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LITERATURE REVIEW

The Engagement and Treatment Effectiveness of Personalised Interventions in Youth Mental Health: A Mixed Studies Review in a European and UK Context

Róise Brannick O Cillin[1]

Background: Given the diversity that exists within youth mental health there is an ongoing concern that standardised evidence-based responses are not effectively addressing the levels of psychological distress experienced by some youth. It is becoming more evident in the use of crisis mental health services that alternative clinical pathways that consider the impact of developmental trajectories, subjective, social, and cultural beliefs on psychological distress are imperative.
Aim: This mixed studies review sought to find effective Personalised Interventions (PIs) within Europe and the UK that could highlight an alternative pathway for youth accessing a mental health service.
Methods: Empirically supported psychological interventions tailored to a youth or youth subgroup, modified modular psychological interventions, psychological interventions to target youth environments, and qualitative research that can inform or equate to a PI were searched in two large databases and then cross synthesised.
Results: 21 studies met inclusion criteria. Nine quantitative studies had attendance rates of 82–89% and significant treatment outcomes. All 12 qualitative studies showed evidence of engagement and treatment outcome themes.
Conclusion: PIs in this review evidence engagement and treatment effectiveness but may be underutilised for hard to reach and culturally diverse youth in Europe and the UK.

Keywords: *Youth mental health, engagement, treatment, personalised interventions, collaborative, co-constructive*

Personalised Interventions in Youth Mental Health

Personalised interventions (PIs) within youth mental health have evolved from the biopsychosocial case formulation approach within child and adolescent psychology and psychiatry (British Psychological Society, 2011; Winters et al., 2007). They have been catalysed by an increased understanding of neural plasticity (Morris et al., 2014), personalised medicine (Chan & Ginsburg, 2011) and the changing view of the patient being a passive participant to an active collaborator (Swan, 2009). PIs involve a transaction of scientific knowledge and experience between clinician and patient to achieve shared treatment decisions (Drake et al., 2009). For example, Guo et al. (2015) found that the perception of psychological distress as shameful for the family was a cultural belief which impacted the help seeking of youth of Asian ethnicity. PIs should therefore be sensitive to the cultural and social beliefs of the service user and their perceptions of psychological distress, and the impact on the acceptability of formulations and proposed interventions.

PIs, as defined by Ng and Weisz (2016, p. 216) in their review, are 'not about intuitive appeal' but are 'evidence-based methods for tailoring treatments to individuals'. The overall aim of PIs is to increase engagement and treatment outcomes and to reduce the need to medicate youth given their rapid stage of brain growth (Ng & Weisz, 2016). This position is also supported by Tishler and Reiss (2011) who report that psychotropic medications have not been fully investigated in paediatric clinical trials. The authors state that without an informed evidence base the prescribing of psychotropic medication to children

1 Queen Mary University.
Corresponding author: Róise Brannick O Cillin (roiseboc@gmail.com)

carries unknown potential risks in both the short term and the long term. This highlights the importance of resourcing the case formulation approach underpinning PIs.

These concerns are echoed by youth themselves. Graham et al. (2014) used a qualitative participatory approach to develop quality standards. In their study, youth expressed that they wanted their mental health practitioner to discuss other treatment options with them before prescribing medication, they wanted more interaction, techniques to help them in the interim, and shorter referral times to therapies. This study highlights the importance of utilising qualitative methodologies to gain insight into youths' beliefs and expectations of mental health interventions.

Ng and Weisz (2016) in their review of PIs in youth mental health have put forward four criterion that would meet a PI; adapted and empirically supported therapies for specific youth subgroups, modular therapies that can be used in a nonlinear way, individual psychometrics used to formulate an individual treatment plan, and the targeting of youth environments. They also highlight four more research designs that can inform PIs such as sequential, multiple assignment randomised trials, measurement feedback systems, meta-analyses comparing treatments for specific patient characteristics, and data mining decision trees. However, Ng and Weisz (2016) suggest that while the PI evidence base catches up, practitioners can learn to review the current evidence base to inform a PI with the goal of optimising engagement and treatment outcomes while reducing the risk of youth experiencing significant psychological distress – a risk exacerbated by the use of empirically unsupported therapies.

Youth Mental Health in Europe and the UK

Taking Ireland as our context, Cannon et. al. (2013) conducted a Psychiatric Epidemiology Research across the Lifespan (PERL) Group Report on the mental health of young people in Ireland. The report evidenced that one in three young Irish youth by age 13 are likely to have a 'mental disorder' and by age 24 this will have increased to one in two. The Irish Mental Health Commission (MHC) published its annual report for 2017, which found that children admitted to adult inpatient units had increased from 68 child admissions in 2016 to 82 child admissions in 2017 (Mental Health Commission, 2018). The MHC found that the main contributory factors to this increasing trend was a lack of beds in Child and Adolescent Mental Health Services' (CAMHS) inpatient units, day and inpatient services being understaffed, and significant disparities in funding, emergency cover, and the waiting lists across different geographical areas. Both reports indicate that the levels of psychological distress amongst Irish youth may be increasing, and their needs may become more complex over time. These reports raise difficult questions on the engagement and treatment effectiveness of the current mental health pathways available to youth.

Efforts in trying to understand young people's distress and respond in a meaningful and effective way is not only observed within Ireland. Similar studies also highlighting these concerns exist within the UK (Knapp et al., 2016) and Europe (Coppens et al., 2015). Youth who experience distress have diverse developmental trajectories, sociocultural beliefs, and modality preferences. However, youth have the ability to recover with effective therapeutic, neurodevelopmental, relational, and environmental support (Crittenden, 2006; Morris et al, 2014; Perry, 2009). It is therefore important to consider how a more personalised clinical pathway can be developed within youth mental health services to respond to the heterogeneity that exists and how this can be offered across multiple contact points and with many different age ranges.

In their review of the Irish context, McGorry et al. (2013) proposed that collaborative approaches with youth are the way forward to reduce engagement and treatment barriers and respond to diversity. McGorry at al. (2013) focus on a systems design approach to trying to engage youth within their communities. This approach has shown promise within the Irish context where youth were involved in the design of a new early intervention urban community based mental health service (Illback et al., 2010). Although this systems design approach offers an important early access point for youth experiencing distress, it does not offer complex interventions for youth experiencing significant levels of distress. Therefore, a systems design approach targeting youth environments should be part of a suite of personalising strategies that involve collaboration but also the marrying of empirically supported therapies, as not all youth will engage in early intervention opportunities.

Using an ethnographic study with vulnerable youth in a deprived urban area in Ireland, Schaffalitzky et al. (2015) found that at first contact with a mental health professional this youth subgroup experienced significant levels of distress but had delayed engagement with services until they were at a crisis point. Schaffalitzky et al. (2015) highlight that mental health professionals need to be able to offer this group an alternative clinical pathway that allows for more time to formulate complex interventions that can target multiple locations of distress including comorbid addiction issues. The authors also highlight the benefits of a community-based GP service that

may be a more culturally acceptable contact point. There is a diverse range of youth and youth subgroups within youth mental health who need a more personalised clinical pathway that can enhance engagement and treatment outcomes.

Rationale for a Mixed Studies Review

This review has operationalised some of Ng and Weisz's (2016) proposals for reviewing the PI evidence base:

1. Review randomised-controlled trial (RCT) data that focuses on psychopathological processes and not just diagnosis because this can highlight mechanisms of change to inform a PI.
2. Review tailoring strategies used in usual care and the engagement and treatment outcomes.
3. Review PIs targeting youth populations who have been poorly served by empirically supported therapies, i.e., ethnic minorities with high dropout rates and poor treatment outcomes.
4. Review idiographic research such as single case experiments as diagnostic based RCTs have been criticized for factoring out individual difference so important personalising information can be lost.

At their core, PIs are trying to achieve a deeper understanding of why certain treatments work for certain youth. The review process which informs a PI is just as concerned with youth who haven't responded or who have dropped out of empirically supported therapies and the importance of their feedback. It is for this reason that this review has added in a qualitative component, given the importance of idiographic data for personalising an intervention that will also be socially and culturally acceptable to youth. As both epistemological positions are inextricably linked within PIs, a mixed studies review is considered theoretically congruent. However, the synthesising of these two data sets is a new and challenging approach.

Primary Review Question

PIs in youth mental health services: what is the evidence for effective engagement and treatment outcomes in Europe and the UK?

Sub Review Questions

i) What is the empirical evidence of effective engagement and treatment outcomes of PIs in Europe and the UK?

ii) What subjective experiences and contextual factors give insight into youths' engagement and treatment outcomes in PIs in Europe and the UK?

Aim

This mixed studies review seeks to review effective PIs within Europe and the UK that could highlight an alternative pathway for youth at initial presentation to a mental health professional or service, and whose needs may not be met by a standardised empirical treatment response.

Objectives

1. To provide an overview of the empirical data of engagement and treatment outcomes of psychological interventions within youth mental health in Europe and the UK using the criteria and proposals made by Ng and Weisz (2016).
2. To integrate qualitative studies that give insight into the effectiveness of PIs on engagement and treatment outcomes within youth mental health in Europe and the UK using the mixed method approach outlined by Kavanagh et al. (2012).
3. To identify gaps in the existing evidence base and direct future efforts within PI research in Europe and UK.

Methodology and Methods

Development of Systematic Review Protocol

The mixed method process developed by Kavanagh et al. (2012) was piloted on a smaller number of studies and is depicted in Figure 1. In these preliminary stages the search strategy was simplistic and yielded large results, which were very heterogeneous in nature.

It became evident that 'Personalised Interventions' was not a mainstream term being used in youth mental health research. Therefore, a search strategy had to be developed for the full review that would search empirical studies in line with the PI criteria and proposals made by Ng and Weisz (2016). In addition, this review's search strategy also needed to identify relevant qualitative studies that could inform a PI so that culturally diverse and hard to reach youth were not lost. This informed a more complex search strategy, and a mixed method flow chart was created to reflect this.

An inductive thematic analysis was applied to the supportive verbatim text within the qualitative studies in the pilot using the guidance document developed by Kavanagh et al. (2012). This yielded important descriptive themes which could then be mapped onto overarching analytical themes which equated to the engagement and treatment outcomes used in this full

review. Kavanagh et al. (2012) describe their process as a thematic analysis which can be either inductive or deductive in nature. Further support and guidance for this thematic process was sought from Braun and Clarke (2008). As per the guidance, a reflexive analysis was conducted as part of this review given the mixed method approach, and to aid transparency.

The engagement and treatment outcomes used in this full review are deductive analytical themes. They were used to code the supportive verbatim text in the qualitative studies that met the inclusion criteria. Therefore the analytical themes evidence the presence of the engagement and treatment outcomes of interest. Table 1 displays how the descriptive themes map onto the analytical themes which equate to the engagement and treatment outcomes of interest.

Search Methods

A full search was completed in all relevant databases at the preliminary stages for similar systematic reviews. One review was found in respect of engaging youth in mental health within the discipline of social work (Kim et al., 2012). It did not focus on personalising empirically supported therapies. However, this review was helpful in highlighting standardised measures of engagement. An annual review by Ng and Weisz (2016) was found which was highly relevant for this review, as previously referenced.

The empirical PI criteria proposed by Ng and Weisz (2016) in their review was used in the quantitative aspect of this review. Their reference list was not used. This review differed in its mixed method approach, including a qualitative component to generate insight into the relationship between user involvement and engagement and treatment effectiveness with a particular focus on subjective, social, and cultural beliefs. Abstract and title were searched in Psychinfo and Pubmed databases in March 2018 and restricted to articles published since 2000 using the search terms detailed in Table 2.

Inclusion and Exclusion criteria

Types of Participants

This review considered studies that included youth aged 12 years (+ or – 1 year allowance) to 28 years (+ or – 1 year allowance) at risk of developing mental health issues, have a mental health diagnosis or experience psychological distress and who are accessing all levels of mental health service response within Europe and the UK.

Figure 1.
A mixed method approach to conducting this systematic review adapted from Harden et al. (2004) and Oliver et al. (2005) as cited in Kavanagh et al. (2012, p. 22)

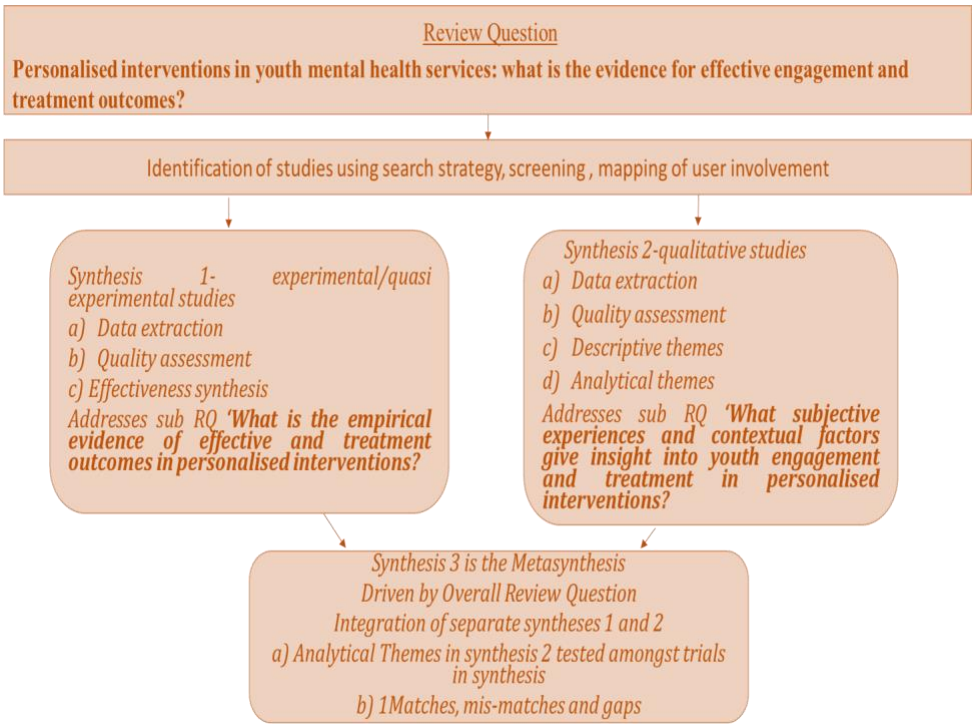

Table 1.
Descriptive Themes mapping onto Analytical Themes

Engagement Descriptive Themes →	Analytical Themes/ Engagement Outcomes
Expressing internal source of distress (unconscious/conscious) Expressing external source of distress Expressing relational distress	Expressed subjective experiences that can inform a personalised intervention
Expressing social and cultural beliefs about personal distress	Expressed social or cultural beliefs that can inform a personalised intervention
Expressing the need for a therapeutic alliance within a group or individual sessions Expressing how they wanted to explore their own distress Expressing subjective experiences about what could be improved	Evidence of collaborative or participatory therapeutic engagement with mental health professional/researcher that can inform or enhance a personalised intervention i.e., forming a therapeutic alliance, feedback on what helped or what could be improved
Treatment Descriptive Themes →	**Analytical Themes /Treatment Outcomes**
Reported improvement in relationships/social outlets Reported increased awareness of issues and coping strategies Reported decrease in symptoms, coping with symptoms, decrease in stress/distress Subjective expressions of a wish to decrease dependency on services, professionals, or medication due to feeling an increased confidence in ability to cope with symptoms	Expressing subjective experiences of recovery
No expressed recovery theme due to dissatisfaction	Expressing subjective experiences of dissatisfaction with treatment/intervention/therapist

Types of interventions of interest

This review considered studies that evaluated PI types as empirically supported psychological interventions modified or tailored for an individual youth, youth subgroup, youth environment, novel therapies delivered to youth subgroups or individual youths, and qualitative research that can inform or equate to a PI. The PIs had to take place in settings where the youth had access to a mental health professional but did not include youth in detention centres for criminal offences; for further details on criterion for inclusion and exclusion see Appendix A and B. The only excluded quantitative research designs were retrospective and qualitative studies with no verbatim supportive text; for more details on inclusion and exclusion criterion see Appendix C.

