcomes. Moreover, it is crucial to investigate potential moderating factors that may buffer the adverse effect of self-criticism. The present findings provide primary evidence regarding effective therapeutic strategies (e.g., therapists' recognition and affirmation) that may help young people with intense self-criticism to benefit from short-term psychotherapies. However, as the participants' self-criticism was not measured at the end of treatment in the IMPACT study, more evidence is needed to explore the mechanism of change to self-criticism during short-term psychotherapies. For example, research has suggested that self-compassion may be a resilience factor against self-criticism (Yamaguchi et al., 2014; Zhang et al., 2019). Studies should further explore potential buffering factors for self-criticism both within and outside the therapeutic setting to provide insight into more efficient strategies for young people to cope with self-criticism.

Although findings suggest that the association between self-criticism and the focal treatment outcome (i.e., depressive symptoms) was mediated by the poorer therapeutic relationship perceived by young people as a function of self-criticism, the therapeutic alliance was only a partial mediator. Further analyses are required to explore other potential mediating factors. For example, Shahar et al. (2004a) revealed that for depressed adults with high levels of self-criticism, their limited capacity to establish social relationships within (i.e., therapeutic relationship) and outside the therapeutic setting (i.e., social network) fully accounted for the significance of the negative effects of self-critical traits on outcomes. Research is needed to explore whether this finding can be generalised to the adolescent population to deepen understanding of the effects of self-criticism on young people's outcomes.



In addition, the studies reported in this PhD thesis identified mixed effects of dependency on participants' symptoms and treatment outcomes. Further studies should examine the proposed assumptions regarding this effect. As discussed in previous chapters, by using the dependency sub-scale in the full version of DEQ and DEQ-A, two factors of dependency have been proposed, with one reflecting intimacy-oriented feelings of loss for a particular person and one being a more maladaptive generalised fear of abandonment (e.g., Blatt et al., 1996a; Zuroff et al., 2004a). By further distinguishing this subtle but meaningful variation in the expression of dependency, its mixed effects on symptoms and treatment outcomes are likely to be further clarified. Moreover, the interaction between self-criticism and dependency was non-significant in all of the analyses. Further clarification of different forms of dependency and perhaps also self-criticism may provide more insights into their associated risks of psychopathology and psychotherapy.

Lastly, the present PhD research identified some evidence of the gender incongruence effect. This not only highlights the importance of considering the role of gender in the impact of personality dimensions on psychopathology and the treatment process, but also raises questions regarding the mechanism of the gender incongruence effect. Based on the present findings and previous research, the author proposes that this effect may be a result of an increased external judgement or criticism perceived by young people with gender-incongruent features. Further research is required to investigate the association between gender-incongruent features, external criticism, and clinical symptoms to further untangle the mechanism of the gender-incongruence effect.

## **6.7 Implications for clinical practice**

Three major sets of clinical implications are proposed based on the present findings. Firstly, therapists are advised to be aware of and prepared for the potential challenges when working with young people with high levels of self-criticism. They may be distrustful of or even reject their therapists at first, and the mistrust or negative assumptions about the therapists may be re-activated during the therapeutic process if they sense signs of neglect and rejection from the therapists. As discussed earlier, to develop a trustful therapeutic relationship and a safe environment that enables young people to talk and stay in their therapy, therapists may need not only to be empathetic and compassionate but also to recognise young people as agents (e.g., unique and worthwhile beings). Moreover, to bring more positive changes

in young people's sense of self and functioning, therapists may need to work with youths to increase their awareness of self-critical beliefs and enhance their self-functioning (e.g., improving self-assertiveness). Again, as Fonagy et al. (2019) proposed, regardless of the treatment modality, effective psychotherapy may require therapists to learn about and recognise young people's experiences and desires and re-activate their capacity to trust and learn from their social context both within and beyond therapy.

The second set of clinical implications concerns the mixed effects of dependency. Although young people with dependency showed an improvement in functioning after beginning therapy, they seemed to have a tendency to relapse after treatment. This may not be anticipated by therapists. Dependent features may create a misleading impression that the young people are readily collaborating with the therapists, which may obscure its more harmful effects, such as impeding youth's attempts to think independently and examine their underlying difficulties for fear of losing their therapists' approval. When working with youths with dependency, therapists are advised to be cautious about the nature of their collaborative behaviours and examine young people's dependency issues. For example, attention can be paid to young people's reactions to separation during the therapeutic process, such as the session break or the end of treatment. Lastly, although only exploratory analysis was conducted, the findings suggest that therapists may be more sensitive to gender-incongruent features. Therapists are encouraged to reflect on their work to minimise potential bias relating to gender-incongruent features and prioritise young people's perceptions and experience of therapy.