This review included the following outcomes for measures of effective engagement and treatment – see Table 3 and 4. The qualitative engagement and treatment outcome indicators in Table 3 and 4 were arrived at using a thematic mapping outlined by Kavanagh et al. (2012) in the preliminary pilot – see Table 1. For more details on this process for this review see Appendix L and M.

Data Collection and Analysis

Studies were screened by a single coder using the inclusion and exclusion criteria for PIs within this study. The results were not subjected to a naturalistic meta-analysis due to small number of robust quantitative studies with comparable outcomes. However, an effectiveness synthesis table was produced with recorded p-values and Cohen's d of measures used as per inclusion criteria.

The qualitative thematic synthesis presents the analytical themes within the studies that corresponded to engagement and treatment outcomes already described in the inclusion criteria. The final step is the cross-study synthesis which maps the qualitative analytical themes onto the quantitative studies.

Table 2.
Search Terms

Population	*Exposure*	*Intervention*	*Outcome*
Youth or Adolescent* Or 'Young adult*' or 'Young people' or Young person* or Teen* or 'Asylum -seekers' or 'Unaccompanied refugee*' or refugee* or 'Unaccompanied minor*' or 'Ethnic minority youth' or 'Refugee youth' or 'migrant youth' or 'marginalised youth' or 'marginalized youth' or 'socially excluded youth'	Mental health or psychological disorder or mental disorder or mental health issues or psychological distress or distress or emotional disorder or depression or anxiety or mood disorder or affective disorder or post-traumatic stress or post-traumatic stress or PTSD or psychosis or neurosis or externalising or externalizing or internalising or internalizing or Personality disorder or 'at risk' or 'high-risk' or high risk or suicide* or 'first episode' or 'early onset' or trauma*or emotion regulation or emotional regulation or therapy or psychotherapy	Personal* or tailored or customised or Individual* or adapted or modified or Culture* or idio or ethno or collaborative or participatory or consult* or construct* or 'personal construct*' or co-construct* or 'service user led' or experience* or 'youth guided' or 'youth driven' or 'youth led' or involve* or listen* or 'lessons learned' or 'expert through experience' or experiences or novel or integrated or creative or explore* or solution* or qualitative or 'intervention design' or outreach or unconventional or non-conventional or non-traditional or alternative or TAU or treatment as usual	Engage* or retention or adherence or alliance or attrition or terminate* or dropout or drop-out or drop out or 'overcoming barriers' or attend* or meaningful or express* or voice* or view* or belief* or treat* or treatment or inform* or feel or disclose* or effective* or accept* or tell or share or receive* or retain* or outcome* or implement* or feasibility or interact* or help seeking or reduce or therapeutic or 'not responding' or non response* or 'hard to reach' or recover* or listen* or hear* or perceptions or assist* or care

Table 3.
Engagement Outcomes for Inclusion

Quantitative Engagement Outcome Measures	Qualitative Engagement Outcome Measures
Standardised measures of engagement, Therapeutic alliance, or adherence	Expressed subjective experiences which can inform or equate to a PI
Standardised measurement of Client satisfaction or acceptability with intervention	Expressed social and cultural beliefs that can inform or equate to a PI
Attrition, attendance, or dropout rates/records	Evidence of collaborative or participatory therapeutic engagement with mental health professionals/researcher/or group facilitator which can inform or equate to a PI

Table 4.
Treatment Outcomes for Inclusion

Quantitative Treatment outcome measure	Qualitative treatment outcome measure
Standardised diagnostic treatment outcome measures i.e., BDI, CDRS-R etc.	Expressing subjective experiences of recovery
Decrease in psychotropic medication, or clinically approved termination of psychotropic medication	Expressing subjective experiences of dissatisfaction with treatment/ intervention/therapist
	Subjective expressions of a wish to decrease dependency on services, professionals, or medication

Data extraction and quality assessment

The Cochrane Public Health Group Data Extraction tool was used to generate a narrative description of the quantitative studies in a tabular format such as authors, year, country, sample size, methodology, focus, setting, engagement, and treatment outcome measures. Each study was given an ID number at this point which was used to reference the study thereafter.

This data extraction tool was also used to generate a separate table on participant characteristics. This focused on important sociocultural factors and differences at baseline; socioeconomic status (SES), ethnicity, living with birth family, Adverse Childhood Experiences (ACEs) reported, diagnostically homogenous at baseline, presence of complex psychological distress, and psychotropic medication use.

Due to limited availability of RCTs, the Effective Public Health Practice Projects Quality Assessment Tool for Quantitative Studies (EPHPP, 2010) was chosen because it was flexible enough to assess pre- and post-interventional studies. The scoring method had to be modified slightly to reflect the higher risks of bias across studies due to the inclusion of clinical case studies (see Appendix E). This scoring method was applied based on selection bias, study design, control of confounders, withdrawal of dropouts, integrity of intervention, and analysis. An overall global score of quality was then given which has also been added to the narrative table.

The Standardized Data Extraction Tool developed by Kavanagh et. al. (2012) was used for qualitative studies to generate a narrative table to include author, year and country, sample size, methodology and analysis, focus, and setting. Each study was given an ID number at this point which was used to reference the study thereafter. The National Institute for Health and Care Excellence checklist for qualitative studies (NICE, 2012) was used to score the study on the following areas: theoretical approach and if it was congruent with the study design, trustworthiness (including reflexive analysis), analysis, and ethics. An overall quality score has been included in the narrative table for qualitative studies.

Results

Study Selection

All results from the search strategy were exported into Endnote, and duplicates were found, recorded, and removed. The title and abstracts were checked against the inclusion and exclusion criteria in Endnote. This filtering process was recorded in PRISMA flow charts for both databases. Once all non-relevant studies were excluded, studies were then moved into two groups in Endnote called 'potential qualitative studies' and 'potential quantitative studies'. These studies were given a deeper screen by being rechecked in the database of their origin as per inclusion and exclusion criteria.

Three studies were moved from qualitative to quantitative based on their methodologies. One quantitative study was found through a published rationale and study design and imported into Endnote. This was the Access III study (Lambert et al., 2017). An included qualitative study by Gee et al. (2016) focused on young people's experiences of social recovery CBT as part of an RCT called The Prodigy Trial. This RCT could not be included in the quantitative studies because the results were not published at the time of the search (https://doi.org/10.1186/ISRCTN47998710).

Four studies were found to meet inclusion criteria based on title and abstract but were unavailable. Requests for the full text were sent to the lead authors of the remaining three studies, but only one was received - 'The mystery of the well-attended group. A model of Personal Construct Therapy for adolescent self-harm and depression in a community CAMHS service' (Moran et al., 2009). However, on a deeper screen it did not meet inclusion criteria based on the methodology used.

The selection flow chart in Figure 2 depicts identification through database searching and screening process.

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Figure 2.
Flow Chart of Study Selection

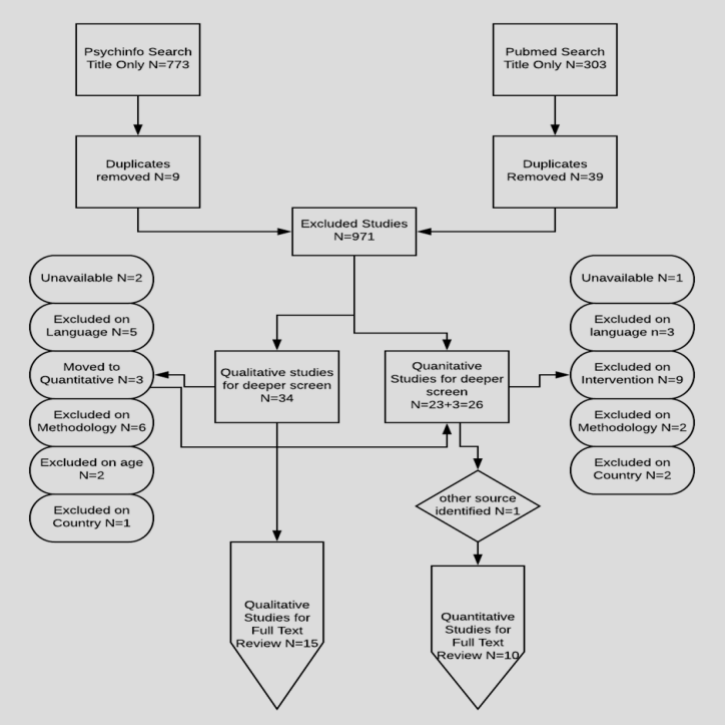

Figure 3.
Flow chart for full text review process

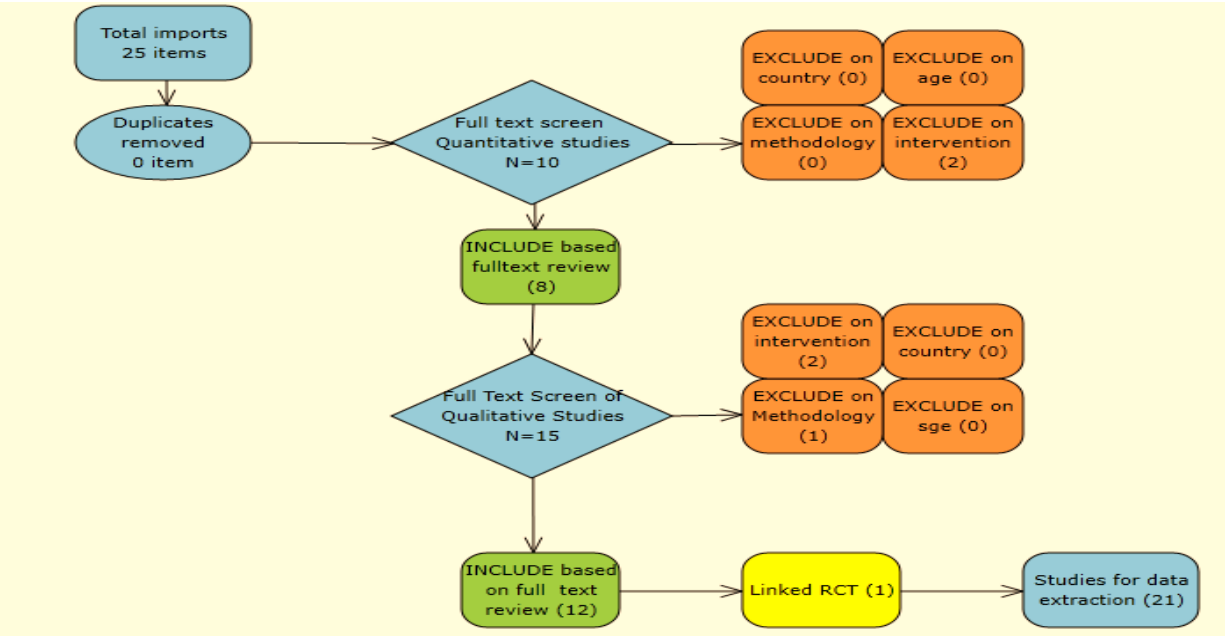

Table 5.
User Involvement mapping process

Qual Study ID	Mapped Concepts	Quant study ID
2,4	Focusing on changing thinking styles to affect behaviour; Internal and external locations of distress-conscious/unconscious	1
10, 11, 8	Anxiety internal and external locations of distress-conscious/unconscious	2
3, 5, 6,2, 7, 11	Adversity, trauma, abuse, and insecure attachments have all been linked to emotional dysregulation, internal and external locations of distress-conscious/unconscious	3
10, 8,11	ASD is linked with OCD and anxiety; young person with ASD engaged in horse therapy; Relational locations of distress/internal locations of distress-conscious/unconscious and external locations of distress	4
7	Recovery from psychosis; Internal locations of distress conscious/unconscious and relational distress	5
8,7,5	Requiring inpatient care; Reflective function and attachment	6
2, 4 ,8,9,10	Focusing on changing thinking styles; Depression and anxiety, internal and external locations of distress	7
4, 9, 10	Depression, internal locations of distress conscious/unconscious	8
4, 8, 9,10	Depression, anxiety and stress, internal and external locations of distress-conscious/unconscious	9

All available eligible studies were then put forward for the full text assessment screen see Figure 3. Also see Appendix D for the documented decision-making on excluded studies at full text screen.

Mapping and Interpretive Process

The mapping and interpretive process as outlined by Kavanagh et al. (2012) is contained in Table 5. The purpose of this process is to show how user involvement in the qualitative studies map onto the quantitative studies through common concepts or constructs.