## **6.8 General limitations**

While a range of findings was identified, several general limitations should be considered when interpreting findings from the reported studies in this PhD thesis. First, as a broad range of clinical symptoms and psychological functioning have been investigated, the original IMPACT study adopted several brief measures (e.g., the short-form DEQ-A) to ensure time efficiency. Although such brief measures can yield evaluations of functioning, they may be not sufficiently sensitive to detect subtle but meaningful variations in the expression of functioning. For example, as discussed before, the full version of the DEQ may be able to capture slightly different expressions of dependency. Although the short-

form DEQ-A was tested for its validity and reliability, it may have limited the capacity to further elaborate on the findings regarding the impact of dependency on the investigated functioning.

Second, when investigating the effects of personality dimensions on treatment outcomes, only indicators for the primary outcome (i.e., depressive symptoms) and secondary outcome (i.e., general and social functioning) were adopted. Although investigating such indicators is crucial, it has been proposed that outcome measures should not be bound by symptom-oriented indicators but rather reflect a person-centred approach that considers what matters to young people and their families, such as family functioning and personal growth (Krause et al., 2021). Moreover, the studies mainly adopted self-reported measurements to capture the participants' functioning and symptoms, which may have introduced self-report bias. Further studies are advised to adopt more comprehensive measurements from different perspectives. For example, Rost et al. (2018) developed an observer-rated assessment for self-criticism and dependency traits, which provided another approach to detecting participants' personality dimensions in research.

Finally, the present analyses were based on cases with complete datasets. Although missingness was investigated and the adopted analytical approaches (notably multilevel modelling) were found to be robust in handling missing data under the assumptions of missing completely at random and missing at random (Centre for Multilevel Modelling, 2019; Curran et al., 2010; Hesser, 2015), the author is aware of the potential for bias. Moreover, a relatively large proportion of data were missing for ratings of the therapeutic alliance, especially for the therapist-rated alliance, which probably limited the statistical power. This limited statistical power needs to be considered when interpreting the results, such as the exploratory analysis of the interaction effects of personality dimensions and gender on the therapist-rated therapeutic alliance. Again, further research with adequate statistical power is needed to confirm this detected interaction.

## **6.9 Conclusions**

The series of studies reported in this PhD thesis explored whether and how young people's personality expressions, namely self-criticism and dependency, influence their pre-treatment symptoms and the therapeutic process in short-term psychotherapies, using a large clinical sample of depressed adolescents.

Significant insights were gained into the role of personality dimensions. As expected, self-criticism was not only associated with more severe symptoms (e.g., depression) and impaired functioning (e.g., social functioning) before the start of the treatment but also associated with poorer treatment outcomes over the course of the study. Further analysis of quantitative data and interviews with young people who suffered from intense self-criticism suggested that self-criticism limited young people's capacity to perceive, develop, and maintain a positive and strong therapeutic alliance and to engage with the therapy, which in turn limited their capacity to deeply benefit from the short-term psychotherapies. While self-criticism appeared to interfere with the therapeutic process, evidence suggested that its negative effect can be slowed down with the help of proposed therapeutic elements (e.g., therapists' recognition and affirmation). The findings for dependency were more mixed in terms of its associated symptoms and treatment outcomes. For example, dependency was associated with improvements in general and social functioning during treatment but also with a tendency to relapse after treatment. There was some evidence of gender incongruity, as self-criticism in girls and dependency in boys were associated with poorer functioning and a poorer alliance as rated by therapists. Based on a mixed-methods approach that combined quantitative and qualitative approaches, this series of studies provide insights into the role of both self-criticism and dependency in adolescent depression, and how these personality dimensions may express and interact with the therapeutic process in short-term psychotherapies. Although the studies have limitations, the findings highlight the importance of considering both self-criticism and dependency in research and clinical practice on adolescent depression and its treatment. Directions for future research are suggested to further reveal the effects of self-criticism and dependency and consider potential buffering factors to improve the life quality and therapeutic outcomes of young people who have high levels of self-criticism and/or dependency.

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## **Appendix 1 Ethics Approval**

The IMPACT study and the nested IMPACT-ME study were approved by the Cambridgeshire 2 Research Ethics Committee (reference 09/H0308/137), Cambridge, United Kingdom. All individual participants, including young people and their parents, gave written informed consent. When conducting this PhD research, University College London and Anna Freud National Centre for Children and Families policies on data protection and confidentiality were followed. To protect confidentiality, for example, to ensure that the interviews with young people were fully anonymised, any identifiable details were omitted or disguised in the analytical materials (e.g., the interview transcripts). A pseudonym was provided to each participant to preserve their anonymity when analysing their interviews.

## Appendix 2 The Short Version of the Depressive Experiences Questionnaire for Adolescents

### (DEQ-A) Used in the IMPACT Study

Listed below are a number of statements concerning personal characteristics and traits. Read each item and decide whether you agree or disagree and to what extent. If you strongly agree, circle 7; if you strongly disagree, circle 1.