Quantitative Synthesis

Description of Studies

The quantitative data extraction form was used to present a narrative description of the studies in a narrative tabular format – see Table 6, which also contains the global quality scores. A more in-depth explanation on the modified scoring system for the EPHPP (2010) Quality Assessment Tool for Quantitative Studies can be found in Appendix E

Participants' Characteristics

Participant characteristics are an important component to PIs, as highlighted by Ng and Weisz (2016), as this allows us to understand who was reached or not reached by these interventions and if participants' characteristics were used to personalise an intervention (see table 7). This is discussed in more detail in the narrative summary section.

This table is discussed more in depth in the narrative summary section to follow. A more detailed table of differences at baseline and intervention characteristics can be found in Appendix F and G.

Effectiveness Synthesis

Table 8 informs the review that there were high levels of statistical significance found within the engagement and treatment outcome measures when analysed. This is discussed further in the narrative summary section which follows. A more detailed table on quantitative engagement and treatment outcome statistical data is available in Appendix H and I.

Qualitative Synthesis

Description of Qualitative Studies

The description of qualitative studies is presented in Table 9 and includes the global quality score. An explanation of the scoring method used by the NICE checklist (2012) can be found in Appendix J. Further details on participant characteristics are contained in Appendix K.

Qualitative Thematic Synthesis

See table 10. A more detailed synthesis of descriptive themes mapping onto analytical themes of engagement and treatment outcomes is contained in Appendix L and M. Verbatim supportive text evidencing descriptive themes as they map onto analytical themes is available in Appendix N.

Cross Study Synthesis

See table 11.

Narrative Summary of Results

Quantitative Narrative Summary

Participants' Characteristics

The participants had an overall age range of 9-29 years old. There was *N*=533 participants in total; *N*=422 (79.2%) females, *N*=111 (20.8%) males. Therefore, females are predominantly represented but this has been affected by three all-female studies Quant 1, 3 and 9.

SES was only minimally reported. In studies that did record this, it was evident that most participants lived with their families of origin. Quant 5 was also the only study to record ACEs at pre-implementation. Ethnic background was minimally reported; thus, it is difficult to know how diverse groups were and if they were reflective of their parent populations. Quant 1 and 8 were based in inpatient units, and Quant 6 was partial inpatient. Quant 2, 3, 4, 5, and 7 were all day clinic-based studies. Quant 9 was the only study to take place in a community setting.

Overall, it is evidenced that although the classification system was used to create groups, these groups are not diagnostically homogenous, not all are naïve to psychotropic medication, and they tend to have complex presentations. It is difficult to ascertain if these studies reached marginalized or hard to reach groups due to a lack of reporting on their SES, living circumstances, cultural background, and ACEs.

Intervention Characteristics

A summary of intervention characteristics evidences the degrees of tailoring found in PIs that meet Ng and Weisz's (2016) review proposals. However, this review also found novel therapies that were modified for youth. These combined criteria resulted in a range of PIs offered to youths, such as modified CBT to become a non-linear game (Chapman et al., 2016), modified therapies for emotional dysregulation (Bjureberg et al., 2017; Hauber et al., 2017), modified cognitive remediation therapy (CRT), which is a novel therapy modified for a youth subgroup (Giombini, et al., 2017), case

Table 6.
Description of Quantitative Studies

Authors	ID	Size	Design	Focus	Setting	Engage. Outcome
Giombini, Moyniha, Turco and Nesbitt, (2017) UK	Quant 1	N=92	pre- and post-interventional study	Evaluate the use of CRT with young people with anorexia nervosa	Inpatient unit	Attendance/ Drop out record
Lundkvist-Houndoumadi, Thastum and Hougaardl, (2016) Denmark	Quant 2	N=14	pre- and post-interventional study	Examine the effectiveness of an individualised case formulation-for youths with anxiety	Anxiety. Clinic	Attendance /Dropout record
Bjureberg et al. (2017) Sweden	Quant 3	N=17	Pre and post interventional study	Evaluate the feasibility, acceptability, and utility of a novel and adapted therapy for emotional regulation	CAMHS Outpatient clinics	Treatment satisfaction measure WAISR
Krebs, Murray and Jassi, (2016) UK	Quant 4	N=1	Pre and post interventional case study	Examine the effectiveness of individualised CBT for severe treatment resistant OCD in an adolescent with Autism	National and Specialist OCD and Related Disorders Clinic	Attendance
Lambert et al. (2017) Germany	Quant 5	N=120	Prospective non-randomised pre- and post-interventional study (historical control data not used)	Investigate early detection and integrated care (EDIC) improved outcomes in youth with early psychosis	Multi mental health settings (day clinic, in patient)	CSQ-8 Dropout rates

Authors	ID	Size	Design	Focus	Setting	Engagement Outcome	Treatment Outcome	Qual Score
Hauber, Boon and Vermeiren, (2017) The Netherlands	Quant 6	N=102	Pre and Post Intervention al Study	Examine the effectiveness of intensive MBT for adolescents with personality disorders	Partial In patient	Attendance/ drop out	SCL-90 SCID-II	2
Chapman et al. (2016) UK	Quant 7	N=11	Pre and Post Intervention al Study and Qualitative aspect to be included as supportive text available	Investigate the acceptability of a novel cCBT (Pesky Gnats) with adolescents	Tier 3 CAMHS	Participant completion rates and Acceptability Evidence of collaborative or participatory therapeutic engagement with researcher	Revised Child Anxiety and Depression Scale, Outcome Rating Scale Reported increased awareness of issues and coping strategies	1
Wunram et al. (2017) Germany	Quant 8	N=64	Semi randomised three arm clinical trial	Investigate the effectiveness of whole-body vibration (WBV) to treat depression	In patient units	Attendance/ drop out	DIKJ (Depression Inventar für Kinder und Jugendliche) Remission rates Medication	2
Duberg, Jutengren and Hagber (2016a) Sweden	Quant 9	N=112	Non blinded Randomised control trial	Investigate if a dance intervention for adolescent girls with internalising problems	City Centre Gym	Attendance/ drop out	SRH CES-DC SiC	2

formulation for a follow up youth subgroup and an individual youth (Krebs et al., 2016; Lundkvist-Houndoumadi et al., 2016), and multidisciplinary teams offering a multimodal outreach therapy service to older youth (Lambert et al., 2017). PIs also included psychosomatic therapies where the body is used as the modality for self-expression and externalising but also for behavioural activation (Duberg et al., 2016a; Wunram et al., 2017). PIs differed from short term to long term interventions.

A more in-depth Table is available in Appendix G.

Engagement Effectiveness Synthesis

Overall dropout rates were low at 11-18 %, which indicates a strong level of engagement. PIs such as Quant 2, 4, and 7 had no dropouts. This may be related to the small numbers and the level of personalisation offered which equated to high levels of engagement. However, this was achieved in Quant

Table 7.
Participant Characteristics Quantitative Studies

Quant ID	SES	Ethnic.	With Birth Family	ACE'S	Diagnostic criteria used to form group	Diagnostically homogenous at baseline	Complex distress	Med. use*
Quant 1	NR*	NR	NR	NR	✓	✓	✓	✓ 66%
Quant 2	Middle	All Danish	✓	NR	✓	No	✓	1/14
Quant 3	Middle	NR	✓	NR	✓	No	✓	5/17
Quant 5	NR	NR	✓	✓	✓	No	✓	✓ 70%
Quant 6	Middle	All fluent Dutch		NR	✓	No	✓	NR
Quant 7	NR	All White British	✓	NR	✓	✓	x	1/11
Quant 8	NR	NR	NR	NR	✓	✓	x	0/64
Quant 9	NR	Born in Sweden	✓	NR	x	NR	x	0/59

7 through strict exclusion criteria. Quant 2 was a PI using case formulation that was offered to young people who were nonresponsive to a manualised CBT programme and were a follow-up group. This is relevant given that the other studies, Quant 1, 3, 6, used a modified manualised approach, and it is unclear if dropouts were offered a follow-up PI.

Treatment Effectiveness Synthesis

Quantitative studies 1, 2, 3, 6, 8, and 9 all reached significance of $p<.05$ on all treatment measures. Quant 5 did not reach significance on the treatment measure used. However, there was variation in effect size in all studies measured by Cohen's d in respect of the strength of the differences between pre- and post-

measures, where *d*=.2 is a small effect size, *d*=.5 is a medium effect size and .8 is a large effect size. Quant 1 had a small effect size for all measures. Quant 3 had medium to large effect sizes for their measures. measures. In the case of Quant 2, one effect size was only large at the 3-month follow-up. Quant 4 and 7 did not have enough power to do statistical tests (*n*=1, *n*=11). However, based on the data provided there were strong differences in the means pre- and post-intervention, evidencing a significant reduction in self-reported symptoms. Quant 5 and 9 had no effect size calculations therefore it is difficult to know the strength of the differences.

Other quantitative measures were taken as indicators of treatment outcomes such as remission rates. Quant 2 had a 50% remission rate on diagnoses of Separation Anxiety and Social Phobia. Quant 5, the early detection and integrated care (EDIC) intervention condition, predicted psycho-functional remission at the 1-year end point *p*<.001. Quant 8 remission rates for depression at 26 weeks were 71.4% ergometer and 61.5% whole body vibration, compared to 17.6% treatment as usual (TAU). Other outcome measures such as a decrease in medication use were found in Quant 9; 15 young people decreased their use of painkiller medication post-intervention. A qualitative measure was an expressed decrease in dependency on services or professionals, which was evident in Quant 3 where 24% at post-treatment said they had not been required to meet with a psychiatric service during treatment, 59% felt they only required monthly meetings with same.

Qualitative Narrative Summary

Participants' Characteristics

The participants' ages ranged from 10 to 25 years of age. Based on calculations of the total known participants' genders (*N*=269), 164 were females (61%) and 105 were males (39%). However, in the Qual 1 there were 348 survey respondents whose genders are not known. Although some SES data is missing there is evidence of several vulnerable SES and hard to reach groups such as homeless youths, youths in state care, youths unable to work, train or attend college due to complex mental health needs, and persons on low income.

Table 8.
Effectiveness Synthesis

Study ID	Sample Size	Engagement Effectiveness Attendance %	Treatment Effectiveness (primary outcome)	Treatment effectiveness (secondary outcome)	Considerations
Quant 1	103	83.5%	*p*<.001 d=.34	*p*<.001 d=.22	
Quant 2	14	89%	*p*<.001 d=.22	*p*<.05 d=.90	At 3 month follow up
Quant 3	17	65%	*p*<.05 d=.40	*p*<.01 d=.81	
Quant 4	1	100%	Mean diff -16	Mean diff -19	Not enough statistical power but strong diff observed in means pre and post
Quant 5	120	65%	EDIC condition only *p*>.05	EDIC condition only *p*<.001	Historical Control Study
Quant 6	115	89%	*p*=.000 d=.92	*p*<.01 d=.87	Not enough statistical power
Quant 7	11	100%	Mean of t change scores=2.1 overall reduction in symptoms	clinically significant ORS scores	
Quant 8	64	81%	*p*=.037 d=.85	*p*=.042 d=.85	
Quant 9	59	82%	*p*=.35	*p*=.025	

Table 9.
Description of Qualitative Studies

Author, year, country	Study ID	Size	Methodology/ Analysis	Focus	Setting	Global Quality score
Persson, Hagquist and Michelson (2017) Sweden	Qual 1	*N*=6 *N*=348 responded to survey Total n=354	Focus Group and Surveys Qualitative content analysis	Investigate young service users' views of outpatient/ community mental health clinics	CAMHS outpatient and community mental health clinics	+
Dittmann and Jensen, (2014) Norway	Qual 2	*N*=30	Semi structured interviews Thematic Analysis	Explore traumatised youth's experiences of Trauma Focused CBT	Community mental health clinics	+
O'Reilly, Taylor, and Vostanis, (2009) UK	Qual 3	*N*=25	Semi structured interview Discourse analysis	Explore the term 'mental health' as expressed by a group of homeless young people	Mental health service delivered in homeless shelters	++
Gee et al. (2016) UK	Qual 4	*N*=17	Semi Structured Interview Thematic analysis (embedded in RCT)	Prodigy Trial (ongoing) participants experiences of Social Recovery CBT	Own homes or community venue chosen by participant	++
Swerts et al. (2017) Belguim	Qual 5	*N*=25	Focus groups Deductive thematic analysis (QQL framework by Schalock and Verdugo, 2002)	To evaluate the views of adolescents with emotional and behavioural disorders on Quality of Life	Multi Centre Residential Care Services for youth	++
Taylor, Stuttaford, Broad and Vostanis (2007) UK	Qual 6	*N*=19	Semi Structured Interviews Thematic Analysis	Investigate young homeless people's experiences of a mental health services delivered in homeless services	Mental health service delivered in homeless shelters	+
Sibeoni et al. (2018), France	Qual 8	*N*=20	Semi Structured Interview Thematic Analysis	Explore how adolescents with anxiety-based school refusal experience psychiatric care	Day service, outpatient, and inpatient Psychiatric Hospital Services	+

Midgley et al. (2016) UK	Qual 9	*N*=77	Semi structured interviews Exploratory Phenomenological-framework analysis	Explore causal beliefs about depression among a sample of clinically referred adolescents	CAMHS	++
Duberg, Moller and Sunvisson (2016b) Sweden	Qual 10	*N*=24	Semi structured interview Content analysis (embedded in RCT)	Explore participants experiences of an 8-month dance intervention	University-homely room	++
Burgon, 2011, UK	Qual 11	*N*=7	Ethnographic opportunity led interview Practice near methodology Inductive thematic analysis	Explore the experiences of at-risk young people participating in a therapeutic horsemanship programme	The Horse Yard	+
Palmstierna and Werbart, 2013, Sweden	Qual 12	*N*=11	Semi Structured Interview Grounded theory methodology	Explore the therapeutic experiences of participants who met outcome measures for therapeutic success in psychotherapy	Institute of Psychotherapy	+

There was minimal data gathered on ethnic background, but what was observed was access to an interpreter in Qual 1, at least 7/30 youths in Qual 2 had one parent from a minority background, Qual 8 excluded youth who were not French speaking, Qual 9 had 85% white British participants in their sample which they report is reflective of the parent population, and in Qual 10, 4/24 were born outside of Sweden. There was evidence of a wide range of DSM diagnoses along with separation and loss, trauma, adversity, learning, and occupational needs within the overall sample. This indicates a heterogeneous sample, multiple locations of distress, and complex mental health needs across the sample.