	Strongly Disagree				Strongly Agree			
1. I set my goals at a very high level.	1	2	3	4	5	6	7	
2. Sometimes I feel very big, and other times I feel very small.	1	2	3	4	5	6	7	
3. I often find that I fall short of what I expect of myself.	1	2	3	4	5	6	7	
4. I feel I am always making full use of my abilities.	1	2	3	4	5	6	7	
5. It bothers me that relationships with people change.	1	2	3	4	5	6	7	
6. There is a big difference between how I am and how I wish I were.	1	2	3	4	5	6	7	
7. I enjoy competing with others.	1	2	3	4	5	6	7	
8. Usually I am not satisfied with what I have.	1	2	3	4	5	6	7	
9. I have difficulty breaking off a relationship that is making me unhappy.	1	2	3	4	5	6	7	
10. Often, I feel I have disappointed others.	1	2	3	4	5	6	7	
11. I very often go out of my way to please or help people I am close to.	1	2	3	4	5	6	7	
12. I never really feel safe in a close relationship with a parent or a friend.	1	2	3	4	5	6	7	
13. I generally watch carefully to see how other people are affected by what I say or do.	1	2	3	4	5	6	7	
14. I worry a lot about upsetting or hurting someone who is close to me.	1	2	3	4	5	6	7	
15. I am a very independent person.	1	2	3	4	5	6	7	
16. Anger frightens me	1	2	3	4	5	6	7	
17. If someone I cared about became angry with me, I would feel frightened that he or she might leave me.	1	2	3	4	5	6	7	
18. What I do and say has a very strong impact on those around me.	1	2	3	4	5	6	7	
19. The people in my family are very close to each other.	1	2	3	4	5	6	7	

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20. I am very satisfied with myself and the things I have achieved.	1	2	3	4	5	6	7
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*Note:* 1. Self-criticism sub-scale includes items 3, 4, 6, 8, 10, 12, 19, 20;

2. Dependency sub-scale includes items 2, 5, 9, 11, 13, 14, 16, 17;

3. Based on CFA results from the present PhD research, item 19 has been excluded from the self-criticism sub-scale, and item 2 has been excluded from the dependency sub-scale when conducting the analyses.

### **Appendix 3 Semi-structured Experience of Therapy Interview – Young Person Used in the IMPACT-ME Study**

1. The difficulties that have brought the young person into contact with Child and Adolescent Mental Health (CAMHS)
  - 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?
  - In what way did these things affect your life at the time?
  
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?')
  
3. Change
  - Compared to about a year ago, how have you been feeling/how have you been experiencing things?
  - 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?
  - Can you tell me the 'story' of your therapy as you see it?
  - 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?
  - 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?
  - 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?
- 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?

## 7. Therapist

- Check whether the young person is okay with their therapist being interviewed.

## 8. Pseudonym

- Would you like to choose your own pseudonym?



#### **Appendix 4 Analytical Stages of the IPA Reported in Chapter Five**

Stage 1: The author Y.B. conducted the initial analysis on interviews and generated initial statements and Personal Experiential Themes (PETs) for each participant involved in the IPA under the supervision of Prof Nick Midgley.