Qualitative Engagement Outcomes

The interventions in which participants expressed their subjective experiences on TAU was in Qual 1, 9, and 12, and PIs in Qual 2, 3, 4, 5, 6, 7, 8, 10, and 11 for youth subgroups and a youth environment. There were no studies representing tailored interventions to an individual youth. The subjective experiences expressed by participants in TAU (Qual 1, 9, and 12) were those which could inform a PI if a case formulation approach were used.

Qualitative studies where young people expressed their social and cultural beliefs that could inform a PI were only captured in Qual 3, 5, 7, and 10. Although these beliefs could potentially inform a PI, it was not detailed if such an intervention was later offered to the participants.

Participants expressing the importance of a therapeutic alliance was a strong theme in all studies evidencing the importance of this for engagement. Participants were actively able to express their locations of distress in Qual 1, 2, 4, 5, 7, 8, 9, and 12 and this was observed as another strong indicator of engagement. The locations of distress as descriptive themes were observed to be multiple within these interventions depicting the homogeneity of the group.

Table 10.
Presence of Qualitative Engagement and Treatment Outcomes in Studies

Study ID	Expressed subjective experiences that can inform a personalised intervention	Expressed social and cultural beliefs that can inform a personalised intervention	Collaborative engagement with a mental health professional/researcher that can inform a personalised intervention	Expressing subjective experiences of recovery	Expressing subjective experiences of dissatisfaction with treatment/intervention/therapist
Qual 1	✓	x	x	x	✓
Qual 2	✓	x	✓	✓	✓
Qual 3	x	✓	✓	x	x
Qual 4	x	x	✓	✓	✓
Qual 5	✓	✓	x	x	x
Qual 6	x	x	✓	✓	x
Qual 7	✓	✓	x	x	✓
Qual 8	x	x	✓	✓	x
Qual 9	✓	x	x	x	x
Qual 10	x	✓	✓	✓	x
Qual 11	x	x	x	✓	x
Qual 12	x	x	✓	✓	x

Table 11.
Integration of Syntheses

Qualitative Analytical Themes indicating user involvement	Quant 1	Quant 2	Quant 3	Quant 4	Quant 5	Quant 6	Quant 7	Quant 8	Quant 9
Expressed subjective experiences that inform a PI	x	x	x	x	✓	x	x	x	**x**
Expressed social and cultural beliefs that inform a PI	x	x	x	x	✓	x	x	x	✓
Collaborative engagement with mental health professional/researcher that can inform a PI	x	*no drop out	✓	*no drop out	✓	✓	✓ *no drop out	✓	✓
Expressing subjective experiences of recovery	x	✓ *p<.05, d=.8	*p<.05, d>.5	✓ *mean diff	✓	✓	✓ *mean difference	*p<.05, d=.8	✓
Expressing subjective experiences of dissatisfaction with treatment	*17/103	x	✓ 1 in 2 dissatisfied 2/17 drop out	x	*14/120 drop out	*13/115	✓ 2/11	*12/64	11/59

Participants expressing their views on TAU interventions in Qual 1, 9, and 12 expressed preferences to explore their distress through different modalities such as art and other non-talk therapies but were not facilitated. Participants also expressed in Qual 1, 2, 3, and 5 how interventions could be improved to promote engagement. This indicates that some participants attending TAU would benefit from tailored interventions if there were consultations at the pre-intervention stage so a personalized response could be formulated if resources were available.

The analytical theme of collaborative engagement was evidenced in Qual 2, 3, 4, 6, 8, and 10, and in Qual 12 there was a strong theme of therapeutic alliance.

Qualitative Treatment Outcomes

Participants expressing themes of subjective recovery were found in Qual 2, 4, 6, 8, 10, 11 and Qual 12. In Qual 12 it should be noted that the sample only contained participants who were deemed 'successful' and did not contain participants views who may have dropped out due to being dissatisfied with the therapeutic alliance or treatment approach. Participants expressing subjective experiences of dissatisfaction with treatment/intervention/therapist were found in TAU Qual 1 and PIs in Qual 2 and 4.

Cross Synthesis

The cross synthesis integrates the quantitative synthesis and qualitative synthesis. The potential insight of the analytical themes as qualitative engagement and treatment outcomes were presented alongside the content and findings of the quantitative data to highlight matches and gaps.

A significant gap was found when mapping the analytical theme of 'expressed subjective experiences which can inform or equate to a PI'. Quant 1, 3, 5, 6, 7, and 8 had no evidence of gathering the subjective experiences of young people to inform the intervention such as expressions of locations of distress or preferences for modality in exploring distress. There was no evidence that these studies gathered subjective experiences at post-intervention either. Quant 2 and 4 did use a case formulation approach at the pre intervention stage to tailor a CBT programme. However, there was no evidence that youth actively contributed to the case formulation. Therefore, all the mentioned studies appear to be science practitioner led only and strongly influenced by the youths' diagnoses at pre intervention stage. A match was found with Quant 9 due to its embedded qualitative study design which gathered subjective experiences at post-intervention.

Evidence of matches were found when mapping the analytical theme of 'expressed social and cultural beliefs that can inform or equate to a PI' onto Quant 9 because an embedded qualitative study was conducted post-intervention which captured the social and cultural beliefs of the participants that was impacting their mental health and were addressed by the intervention. It was also evident in Quant 5, which recorded detailed demography including childhood adversities – 57% of the sample had more than one ACE. Quant 5 did appear to use this social and cultural information at pre intervention to adapt the EDIC intervention as they made a targeted attempt to positively influence social and cultural beliefs about mental health stigma and help seeking, offered outreach, and had a range of therapies on offer to tailor to the person and social context.

However, a gap is that no other study captured social and cultural beliefs at either pre- or post-intervention to either inform or equate to a PI. Gaps were found in that ethnic background of participants were only reported in Quant 7 where it was reported to be reflective of the parent population. Quant 4 had only one participant who was British Asian. Quant 2 was all Danish and it was not reported if this was reflective of the parent population. Socioeconomic information such as family status and income were minimally gathered in Quant 2, 3, 6, and 7. No data on ethnic background or SES was used to equate or inform a PI at either pre- or post-follow up. A gap was found where the remaining studies did not report ethnic background or SES at all. This appears to suggest that the importance of these variables was not considered as part of a pre-intervention formulation.

A second match was found when mapping the analytical theme of 'evidence of collaborative or participatory therapeutic engagement with mental health professional/researcher' onto Quant 2, 3, 7, and 9 where efforts had been made by the researchers to gather feedback from participants on their experiences using structured questionnaires and an embedded qualitative study. A gap was found in that Quant 1, 4, 5, 6, and 8 did not collaborate at pre-intervention stage or gather collaborative feedback at post-intervention stage. This indicated that there was minimal user involvement in these studies. Overall, the quantitative studies were found to be effective in engaging youth despite there being minimal pre-consultation. This important finding highlights a sine qua non for engagement which was the evidence of a strong therapeutic alliance in the studies.

A third match was found when mapping the analytical theme of 'expressing subjective experiences of recovery' on to Quant 2, 3, 7, and 9

where they had gathered the participants experiences of recovery post-intervention through questionnaires and an embedded qualitative study. Treatment effectiveness was evidenced in medium to large effect sizes in Quant 2, 3, 6, and 8. Quant 4, 5, 7 and 9 did not report effect sizes but did evidence statistical significance ($p<.05$).

A final match was found in mapping the analytical theme of 'expressing subjective dissatisfaction with treatment/intervention/therapist' mapped onto Quant 3 where only 50% were satisfied and 42% felt that the treatment did not meet their expectations. Quant 7 found that 2/11 did not find the intervention helpful. The only other indicator of dissatisfaction was recorded through dropout rates; Quant 2, 4 and 7 had no dropouts and Quant 1, 3, 5, 6, 8, and 9 had between 11-18% drop out rates which overall is low in all quantitative studies. A gap was found in that minimal or no attempts were made to establish the reasons for these dropouts. This does indicate that the dropouts may not have been targeted for a follow-up PI. This highlights the importance of follow-up with participants who drop out so that qualitative and/or individual metric information could inform a future PI with a youth group who may share these characteristics and/or similar experiences.

Discussion

The empirical evidence in this review suggests that PIs emerging in Europe and the UK have been effective in their engagement and treatment outcomes with the youth or youth subgroup they have targeted. These PIs fall into the following criteria: modified empirically supported therapies, a tailored outreach service, case formulation, single case experiment, and the use of modified novel therapies for youth such as CRT, dance, and somatic therapies.

An effective PI clinical pathway was highlighted in this review where a group of youth and their families who were dissatisfied with a CBT manualized approach were offered a follow up PI based on a case formulation approach. This indicates that PIs could be offered to those who drop out or who are unresponsive to a standardised empirically supported therapy. This can also help to inform future PIs with groups sharing similar characteristics and experiences. It also highlights the importance of capturing the characteristics and qualitative feedback of youth who would require a case formulation approach over a diagnostically informed manualised treatment intervention.

PIs could therefore be gaining empirical support as a clinical pathway for youth who require a personalised response. Due to not all youth involved in the review being medication naïve, it is difficult to say if PIs can reduce the need to medicate youth. However, there was limited reporting on medication use pre and post PI using standardised measures, and there is some evidence that youth reduced their painkiller use from standardised measures taken in an RCT involving a dance intervention for youth with anxiety.

This review points to the benefits of using transdiagnostic methods for forming groups for complex and hard to reach groups, as there was evidence of significant differences at baseline in the quantitative component of the review. This would help to yield more information in respect of psychopathological processes which can inform future PIs for youth or youth groups with similar characteristics.

Although the modification of empirically supported interventions was evident in the quantitative aspect of this review, they were less informed by service users and more led by scientist practitioners, which would equate to a more realist approach. However, it is difficult to negate contextual factors given that they evidently play a role in disengagement, dissatisfaction, and dropout. This was most evident in the insight gained from the qualitative aspect of the review.

Strong themes of expressed subjective, social, and cultural beliefs were deduced from the qualitative aspect of this review. However, there was little evidence available to indicate that this valuable information was then used to inform a PI at pre-intervention stage. Given how diverse youth mental health is this is an important finding. However, a strength within the qualitative aspect was its ability to reach and gather the views of marginalized and vulnerable groups such as homeless youth and youth in state care. This highlights the importance of qualitive research with youth and the contexts for healing outside of clinic-based interventions such as homeless hostels and children in the care centres.

Although there was minimal evidence that pre-consultation with youth on their social and cultural beliefs informed any PI and they were predominantly scientist practitioner led, they were effective due to satisfaction with the therapeutic alliance throughout the intervention. This highlights a *sine qua non* of engagement and treatment effectiveness within PIs.

The evidence base for PIs in Europe and the UK is promising but has more to give in respect of engaging vulnerable, marginalized, or diverse, hard to reach groups who have demonstrated that they can express their subjective and cultural beliefs on their distress and preferences in treatment modalities,

especially where a co-constructive intervention design is permitted. PIs appear to increase the opportunities to build this alliance for therapists and youth, particularly where the PI is adequately addressing the locations of distress within the youth or youth group.

Conclusion

Based on this review it has become evident that PIs exist across a theoretical spectrum. On one side are the more realist approaches where the practitioner makes the modifications and on the other side are the social constructionist or participatory approaches where the PI is more service user led. In the middle lies the co-constructive approach which draws on the strengths of both sides, the user's subjective, social, and cultural experiences, and the practitioner's scientific knowledge of the empirical evidence base. To conclude, PIs have gained empirical support, but have yet to be utilized to their full potential as co-constructed interventions within Europe and UK given the diversity in youth mental health.

Limitations and Future Research

It would be a useful future research endeavour to widen the scope of this review to other jurisdictions outside of Europe and the UK to examine their evolving evidence base on PIs. Operationalizing the proposals made by Ng and Weisz (2016) gave the necessary structure to review the evidence base and could theoretically inform PIs for youth with similar characteristics to those found in this review and where engagement concerns exist. Equally, the insight gained by the qualitative aspect of the review points to its utility within a mixed method approach to developing a PI with underserved youth where there is a limited empirical base for standardised therapies. PIs in the future could highlight mechanisms of change and focus formulation on important areas such as the social and cultural beliefs of a youth or youth subgroup which may allow for modification of an empirically supported therapy. This, in turn, may enhance engagement and treatment outcomes for youth from marginalised cultural minorities within Europe and the UK.

Further investigation into the therapeutic alliance that was found to be consistently present in the PIs in this review would yield further insight into its effective characteristics such as the skills of the therapists, increased opportunities to build rapport, the creating of groups with similar locations of distress, the effective targeting of these locations of distress, and the nature of the alliances between group members. It was difficult to assess if PIs could be an effective way to reduce the need to medicate youth as most participants in this review were not medication naïve at the start of the interventions. It would therefore be imperative for the continued development of the evidence base to use standardised measures around the use of medication pre and post PIs, as the primary objective of the PI is to reduce psychological distress and reduce the need to medicate youth given their rapid stage of brain growth.

As some PIs were found to be in the preliminary and feasibility stages their methodologies were more naturalistic and their quality assessments would be considered low on the hierarchy of evidence. Females were also overrepresented in the qualitative aspect of the review. This review, due to its exploratory nature, had a wide age range. Further reviews may narrow this age range or choose to focus on certain age cohorts particularly with the inclusions of other jurisdictions and as the PI evidence base grows.

Conflicts of Interest

The author certifies that they have no affiliations with or involvement with any organisation or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this review.

References

Bjureberg, J., Sahlin, H., Hellner, C., Hedman-Lagerlof, E., Gratz, K. L., Bjarehed, J., Ljotsson, B. (2017). Emotion regulation individual therapy for adolescents with nonsuicidal self-injury disorder: a feasibility study. *BMC Psychiatry, 17*(1), 411. https://doi.org/10.1186/s12888-017-1527-4

Braehler, C., & Schwannauer, M. (2012). Recovering an emerging self: exploring reflective function in recovery from adolescent-onset psychosis. *Psychology and Psychotherapy, 85*(1), 48-67. https://doi.org/10.1111/j.2044-8341.2011.02018.x

British Psychological Society. (2011). Good practice guidelines on the use of psychological formulation. Leicester, UK. Retrieved from http://www.sisdca.it/public/pdf/DCP-Guidelines-for-Formulation-2011.pdf

Burgon, H. L. (2011). 'Queen of the world': Experiences of 'at-risk' young people participating in equine-assisted learning/therapy. *Journal of Social Work Practice, 25*(2), 165-183. https://doi.org/10.1080/02650533.2011.561304

Cannon, M., Coughlan, H., Clarke, M., Harley, M., & Kelleher, I. (2013). *The mental health of young people in Ireland: A report of the Psychiatric Epidemiology Research across the Lifespan (PERL) Group*. Royal College of Surgeons in Ireland. Retrieved from http://epubs.rcsi.ie/cgi/viewcontent.cgi?article=1000&context=psychrep

Chan, I. S., & Ginsburg, G. S. (2011). Personalized medicine: progress and promise. *Annual review of genomics and human genetics, 12*, 217-244. https://doi.org/10.1146/annurev-genom-082410-101446

Chapman, R., Loades, M., O'Reilly, G., Coyle, D., Patterson, M., & Salkovskis, P. (2016). 'Pesky gNATs': Investigating the feasibility of a novel computerized CBT intervention for adolescents with anxiety and/or depression in a Tier 3 CAMHS setting. *The Cognitive Behaviour Therapist, 9*. https://doi.org/10.1017/s1754470x16000222

Cochrane Public Health Group. (2011, November). Data Extraction and Assessment Template. Retrieved from https://www.google.ie/url?esrc=s&q=&rct=j&sa=U&url=https://ph.cochrane.org/sites/ph.cochrane.org/files/public/uploads/CPHG%2520Data%2520extraction%2520template_0.docx&ved=2ahUKEwiTl5qNg8_0AhViQkEAHd6PAoUQFnoECAIQAg&usg=AOvVaw1UBag_It8KvZp2qyOIY2is

Coppens, E., Vermet, I., Knaeps, J., De Clerck, M., De Schrijver, I., Matot, J.P. and Van Audenhove, Ch. (2015). Adolescent mental health care in Europe: state of the art, recommendations, and guidelines by the ADOCARE* network. Adocare. http://www.adocare.eu/wp-content/uploads/2015/12/ADOCARE-UK-2015.pdf

Crittenden, P. (2006). A Dynamic-Maturational Model of Attachment. *Australian and New Zealand Journal of Family Therapy*, *27*(2), 105-115. https://doi.org/10.1002/j.1467-8438.2006.tb00704.x

Dittmann, I., & Jensen, T. K. (2014). Giving a voice to traumatized youth-experiences with Trauma-Focused Cognitive Behavioral Therapy. *Child Abuse & Neglect, 38*(7), 1221-1230. https://doi.org/10.1016/j.chiabu.2013.11.008

Drake, R. E., Cimpean, D., & Torrey, W. C. (2009). Shared decision making in mental health: prospects for personalized medicine. *Dialogues in Clinical Neuroscience*, *11*(4), 455-463. https://doi.org/10.31887/DCNS.2009.11.4/redrake

Duberg, A., Jutengren, G., & Hagberg, L. (2016a). *Dance Intervention for Adolescent Girls: Effects on Somatic Symptoms, Emotional Distress, and Use of Medication. A Randomized Controlled Trial*. Orebro, Sweden: Örebro University, School of Health Sciences. https://doi.org/10.1001/jamapediatrics.2013.421

Duberg, A., Moller, M., & Sunvisson, H. (2016b). "I feel free": Experiences of a dance intervention for adolescent girls with internalizing problems. *International Journal on Qualitative Studies on Health and Well-being, 11*, 31946. https://doi.org/10.3402/qhw.v11.31946

Effective Public Health Practice Project. (2010). *Quality Assessment Tool for Quantitative Studies*. Retrieved 6 March 2018 from https://merst.ca/ephpp/

Gee, B., Notley, C., Byrne, R., Clarke, T., Hodgekins, J., French, P., & Fowler, D. (2016). Young people's experiences of social recovery cognitive behavioural therapy and treatment as usual in the prodigy trial. *Early Intervention in Psychiatry*, 11 (5), 879-885. https://doi.org/10.1111/eip.12381

Giombini, L., Moynihan, J., Turco, M., & Nesbitt, S. (2017). Evaluation of individual cognitive remediation therapy (CRT) for the treatment of young people with anorexia nervosa. *Eating and Weight Disorders, 22*(4), 667-673. https://doi.org/10.1007/s40519-016-0322-4

Graham, T., Rose, D., Murray, J., Ashworth, M., & Tylee, A. (2014). User-generated quality standards for youth mental health in primary care: a participatory research design using mixed methods. *BMJ Quality & Safety*, *23*(10), 857-866. https://doi.org/10.1136/bmjqs-2014-002842

Guo, S., Nguyen, H., Weiss, B., Ngo, V., & Lau, A. S. (2015). Linkages between mental health need and help-seeking behaviour among adolescents: Moderating role of ethnicity and cultural values. *Journal of Counseling Psychology, 62*(4), 682–693. https://doi.org/10.1037/cou0000094

Thomas, J., Harden, A., Oakley, A., Oliver, S., Sutcliffe, K., Rees, R., Brunton, G., & Kavanagh, J. (2004). Integrating qualitative research with trials in systematic reviews. *BMJ (Clinical research ed.)*, *328*(7446), 1010–1012.
https://doi.org/10.1136/bmj.328.7446.1010

Hauber, K., Boon, A. E., & Vermeiren, R. (2017). Examining changes in personality disorder and symptomology in an adolescent sample receiving intensive mentalization based treatment: a pilot study. *Child and Adolescent Psychiatry and Mental Health, 11*, 58. https://doi.org/10.1186/s13034-017-0197-9

Illback, R., Bates, T., Hodges, C., Galligan, K., Smith, P., Sanders, D., & Dooley, B. (2010). Jigsaw: Engaging communities in the development and implementation of youth mental health services and supports in the Republic of Ireland. *Journal of Mental Health, 19*(5), 422-435. https://doi.org/10.3109/09638231003728141

Kavanagh, J., Campbell, F., Harden, A., & Thomas, J. (2012). Mixed Methods Synthesis: A Worked Example. In K. Hannes & C. Lockwood (Eds.), *Synthesising Qualitative Research: Choosing the Right Approach*, (pp.113-136). John Wiley &Sons, Ltd. https://doi.org/10.1002/9781119959847.ch6

Kim, H., Munson, M.R. & McKay, M.M. (2012). Engagement in Mental Health Treatment Among Adolescents and Young Adults: A Systematic Review. *Child and Adolescent Social Work Journal*, 29, 241–266. https://doi.org/10.1007/s10560-012-0256-2

Knapp, M., Ardino, V., Brimblecombe, N., Evans-Lacko, S., Iemmi, V., & King, D. et al. (2016). Youth Mental Health: New Economic Evidence. The Personal Social Services Research Unit (PSSRU) at the London School of Economics and Political Science. Retrieved from http://www.pssru.ac.uk/archive/pdf/5160.pdf

Krebs, G., Murray, K., & Jassi, A. (2016). Modified Cognitive Behavior Therapy for Severe, Treatment-Resistant Obsessive-Compulsive Disorder in an Adolescent with Autism Spectrum Disorder. *Journal of Clinical Psychology, 72*(11), 1162-1173. https://doi.org/10.1002/jclp.22396

Lambert, M., Schöttle, D., Ruppelt, F., Rohenkohl, A., Sengutta, M., Luedecke, D., Karow, A. (2017). Early detection and integrated care for adolescents and young adults with psychotic disorders: The ACCESS III study. *Acta Psychiatrica Scandinavica, 136*(2), 188-200. https://doi.org/10.1111/acps.12762

Lundkvist-Houndoumadi, I., Thastum, M., & Hougaard, E. (2016). Effectiveness of an individualized case formulation-based CBT for non-responding youths with anxiety disorders. *Journal of Child and Family Studies, 25*(2), 503-517. https://doi.org/10.1007/s10826-015-0225-4

McGorry, P., Bates, T., & Birchwood, M. (2013). Designing youth mental health services for the 21st century: examples from Australia, Ireland and the UK. *The British Journal of Psychiatry*, *202*(s54), s30-s35. https://doi.org/10.1111/acps.12762

Midgley, N., Parkinson, S., Holmes, J., Stapley, E., Eatough, V., & Target, M. (2017). "Did I bring it on myself?" An exploratory study of the beliefs that adolescents referred to mental health services have about the causes of their depression. *European Child and Adolescent Psychiatry, 26*(1), 25-34. https://doi.org/10.1007/s00787-016-0868-8

Morris, S. E., Rumsey, J. M., & Cuthbert, B. N. (2014). Rethinking mental disorders: The role of learning and brain plasticity. *Restorative Neurology and Neuroscience, 32*(1), 5-23. https://doi.org/10.3233/rnn-139015

National Institute for Health and Care Excellence (2012). *Methods for the development of NICE public health guidance (third edition)*. Retrieved 26 February 2017 from https://www.nice.org.uk/process/pmg4/chapter/appendix-h-quality-appraisal-checklist-qualitative-studies

Ng, M. Y., & Weisz, J. R. (2015). Annual Research Review: Building a science of personalized intervention for youth mental health. *Journal of Child Psychology and Psychiatry*, *57*(3), 216-236. https://doi.org/10.1111/jcpp.12470

Oliver, D. G., Serovich, J. M., & Mason, T. L. (2005). Constraints and Opportunities with Interview Transcription: Towards Reflection in Qualitative Research. *Social forces; a scientific medium of social study and interpretation*, *84*(2), 1273–1289. https://doi.org/10.1353/sof.2006.0023

O'Reilly, M., Taylor, H. C., & Vostanis, P. (2009). 'Nuts, schiz, psycho': An exploration of young homeless people's perceptions and dilemmas of defining mental health. *Social Science & Medicine, 68*(9), 1737-1744. https://doi.org/10.1016/j.socscimed.2009.02.033

Palmstierna, V., & Werbart, A. (2013). Successful psychotherapies with young adults: An explorative study of the participants' view. *Psychoanalytic Psychotherapy, 27*(1), 21-40. https://doi.org/10.1080/02668734.2012.760477

Perry, B. (2009). Examining Child Maltreatment through a Neurodevelopmental Lens: Clinical Applications of the Neurosequential Model of Therapeutics. *Journal of Loss and Trauma*, *14*(4), 240-255. https://doi.org/10.1080/15325020903004350

Persson, S., Hagquist, C., & Michelson, D. (2017). Young voices in mental health care: Exploring children's and adolescents' service experiences and preferences. *Clinical Child Psychology and*

Psychiatry, 22(1), 140-151. https://doi.org/10.1177/1359104516656722

Schaffalitzky, E., Leahy, D., Armstrong, C., Gavin, B., Latham, L., McNicholas, F. & Cullen, W. (2015). 'Nobody really gets it': a qualitative exploration of youth mental health in deprived urban areas. *Early Intervention in Psychiatry, 9*(5), 406-411. https://doi.org/10.1111/eip.12165

Sibeoni, J., Orri, M., Podlipski, M. A., Labey, M., Campredon, S., Gerardin, P., & Revah-Levy, A. (2018). The Experience of Psychiatric Care of Adolescents with Anxiety-based School Refusal and of their Parents: A Qualitative Study. *Journal of the Canadian Academy of Child and Adolescent Psychiatry, 27*(1), 39-49. Retrieved from: https://www.ncbi.nlm.nih.gov/pubmed/29375632

Swan, M. (2009). Emerging patient-driven health care models: an examination of health social networks, consumer personalized medicine and quantified self-tracking. *International Journal of Environmental Research and Public Health, 6*(2), 492-525. https://doi.org/10.3390/ijerph6020492

S**werts, C., De Maeyer, J., Lombardi, M., Waterschoot, I., Vanderplasschen, W., & Claes, C. (2017)**. You shouldn't look at us strangely': An exploratory study on personal perspectives on quality of life of adolescents with emotional and behavioural disorders in residential youth care. *Applied Research in Quality of Life*, 14, 867-889. https://doi.org/10.1007/s11482-017-9534-7

Taylor, H. C., Stuttaford, M. C., Broad, B., & Vostanis, P. (2007). Listening to service users: Young homeless people's experiences of a new mental health service. *Journal of Child Health Care, 11*(3), 221-230. https://doi.org/10.1177/1367493507079568

The Mental Health Commission (2018). *Mental Health Commission calls on Government and HSE to initiate major transformation programme to deal with service issues*. Retrieved March 2018 from PR_AR2017.pdf (mhcirl.ie)

Tishler, C., & Reiss, N. (2011). Psychotropic drugs and paediatrics: a critical need for more clinical trials. *Journal of Medical Ethics*, *38*(4), 250-252. https://doi.org/10.1136/medethics-2011-100003

Virginia Braun & Victoria Clarke. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3 (2), 77-101. https://doi.org/10.1191/1478088706qp063oa

Winters, N., Hanson, G., & Stoyanova, V. (2007). The Case Formulation in Child and Adolescent Psychiatry. *Child and Adolescent Psychiatric Clinics of North America*, *16*(1), 111-132. https://doi.org/10.1016/j.chc.2006.07.010

Wunram, H. L., Hamacher, S., Hellmich, M., Volk, M., Janicke, F., Reinhard, F., Fricke, O. (2017). Whole body vibration added to treatment as usual is effective in adolescents with depression: a partly randomized, three-armed clinical trial in inpatients. *European Child and Adolescent Psychiatry*, 27, 645-662. https://doi.org/10.1007/s00787-017-1071-2

Appendix A – PI Type and Setting Inclusion and Exclusion Criteria

Inclusion	Inclusion	Exclusion	Exclusion
Therapeutic interventions tailored for an individual youth Modular therapeutic interventions tailored for a youth subgroup Therapeutic interventions tailored to target youth environments (i.e., outreach, virtual) Novel therapies targeting youth subgroups or individual youths Qualitative Research that can inform or equate to a PI	CAMHS outpatient and Inpatient services AMHS outpatient and Inpatient Services Accident and Emergency Departments GP Practice Community Mental Health Service providing centre based, outreach and homebased services Specialised Settings delivering mental health services to youth (i.e., specialised inpatient treatment)	Evidenced based generic therapies which can be delivered to a general population	Generic settings such as schools Excluded specialised residential settings where client group are detained under criminal proceedings and not mental health i.e., prisons

Appendix B – Intervention Focus Inclusion and Exclusion Criteria

Intervention focus inclusion	Intervention focus exclusion
Child and Adult mental Health needs/disorders	Interventions with no psychological therapies
Transdiagnostic mental health interventions	Peer support only interventions
Psychological distress, Trauma, adverse experiences, and at-risk youth	School based programmes
Group or systemic interventions	Online psychological interventions with open access for general population
Specialised Interventions for severe and complex mental health needs	

Appendix C – Types of Studies Inclusion and Exclusion Criteria

Quantitative Inclusion Criteria	Qualitative Inclusion Criteria
Experimental Designs	Phenomenological
Quasi Experimental Designs	Grounded Theory
Feasibility Studies	Ethnographic
Clinical Case Studies	Participatory Research
Data from the Here and Now Time Period in Historical Control Designs	Feminist Research
Exclusion	Exclusion
Retrospective Data	No Verbatim Supportive Text

Appendix D

Cepukiene, V., & Pakrosnis, R. (2011). The outcome of Solution-Focused Brief Therapy among foster care adolescents: The changes of behavior and perceived somatic and cognitive difficulties. *Children and Youth Services Review, 33*(6), 791-797.