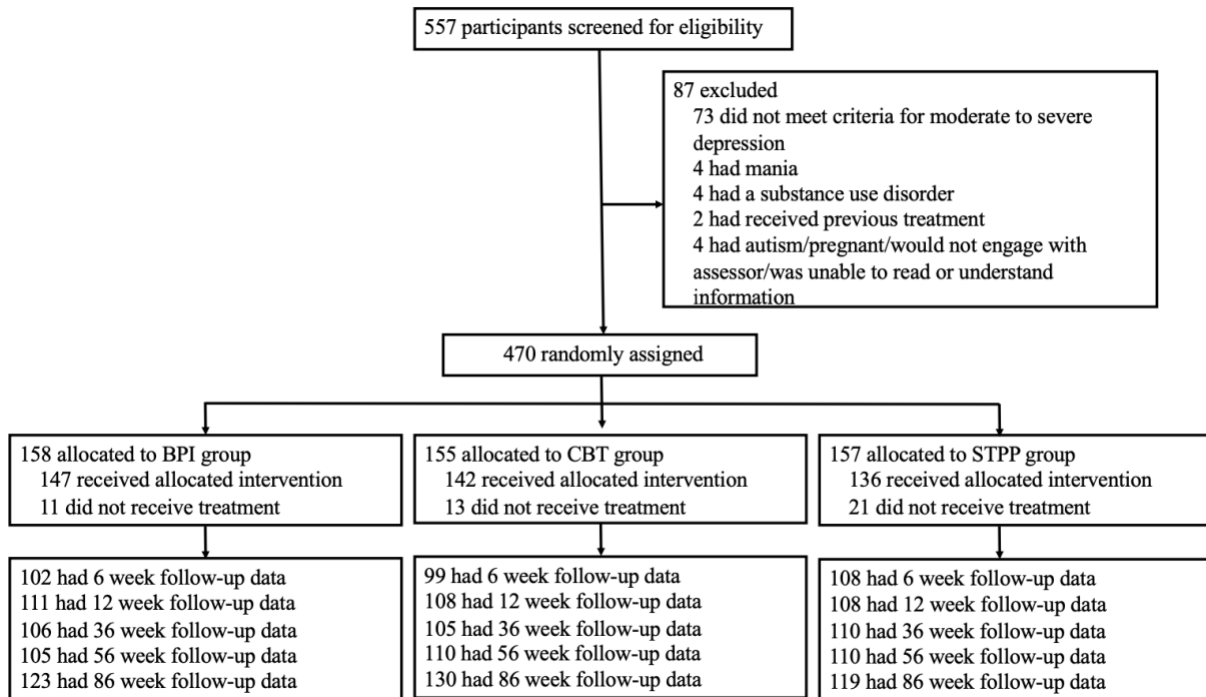
Stage 2: The initial statements and PETs were discussed in-depth among Prof Nick Midgley, Prof Patrick Luyten, and Y.B. to reflect on whether the statements and themes were grounded in the data and offered meaningful interpretations that were relevant to the research question. Following that, Group Experiential Themes (GETs) were developed to reflect the meaningful connections between the PETs of the five participants.

Stage 3: To further ensure that the statements and themes were grounded in and closely linked with the data, the author Y.B. involved a research assistant, Mahika Duseja, who was an undergraduate student at University College London, in this study. We had weekly meetings to cross-check the linkage between interview transcripts, statements, and themes.

Stage 4: The polished themes were presented in the IMPACT research group and reviewed by researchers in the group to reflect on whether the themes made sense based on the transcripts and our interpretations.

Stage 5: The themes were again discussed among Prof Nick Midgley, Prof Patrick Luyten, and Y.B. to make a final adjustment. As a result, the presented themes were closely linked with the transcripts, and the interpretations were more well-considered and offered more in-depth insights into the present research question.

## Appendix 5 Trial Profile of the IMPACT Study

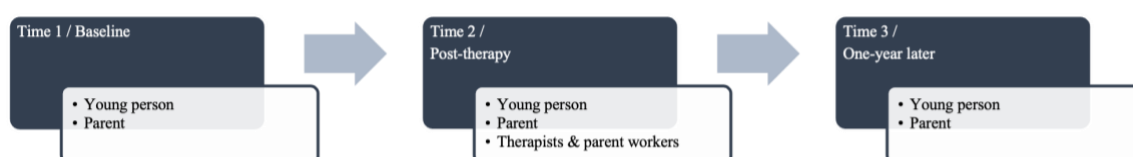


*Note:* 1. BPI = brief psychological intervention; CBT = cognitive behavioural therapy; STPP = short-term psychoanalytical psychotherapy

2. This trial profile is cited from Goodyer et al. (2017), and more detailed description and discussion can be found in that paper

## Appendix 6 Interview Schedule Across Treatment Stages in the IMPACT-ME Study

In the IMPACT-ME study, young people and parents across all sites in the IMPACT trial (North London, East Anglia and the North West) were interviewed where possible. All families in the London sites from the IMPACT trial were invited to take part in IMPACT-ME. The youths and their parents were interviewed at three time points: before the treatment, post-treatment, and one year after the treatment as shown below.



Time 1 interviews were part of the baseline assessment conducted by the main IMPACT Research Assistants. The interviews were relatively short (around 10-20 minutes) as they were part of a lengthy assessment process. Interviews at Time 1 focused on the experience and understanding of the difficulties that brought the young person into contact with child and adolescent mental health service (CAMHS), their hopes for the future, and hopes/expectations of therapy.

The later IMPACT-ME interviews were conducted in meetings separate from the IMPACT assessments. The interviews, therefore, were longer and more in-depth with a typical duration of one hour. At Time 2, therapists and parent workers where applicable were also interviewed. This was done with the consent of the young person (to interview their therapist) and parent (to interview the parent worker). Interviews at Time 2 focused on the difficulties that brought the young person into CAMHS, changes over the course of treatment, participants' understanding of the therapeutic and contextual factors contributing to these changes, the experience of therapy, and the experience of being involved in the research. Interviews at Time 3 asked young people when they thought back about the therapy, how the therapy was relevant to them in their current stage. Based on the research question in this PhD research, interviews with young people at Time 2 were used.