Non-inclusion reason=Measure used in this study was below Cronbach's alpha of .7 which is an international standard for diagnositic and research measures.

D'Onofrio, E., Pace, C. S., & Cavanna, D. (2015). Qualitative research in adolescent psychotherapy: Attachment and Reflective Functioning as psychotherapy's outcomes of an adolescent with anorexia nervosa. *Research in Psychotherapy: Psychopathology, Process and Outcome, 18*(2), 93-101.

Non-inclusion reason=Intervention used was not detailed therefore could not be considered a personalised intervention

Laenen, F. V. (2009). 'I don't trust you, you are going to tell', adolescents with emotional and behavioural disorders participating in qualitative research. *Child: Care, Health and Development, 35*(3), 323-329. doi:10.1111/j.1365-2214.2009. 00936.x

Non-inclusion reason=Poor methodological quality and views being gathered to inform drug policy which does not inform a mental health personalised intervention

Lundkvist-Houndoumadi, I., & Thastum, M. (2017). Anxious Children and Adolescents Non-responding to CBT: Clinical Predictors and Families' Experiences of Therapy. Clinical psychology & psychotherapy, 24(1), 82-93.

Non-inclusion Reason=Not a personalised Intervention, and draws on same data used in a study which is included in the systematic review by the same author.

Rossouw, T. I. (2015). The use of mentalization-based treatment for adolescents (MBT-A) with a young woman with mixed personality disorder and tendencies to self-harm. *J Clin Psychol, 71*(2), 178-187. doi:10.1002/jclp.22153

Non-inclusion reason=No Clear Methodology used and no Analysis

Appendix E – Adapted Scoring Method for the EPHPP Quantitative Quality Assessment Tool

The scoring used in the EPHPP quality assessment tool utilises a scoring system for each section where 1=strong, 2=moderate and 3=weak. The global rating for this quality assessment tool was modified slightly to reflect the lower evidential quality within pre and post interventional studies as opposed to RCT's because all studies had a weak rating for blinding. Therefore, the threshold was lowered to increase the range on the studies that were available where 'strong' equated to one weak rating, moderate equated to two weak score ratings and weak is three or more weak score ratings. Where studies had consideration for confounders in the design but were not controlled for in the analysis, they were awarded a score of 2, if in both, they were awarded a score of 1. Quant 4 and 7 n=1 and n=11 given their case study designs they were scored on their level of reporting and transparency but were afforded a score of 1 given that their reliability and validity were 'weak'. A global rating of 'weak' indicates that if the study was replicated the likelihood of it finding the same effect in relationships is low.

Appendix F - *Participant Characteristics and Participant differences at baseline*

Study ID	*Participant Characteristics*	*Differences at Baseline*
Quant 1	All had a diagnosis of Anorexia Nervosa DSM 5 All in receipt of individual, family and group therapy All females 11-17 years old STAI state score M=54.43, SD= 13.66, Range 27-78 STAI Trait Score M=59.95, SD=12.36, Range 28-77 SES/Ethnic Group not reported	32/92 were taking an antidepressant 7/92 were taking an antipsychotic 22/92 were taking both 31/92 no medication Some patients had been transferred from other paediatric units where nasogastric feeding had been undertaken* impacts height weight calculation at baseline and post treatment
Quant 2	All non-responders to a manualised modular CBT Group for Anxiety 8 girls, 6 boys 9-17 years old All Danish Ethnic Background All met criteria for anxiety disorders (social phobia, separation anxiety disorder, obsessive compulsive disorder, Generalised Anxiety disorder, Specific Phobia, Agoraphobia with Panic Disorder	2/14 Eating disorder 2/14 ASD 3/14 Severe Cognitive difficulties 2/14 ADHD-1 on meds for ADHD 1/14 dysthymic disorder 12/14 youths living with both parents 10/14 mother's higher education 8/14 father's higher education
Quant 3	All met Criteria for Non-Suicidal Self Injury Disorder All females 13-17 years old 94% said ERITA was their primary treatment for the 12 weeks	11/17 mother 3rd level Ed 6/17 father 3rd level Ed 5/17 on psychotropic meds 14/17 received prior psychological treatment **Co-Occurring Diagnosis** 7/14 w/ BPD diagnosis 7/14 Depression 7/14 Panic Disorder 9/14 ADHD 4/14 Conduct Disorder 6/14 ODD 5/14 Social Anxiety Disorder 2/14 PTSD 2/14 Separation Anxiety
Quant 4	Male, 14 years old Asian British OCD since 8 years old which impaired school attendance Average IQ (WISC) Significant impairment working memory and in processing speed Dyslexia Self-harming and suicidal attempts	Received two treatments of ERP based CBT prior to treatment Was unresponsive to sertraline, fluvoxamine, risperidone, aripiprazole Reassessment and case formulation employed to tailor to his OCD and ASD needs
Quant 5	All met Criteria for Psychotic Disorders 63 male, 57 females, 12-29 years old Ethic background not reported	24/120 married 73/120 at work/school 60/120 inpatient care 100/120 with a comorbid disorder 74/100 Comorbid substance disorder 97/120 antipsychotics 27/120 antidepressants 12/120 mood stabiliser 85/120 full adherence to meds 68/120 at least 1Childhood Adversity

Quant 6	*All with clinically diagnosed personality disorders* *N=102* *83 female 19 males* *15-22 years old* *Education was average and above average* *All fluent in Dutch* *No ethnic background reported*	*Co-morbid disorders* *58% mood disorder* *PTSD 31%* *Eating Disorder 13%* *ADHD 8%* *Substance dependence 7%* *Dissociative disorder 3%* *OCD 2%*
Quant 7	7 females and 4 males 13-16 years old Important to note is that young people with concentration issues i.e. ADHD were excluded and so were those who refused to attend school All participants were of White British ethnicity	1/11-depression 1/11-anxiety 9/11 mixed anxiety and depression 1/11 on psychotropic medication Less than half (45%) lived in a two-parent family with both biological parents.
Quant 8	All with diagnosis of depression excluding psychotic depression, and Bipolar I and II disorder 18 males and 46 females 13-18 years old	IQ for all participants was assessed using WISC, mean of 100.12 + or – 11.94 SD. 28/64 parents divorced 25/64 had parent with psychiatric diagnosis 15/64 sports club members **Comorbidities and Groups** 14/64 anxiety increased number in ergometer training group 8/64 somatoform disorders, less somatoform disorders in control group
Quant 9	All met inclusion for internalising problems such as headache, stomach ache, tiredness, aches, stress, sadness, anxiety, nervousness All females 13-18 years old No differences between the intervention group and the control group, in number born in Sweden (55:49), living with both parents (24: 30), mother on sick leave (6:6), father on sick leave (3:3), participation in dance prior to study (33:36)	Rate of overall health between intervention group to the control group 8:3 Use of medication* everyday 8:10 Use of medication* 1-3 days a month 13:4 *analgesics, NSAIDS

Appendix G - ***Intervention Characteristics of PI's in Included Quantitative Studies***

Study ID	*Intervention Characteristics*
Quant 1	CRT sessions were based on a manual and resource pack for adolescents with eating disorders (Tchanturia et al, 2016). However, content of the sessions was tailored depending on the age and needs of the participants as determined by the pre-CRT assessment (cognitive strengths and inefficiencies). CRT x 2 weekly for 8 sessions.
Quant 2	Case formulation and anxiety treatment plan developed to inform intervention and took each young person's primary and comorbid diagnoses into consideration, this was agreed with the treatment team and parents. Individualised treatment was based on CBT principles but individualised for each participant based on case formulation. Therapy ranged from 6-20 sessions, and parent session were also offered where required.
Quant 3	ERITA was adapted from the group treatment manual for adult women. Adaptations made for adolescents were; provided to an individual adolescent, shortening treatment to 12 weeks to fit school term, included last session as relapse prevention, simplifying homework sheets, incorporating a young friendly design and examples, online accompanying programme for parents to understand and support the young person and the skills they were learning. Regular online therapist support to guide parents on young person's homework tasks.
Quant 4	Case formulation that gave consideration to the young person's ASD presentations. Modifications made to CBT; greater use of visual materials and worksheets, greater repetition of key psychological concepts, short breaks, highly structured sessions and written on whiteboard for young person to see, download time at end of sessions, extended psychoeducation on anxiety, use of Doctor Who anxiety rating scale, use of Dr. Who incentives and regular home based sessions, working with school, developing social activities outside of therapy, and parents leading some sessions and weekly family meetings at follow up stage. Total of 18 sessions.
Quant 5	EDIC integrated care delivery 1) improving mental health literacy and reducing mental illness stigma (public campaign) 2) improving service utilisation pathways (to include referrals from inpatient, day clinic and outpatient services, private practice, school psychology services, youth help services and social care services), 3) providing SKYPE and hotline counselling services 4) Creating easy access to psychiatric care services and expanded access to include schizophrenia spectrum disorders and affective spectrum psychotic disorders and all co-morbid mental health disorders, 5) Therapeutic Assertive Community Treatment (TACT) Teams with reduced caseloads 1:15 that provide multidisciplinary mobile early detection and treatment that is acute or long term, case management of specialised interventions (social therapy, diagnosis specific psychoeducation, trauma and substance misuse therapy, metacognitive training, CRT, social skills training, vocational therapy, pharmacotherapy, intensive individual psychotherapy including CBT, psychodynamic and or family therapy)
Quant 6	MBT is a manualised Integrative psychodynamic group psychotherapy programme that has been adapted for adolescents (Bateman and Fonagy, 2006) and delivered by a team all trained in MBT. The programme is delivered over 5 days for approx. 12-18 months. Weekly sessions include group psychotherapy (the team have modified the group therapy approach based on their service experience), art therapy, psychodrama therapy, individual psychotherapy and family therapy. Begins as hospitalisation, semi hospitalisation and then day treatment toward the end of the programme.
Quant 7	Pesky Gnats is a manualised Computerised CBT game; Level 1=Thoughts, feelings and behaviours, Level 2 and 3=Cognitive monitoring, Level 4=Cognitive Restructuring, Level 5=Negative Core Belief identification Level 6=Negative Core Belief reappraisal Level 7=Relapse prevention. The programme also includes awareness of body, awareness of your mind and awareness of your world and activity scheduling that all draw on mindfulness techniques with homework. There are 7 sessions in total
Quant 8	Intervention groups of either supervised ergometer training or whole-body vibration training for one hour daily where participants could take 1-2 days off per week once they had 18 sessions over 6 weeks. Intervention continued for another 20 weeks based on participants own motivation. TAU was psychotherapy group or individual, art therapy and music therapy
Quant 9	Afterschool 75-minute dance class twice weekly in a demand free non-judgemental environment taught and managed by a qualified occupational therapist with dance qualifications. 75 minutes involved; 15 min warm up, improvisation and preparation practice then 40 minutes of choreographed dance to music, improvisation in pairs, individual improvisation then 15-minute relaxation, light massage of each other in pairs (upper body), and then 5 minute reflection which included a voluntary sharing on what they liked or didn't like in session.

Appendix H - *Quantitative Engagement Outcomes*

Study ID	Engagement Outcomes dropout/attendance	Statistical measures
Quant 1	17/103 dropped out of study by their own choice no other information	
Quant 2	N=14 No dropouts Most families reported that the individualised treatment allowed them more time to use the tools and techniques with support	91.7% of all youth participants indicated 'true' that 'treatment helped' 100% of youth indicated 'true' that 'I trusted my therapist' compared to 85% in manualised group
Quant 3	2/17 participants dropped out due to discomfort/disinterest in the treatment and its format. Average attendance was M= 10.29, SD=3.37; median=12.	Treatment credibility: M=6.14, SD=2.07 were satisfied and expectancy M=56%, SD=22.74 Alliance with therapist on WAISR measured as high M=32.15, SD=9.90
Quant 4	Study indicates the participant attended all sessions offered	
Quant 5	N=120 at T0, N=106 at T1, N=97 at T2, N=90 at T3.	CSQ-P p=.829
Quant 6	N=115 included in study, 13 were treatment dropouts but they are reported to have not differed significantly from the rest of the group. Only 62 engaged in pre and post interviews	
Quant 7	N=11 No dropouts	81% of participants said they would recommend to a friend, 5/11 =kind of enjoyable, 3/11 very enjoyable, 1/11 extremely enjoyable, 2/11 not really enjoyable.
Quant 8	52/64 completed, 10 did not follow treatment protocol for intervention, 2 began medication in intervention group	
Quant 9	59 girls started, 11 dropped out	Adherence% 90-100% attendance=n=6, 50-89% n=26, 10-49% n=16, attendance 0-9% =11 dropouts

Appendix I - *Treatment effectiveness of interventions in Quantitative Studies*

Study ID	Treatment outcomes	Pre M	Post M	Differences	t	P	Cohens D
Quant 1	Behaviour rating inventory	58.06	53.81	-4.25	4.74	p<.001	.34
	Metacognition	54.28	51.19	-3.09	3.30	p<.001	.22
	Global Executive Composite	56.56	52.68	-3.88	4.22	p<.001	.28
	Weight for Height	78.11 *Range 63.90-110.10	86.10 Range 72.2-110.2	Healthy weight per height =90-110%			
Quant 2	Spence children's anxiety scale-individualised	23.5	15.17	-8.33	T(11)=3.3	p<.005	1.05
	Child anxiety Life interference scale	10.14	8.17	-1.97	T(11)=1.4	p>.05 p<.05 at 3mF/U	D=.33 D=.90
	Individual outcomes: 2/6 with SoP and 5/5 with SAD had remitted this as primary diagnosis 6/14 had clinically significant change on SCAS-C						
Quant 3	Deliberate Self Harm Inventory	2.12	1.35	-2.02		p<.05	d=.40
	Difficulties in Emotion Reg Scale	122.71	109.69	-2.91		p<.01	d=.81
	Children's Global functioning scale	51.24	56.59	+3.7		p<.001	d=.85
	24% at post treatment said they had not required to meet with psychiatric service during treatment, 59% felt they only required monthly meetings with same						
Quant 4	Children's Yale Brown Obsessive Compulsive Scale	32	16	-16			
	Children's Obsessive Compulsive Inventory (inadequate power for stats analysis)	43	24	-19			
	Participant began attending school daily						

Quant 5	Quality of Life Questionnaire(to-t3 1 year) only data from EDIC group only EDIC intervention condition predicted psycho-functional remission at the 1 yr. end point	55.57	65.96	+10.44		.052 p<.001
Quant 6	Number of clients meeting personality disorder diagnostic criteria using SCID-II Using SCL-90	1.42 241.0	.48 189.8	-.94 -51.2		p=.000 z score=5.76 P<.01
Quant 7	Revised Child Anxiety and Depression Scale Outcome Rating Scale	99 82 51 92 94 82 82 90 90 58 69	89 80 52 82 89 93 86 88 89 60 5 7	–10 –2 +1 –10 –5 +11 +4 –2 –1 +2 –12	Inadequate power for statistical analysis Overall Mean of t change scores for all participants=-2.1 indicating an overall reduction in symptoms	
Quant 8	DIKJ scores Ergometer condition post intervention WBV condition post intervention Remission rates at 26 weeks were 71.4% ergometer and 61.5% WBV, 17.6 % TAU All medication naïve however tau n=6 began psychotropic, n=2 in intervention groups	 27.00 27.00	 14.3 13.6	 -12.7 -13.4		 P=.037 P=.042 P=.035 between intervention groups and tau
Quant 9	Self-rated health post intervention Somatic symptoms (SiC) Emotional distress (SiC) Depressive Symptoms CES Medication (Analgesics, NSAIDS)	 2.77 3.06 N=23	 2.42 2.87 N=8	 .-35 -.19 -15		P=.032 P=.016 p=.35 p=.025 p=.01

Appendix J

The NICE checklist (2012) used to assess quality in the qualitative study had five key quality indicators. The following symbols will be used to rate each section heading based on the guidance notes provided by NICE (2012) where ++ = strong, + = moderate and – = weak. For overall mark ++ means all or most of the checklist criteria have been fulfilled, where they have not been fulfilled the conclusions are very unlikely to alter, + Some of the checklist criteria have been fulfilled, where they have not been fulfilled, or not adequately described, the conclusions are unlikely to alter, – Few or no checklist criteria have been fulfilled and the conclusions are likely or very likely to alter.

Appendix K - *Characteristics of Participants in Qualitative Studies*

Study ID	*Age*	*Gender*	*SES*	*Ethnic background*	*Mental health/trauma/adversity*
Qual 1	10-18 years old	3 female, 3 male, anonymous survey responses had no gender details	No data	No data, although participants requiring a Swedish interpreter was in the inclusion criteria.	
Qual 2	11-17 years old	23 females and 7 males	No data	7 youths had parents from a minority background	Participants all had at least one traumatic incident such as sexual abuse, domestic violence, violence from peers, life threatening accidents, or sudden death of a parent Is a modified modular intervention
Qual 3	15-22 years of age	17 females and 8 were male	Homeless		No exclusion criteria Voluntarily accessed in house mental health support Long standing histories of adversity with previous fragmented contact with services. Depression, anxiety, PTSD, self-harming, alcohol and substance misuse.
Qual 4	16-25 years old	8 males, 9 females,	Were unable to work, train or attend college	No data	Primary and co-morbid diagnosis of GAD, Depression, panic disorder, PTSD, Dysthymia, OCD, Social Phobia, Agoraphobia, OCD, Specific phobia, panic disorder, body dysmorphia disorder, anxiety disorder not otherwise specified. One participant had no diagnosis from DSMIV, but all had low to very low social functioning.
Qual 5	13-17 years old	18 males and 7 females	In residential care funded by the state	No data	No exclusion criteria Primary and co-morbid diagnoses and requiring clinical attention (DSM IV); ADHD, Disruptive behaviour disorder, attachment disorder, pervasive developmental disorder, intellectual disability, motor skills disorder, mood disorder, anxiety disorder, PTSD, learning disorders, identity problem. Number of diagnosis per participant 1-4.
Qual 6	16-23 years old	13 females and 6 males	Homeless	No data	No exclusion criteria Beliefs on what 'mental health' to inform if in house personalised intervention should be renamed

Qual 7	*18-21 years old*	*4 males and 4 females*	*Only one participant attended school* *No participant was employed* *None were attending college or training*	*No data*	*Primary diagnoses: schizophrenia-like psychosis, schizoaffective disorder, bipolar disorder and psychotic depression* *Excluded: acutely unwell or distressed service users and severe intellectual impairment* *Most participants in the critical period (3-5 years) from first onset* *All receiving neuroleptic medication MDT support*
Qual 8	12-18 years old	9 females and 11 males	No data	No data	Had to speak fluent French, exclusions: OCD, PTSD, conduct disorder. Refusing to attend school for the last 6 months due to school related emotional upset and anxiety
Qual 9	11-17 years old	71% (54 approx.) females, 29% (23 approx.) males	No data	85% were white British	TAU CAMHS (IMPACT STUDY) All met diagnostic criteria for moderate to severe depression.
Qual 10	14-19 years old	All females	No data	20 born in Sweden 4 born outside of Sweden, no other data	Mixture of family backgrounds, divorced parents, living with both parents, living with the parent that has a psychiatric diagnosis
Qual 11	11-21 years old	Five females and two boys	All in foster care/residential care	No data	All placed in alternative care due to having care and protection needs. The group had a mixture of educational needs. One had ADHD and another had ASD
Qual 12	Mean age 22 years (SD=2.3)	9 females and 2 men	Qualified for low cost psychotherapy	No data	11 patients had Axis I diagnoses, and 2 patients had co-morbid Axis II diagnosis Non-manualised treatments 22 months was the average duration of twice weekly sessions in 10 cases, and weekly in 1 case. Clients were chosen based on their pre and post change scores on standardised measures for global functioning, self-rated health, self-reported self-concept and self-representation.

Appendix L – *Data Synthesis of engagement outcomes in Qualitative studies*

Study ID	Descriptive engagement theme	Analytical engagement theme	Views based on
Qual 1	Expressing the need for a therapeutic alliance within a group or individual sessions (not feeling judged or shamed) Expressing subjective experiences about how they wanted to explore their own distress Expressing subjective experiences about what could be improved	Expressed subjective experiences which can inform or equate to a personalised intervention	CAMHS TAU
Qual 2	Expressing the need for a therapeutic alliance within a group or individual sessions (not feeling judged or shamed) Expressing internal and external source of distress (conscious) Expressing internal source of distress (unconscious) Expressing subjective experiences on what could be improved	Evidence of collaborative or participatory therapeutic engagement with mental health professionals/researcher/or group facilitator which can inform or equate to a personalised intervention i.e. co-construction, forming a therapeutic alliance, feedback on what helped or what improvements are needed Expressed subjective experiences which can inform or equate to a personalised intervention (note this is where we can see evidence that an alternative could have been offered i.e. less threatening psychodynamic approach such as art therapy)	Personalised intervention adapted to youth subgroup
Qual 3	Expressing social or cultural beliefs about personal distress Expressing the need for a therapeutic alliance within a group or individual sessions (not feeling judged or shamed) Expressing subjective experiences on what could be improved	Expressed social and cultural beliefs that can inform or equate to a personalised intervention Evidence of collaborative or participatory therapeutic engagement with mental health professionals/researcher/or group facilitator which can inform or equate to a personalised intervention i.e. co-construction, forming a therapeutic alliance, feedback on what helped or what improvements are needed	Personalised Intervention adapted to youth subgroup
Qual 4	Expressing the need for a therapeutic alliance within a group or individual sessions (not feeling judged or shamed) Expressing internal source of distress (unconscious) Expressing internal and external source of distress (conscious) Expressing subjective experiences of what helped	Evidence of collaborative or participatory therapeutic engagement with mental health professionals/researcher/or group facilitator which can inform or equate to a personalised intervention i.e. co-construction, forming a therapeutic alliance, feedback on what helped or what improvements are needed (NOT in TAU)	Personalised Intervention adapted to youth subgroup V TAU

Qual 5	Expressing a relational source of distress Expressing the need for a therapeutic alliance within a group or individual sessions (not feeling judged or shamed) Expressing social and cultural beliefs about distress Expressing subjective experiences of what could be improved	Expressed subjective experiences which can inform or equate to a personalised intervention Expressed social and cultural beliefs that can inform or equate to a personalised intervention	Hard to reach group young people in care (not receiving a personalised mental health intervention)
Qual 6	Expressing the need for a therapeutic alliance within a group or individual sessions (not feeling judged or shamed, being listened to)	Evidence of collaborative or participatory therapeutic engagement with mental health professionals/researcher/or group facilitator which can inform or equate to a personalised intervention i.e. co-construction, forming a therapeutic alliance, feedback on what helped or what improvements are needed	Personalised intervention adapted to youth environment
Qual 7	Expressing internal source of distress (unconscious) Expressing internal source of distress (conscious) Expressing subjective experiences about how they wanted to explore their own distress Expressing internal distress (unconscious) Expressing social and or cultural beliefs about distress Expressing relational distress	Expressed subjective experiences which can inform or equate to a personalised intervention Expressed social and cultural beliefs that can inform or equate to a personalised intervention	Based on tailored TAU clinical pathway CAMHS-Early Onset Service for Psychosis
Qual 8	Expressing internal distress (conscious and unconscious) Expressing the need for a therapeutic alliance within a group or individual sessions (not feeling judged or shamed, being listened to)	Evidence of collaborative or participatory therapeutic engagement with mental health professionals/researcher/or group facilitator which can inform or equate to a personalised intervention i.e. co-construction, forming a therapeutic alliance, feedback on what helped or what improvements are needed	Personalised Inpatient Clinical Pathway (school refusal)
Qual 9	Expressing internal distress (unconscious) Expressing internal distress (conscious) Expressing relational distress Expressing internal and external distress	Expressed subjective experiences which can inform or equate to a personalised intervention	TAU CAMHS (IMPACT STUDY on youth depression)

Qual 10	Expressing social and cultural beliefs about distress Expressing the need for a therapeutic alliance within a group or individual sessions (not feeling judged or shamed, being listened to)	Expressed social and cultural beliefs that can inform or equate to a personalised intervention Evidence of collaborative or participatory therapeutic engagement with mental health professionals/researcher/or group facilitator which can inform or equate to a personalised intervention i.e. co-construction, forming a therapeutic alliance, feedback on what helped or what improvements are needed	Personalised intervention adapted to youth subgroup
Qual 11	No engagement themes	No engagement themes	Offered personalised intervention adapted to youth subgroup
Qual 12	Expressing internal distress (unconscious) Expressing the need for a therapeutic alliance within a group or individual sessions (not feeling judged or shamed, being listened to) Expressing subjective beliefs on how they wanted to deal with their distress Expressing subjective beliefs on what helped	Evidence of collaborative or participatory therapeutic engagement with mental health professionals/researcher/or group facilitator which can inform or equate to a personalised intervention i.e. co-construction, forming a therapeutic alliance, feedback on what helped or what improvements are needed	TAU psychotherapy service

Appendix M – ***Data Synthesis of engagement outcomes in Qualitative studies***

Study ID	Descriptive recovery theme	Analytical recovery theme	Intervention offered
Qual 1	No expressed recovery theme due to dissatisfaction	Expressing subjective experiences of dissatisfaction with treatment/intervention/therapist	Based on CAMHS TAU
Qual 2	Reported improvement in relationships/social outlets Reported increased awareness of issues and coping strategies Reported decrease in symptoms, coping with symptoms, decrease in stress/distress No expressed recovery theme due to dissatisfaction	Expressing subjective experiences of recovery Expressing subjective experiences of dissatisfaction with treatment/intervention/therapist	Offered personalised intervention adapted to youth subgroup
Qual 3	No recovery theme recorded in data	No recovery theme recorded in data	Offered Personalised Intervention adapted to youth subgroup
Qual 4	Reported increased awareness of issues and coping strategies Reported increased sense of self-esteem, self-worth or belonging No expressed recovery theme due to dissatisfaction	Expressing subjective experiences of recovery Expressing subjective experiences of dissatisfaction with treatment/intervention/therapist (TAU only)	Personalised Intervention adapted to youth subgroup v TAU
Qual 5	No recovery themes recorded in data	No recovery themes recorded in data	Hard to reach group (not offered a personalised intervention)
Qual 6	Reported increased awareness of issues and coping strategies Reported increased sense of self-esteem, self-worth or belonging	Expressing subjective experiences of recovery	Offered personalised intervention adapted to youth environment
Qual 7	Reported improvement in relationships/social outlets Reported increased awareness of issues and coping strategies	Expressing subjective experiences of recovery (it should be noted here that in the engagement section there is still distress being disclosed, and those with higher reflective function, and healthier attachments appeared to have adapted to psychosis symptoms and therefore had better treatment outcomes	Based on Tailored clinical pathway for Early Onset Service for Psychosis CAMHS

Qual 8	Reported increased awareness of issues and coping strategies Reported improvement in relationships/social outlets	Expressing subjective experiences of recovery	Personalised Intervention Inpatient for school refusal
Qual 9	No recovery themes recorded in data	No recovery themes recorded in data	TAU CAMHS (IMPACT STUDY)
Qual 10	Subjective expressions of improved satisfaction with life or quality of life Reported increased sense of self-esteem, self-worth or belonging Reported increased awareness of issues and coping strategies	Expressing subjective experiences of recovery	Offered personalised intervention adapted to youth subgroup
Qual 11	Reported increased sense of self-esteem, self-worth or belonging Reported increased awareness of issues and coping strategies Reported improvement in relationships/social outlets	Expressing subjective experiences of recovery	Offered personalised intervention adapted to youth subgroup
Qual 12	Reported increased awareness of issues and coping strategies Reported improvement in relationships/social outlets	Expressing subjective experiences of recovery	TAU psychotherapy service

Appendix N – *Coding of Descriptive Themes on to Analytical Themes*

Study ID	Supportive Text	Descriptive code	Analytical code for engagement outcomes	Intervention offered
Qual 1	*"What is it that makes it [the session] good?...[Y]out can talk...about everything"* "It's important to feel that you can talk to the person you meet" "I think it is important to respect one another and let all say what they want to" "*You can build a relationship before starting to talk"* *"To get to know each other at the same time"* "*You should not feel pressured to say the correct things...and no pressure to say more than you want to*" "S*ome things you don't want to talk about...because it is a bit private, but parents want to*'	Expressing the need for a therapeutic alliance within a group or individual sessions (not feeling judged or shamed)	Expressed subjective experiences which can inform or equate to a personalised intervention	Based on CAMHS TAU
	"Do not begin the conversation with [the problem], in front of my parents" "To write and draw how it feels" "If I could do something while talking" "Occupation for my hands, helps me to focus" "A 5 or 10 minute break, maybe do something fun during the break" *''More variation, for example a game of some kind"* *"I think it's better to be alone [with the clinician] because I talk better when I'm alone"*	Expressing subjective experiences about how they wanted to explore their own distress	Expressed subjective experiences which can inform or equate to a personalised intervention	
	"It happened that the clinician had forgotten what I had said … maybe he should take notes/prepare himself better" "*I believe it makes you feel more as a case...could be hurtful...if you are not so well treated*" *"If, for example, mother is present it might be that he [the clinician] agree with mother...but it shouldn't be like that"* "If he hadn't focused on just one thing [the problem], but also had showed concern for how I was feeling in general" *"Show understanding for why one feels as one does, not making one feel as being less intelligent"* *"To get the help you need at the moment...what worries you the most"* *"More of what I wanted to discuss"* "It is important to receive the help you need" "that were more concrete" ref practical tools to help "Better structure concerning how the treatment is supposed to help me" *"Given me clearer guidelines and help for my problems"*	Expressing subjective experiences about what could be improved	Expressed subjective experiences which can inform or equate to a personalised intervention Expressed subjective experiences which can inform or equate to a personalised intervention	

Qual 2	"When you are going to sit down and talk to another person about personal stuff and the other person doesn't know you and you don't know the person. . . in the beginning you are wondering what things will be like and what they will expect from you." "I dreaded telling a strange lady what I had experienced." "When I saw her, (the therapist) she seemed really nice and she was very calm and very laid back and she didn't make me feel stressed. I felt I could relax." "The psychologist has studied how the patient may feel, and how he can make the patient feel better, and they know how they are supposed to talk and what to say and not say.		Evidence of collaborative or participatory therapeutic engagement with mental health professionals/researcher/or group facilitator which can inform or equate to a personalised intervention i.e. co-construction, forming a therapeutic alliance, feedback on what helped or what improvements are needed
	"It was nice talking to her because I knew I got help at the same time. And then I wanted to talk to her a lot more than Mommy because I knew Mommy could not do anything about it. The only thing I knew when I talked to Mommy was that I made her more and more upset. "I have Mommy all the time, but the therapist I can go to once a week and talk a little more and we are just doing that, not preparing dinner at the same time and stuff." "But other adults. . . It's not certain that they will understand you, right? And maybe they think you are crazy. They can easily misunderstand."	Expressing the need for a therapeutic alliance within a group or individual sessions (not feeling judged or shamed)	
	"My friends said 'Oh, everything will be all right, I understand, I know. . .' and that bothered me very, very much. I wanted to punch them! Because they don't know and they don't understand! So there's no point in saying that. However, when I went to (the therapist's name) she never said 'I understand', she said 'I think it would have been the same for me if I had been in your situation'. She never said 'Oh, I know how you are feeling' "I wasn't able to tell my mom about what had happened and how I felt, so it was nice that the therapist could talk to her about that." "I thought it was okay that mummy spoke to the therapist because then she got information about what she could do regarding what had happened to me."		Evidence of collaborative or participatory therapeutic engagement with mental health professionals/researcher/or group facilitator which can inform or equate to a personalised intervention i.e. co-construction, forming a therapeutic alliance, feedback on what helped or what improvements are needed
	"I started crying even when we only talked about doing it because I felt so scared" ref talking through the trauma narrative "I was shivering and feeling tense in my whole body." ref talking through the trauma narrative "If that person had, for example, experienced the same thing as me, then I would have recommended that they found someone to talk to right away, because it helps so much. Because it is almost dangerous in a way to be by yourself and think. . . I used to cut myself and if I hadn't found someone to talk to, I could have. . . cut myself again. Because I had so much anxiety and stuff. It's really just about believing in oneself and not being afraid of receiving help. That is the most important thing."	Expressing internal and external source of distress (conscious)	Evidence of collaborative or participatory therapeutic engagement with mental health professionals/researcher/or group facilitator which can inform or equate to a personalised intervention i.e. co-construction, forming a therapeutic alliance, feedback on what helped or what improvements are needed
	"It was the fact that I had to drag up the things that had happened and that I didn't have time to think about it and that I felt pressured to talk about it when I didn't feel ready. I wished we could have done it another time when I was more ready and that I could have decided when, but I felt that I couldn't . . . that I had to say it right away. And when I said 'no' many times and that I couldn't do it, she didn't listen to me so at the end I had to say it to her. That was difficult for me." "It felt rather bad . . . knowing that they may be talking about you, but not knowing what they are talking about."	Expressing internal source of distress (unconscious)	Expressed subjective experiences which can inform or equate to a personalised intervention (note this is where we can see evidence that an alternative could have been offered i.e. less threatening psychodynamic approach such as art therapy)
		Expressing subjective experiences on what could be improved	Expressed subjective experiences which can inform or equate to a personalised intervention

Qual 3	Extract 1: female resident '*Rhianna' – tape 23 1 Interviewer: you know like Fran's title is mental health 2 Coordinator? 3 Respondent: I don't see her as that 4 Interviewer: No (.) why not? 5 Respondent: No 6 Interviewer: What do you see her as? 7 Respondent: I'm not mental		Expressed social and cultural beliefs that can inform or equate to a personalised intervention
	Extract 2: female resident – '*Veronica' - tape 34 1 Interviewer: would you 'ave described yourself at that 2 point as havin' mental health problems (.) or 3 did you see it as somethin' different t' that? 4 Respondent: I 'ad problems I didn't 'ave mental health 5 problems'.	Expressing social or cultural beliefs about personal distress	
	Extract 5 – Female resident – *Eva – tape 8 1 Interviewer: ...but could you tch. could you describe t' me 2 what you think mental health is? 3 (0.6) 4 Interviewer: Jus' like the wo[rds mental health (.) 5 Respondent: [heh heh heh heh 6 Interviewer: How would you descri[be- 7 Respondent: [[Psycho:s (.) that's what 8 I think	Expressing social or cultural beliefs about personal distress	
	Extract 6 – female resident – *Heather – tape 21 1 Interviewer: Can I ask you what (0.2) li- (.) you know like 2 (.) mental health wor[ker 3 Respondent: [Yeah 4 Interviewer: what did that mean to you (.)like that those 5 words? 6 Respondent: Someone who wuz a bit of a fruit loop that's 7 what it meant (.) that's what I thought it 8 meant 9 Interviewer: Yeah 10 Respondent: But that's when e- (.) the first session I 11 went t' see 'er I wuz thinkin' ''oh God she's 12 goin' to think I'm a fruit loop now'' 13 (0.4) 14 Respondent: but (.) she didn't at all	Expressing the need for a therapeutic alliance within a group or individual sessions (not feeling judged or shamed)	Evidence of collaborative or participatory therapeutic engagement with mental health professionals/researcher/or group facilitator which can inform or equate to a personalised intervention i.e. co-construction, forming a therapeutic alliance, feedback on what helped or what improvements are needed
	Extract 7 – female resident – *Karen – tape 7 1 Respondent: well I got told the other week (0.2) off (0.2) 2 a certain resident (.) that if yer go and see 3 LS (.) you're loopy in the head 4 Interviewer: Really? 5 Respondent: an' I thought (.) to meself (0.2) no (0.4) 6 you're not loopy in the head, you jus' (.) 7 need somebody t' talk to (.) but (.) I bet ya 8 ten t' one bet ya ten t' one that there's 9 people in here who does really want t' talk t' 10 LS but (.) act big and hard or hard 11 an' go an' say I don't wanna go an' see L 12 S but really deep down I- I mean everybody 13 needs somebody t' talk to	Expressing the need for a therapeutic alliance within a group or individual sessions (not feeling judged or shamed)	
	Extract 10 – female resident – *Tammie – tape 13 1 Interviewer: What d' you think people's views are of mental 2 health (0.2) who live in the foyer? 3 Respondent: That's what I wuz scared of (.) because mental 4 health sounds a bit (.) mad (0.2) cuz I 5 don't like when I talk t' about people about 6 T I say my counsellor (.) I don't say my 7 mental health co-ordinator cu- (0.2) I see her 8 as my counsellor I see her as someone (0.2) 9 who talks to me	Expressing the need for a therapeutic alliance within a group or individual sessions (not feeling judged or shamed)	Evidence of collaborative or participatory therapeutic engagement with mental health professionals/researcher/or group facilitator which can inform or equate to a personalised intervention i.e. co-construction, forming a therapeutic alliance, feedback on what helped or what improvements are needed
	Extract 9 – female resident – *Tammie – tape 13 1 Respondent: Yeah (0.2) I think it's jus' scary sayin' 2 mental health cuz (0.2) it doesn't sound very 3 nice really (.)		

Qual 3	4 Interviewer: Yeah 5 Respondent: Mental (.) that's all(.) that's a bit what (.) 6 ya know (.) it's not (.) it should be changed 7 I think but then it's not up t' me heh (.) I 8 think more people w- w- wan- w- would be (.) 9 more willing to use the service if it wasn't 10 called mental health 11 Interviewer: Mmm. 12 Respondent: if it was called counsellin' service	Expressing subjective experiences on what could be improved	Expressed social and cultural beliefs that can inform or equate to a personalised intervention
Qual 4	I believe she understood me on a personal level as well obviously we didn't go it wasn't any it wasn't unprofessional at all but we spoke about sort of things in general rather than just straight to the therapy it wasn't as clinical as I can imagine some of these services can be with certain people (Liam*)	Expressing the need for a therapeutic alliance within a group or individual sessions (not feeling judged or shamed)	Evidence of collaborative or participatory therapeutic engagement with mental health professionals/researcher/or group facilitator which can inform or equate to a personalised intervention i.e. co-construction, forming a therapeutic alliance, feedback on what helped or what improvements are needed
	It wasn't like I was being talked at, all my problems were being dissected in front of me without my sort of input, it was a conversation … it wasn't sort of like someone was talking about the problems they thought I had, it was we were finding out what problems I had and then sorting them out together (Matthew)		
	He was really dedicated to helping me I think he liked me you know and I really liked him so I really found a friend in him um which was really nice really, which has made it even more difficult that you know we had to finish (Harry)		
	We continued meeting weekly cos I think in the end … we both agreed that it was a better idea cos obviously things were so manic and obviously in a hostel things would go from really really good to boff really really bad, so it was, yes, we both agreed that it was a really good idea to do it every week because then we could keep it up…('[I realised] talking to people about things isn't a bad thing to do, it actually really helps' (Katie)	Expressing the need for a therapeutic alliance within a group or individual sessions (not feeling judged or shamed) Expressing internal source of distress (unconscious)	
	It was very difficult because it was dabbling into things that I think I'd just really, didn't really even realise were there because … they were so painful to look at that I didn't really want to so yes it was really tough at the beginning (Katie)	Expressing internal and external source of distress (conscious)	
	I was nervous I and I was shaking but I thought I need to start somewhere, I could always say no but that's not going to do any good that's not going to help me (Matthew)	Expressing subjective experiences of what helped	Evidence of collaborative or participatory therapeutic engagement with mental health professionals/researcher/or group facilitator which can inform or equate to a personalised intervention i.e. co-construction, forming a therapeutic alliance, feedback on what helped or what improvements are needed
	I just feel comfortable in college and it's good that they can do it here cos if I couldn't do it here I wouldn't do it…I wouldn't have done it otherwise (Abigail)''it helped me recognize the things that I wanted to change'		
Qual 5	What I do want is for me and my mother to get along. Being able to talk with her. She is always saying terrible things and that everything is my fault…I don't like that. Mothers should be there for you. They have to understand that you have problems. However, some don't understand that.^ (girl, fourteen years old)		Expressed subjective experiences which can inform or equate to a personalised intervention
	It's almost like you can only talk to them [friends] via Facebook or text …Normally this [organization] should be a replacement for your home. Therefore, you want to have the same feeling you have at home. However, I just don't understand. At my home, my mother never tells me: 'you are not in the right step [of the support plan], so you can only go out for one hour.'^ (girl, fourteen years old)	Expressing a relational source of distress	
	I want to do more with the group…Then we wouldn't fight that much. Because now, we mostly do things on our own … then one will receive more attention than the other … and this will result in another fight. And I mean, not just activities,	Expressing the need for a therapeutic alliance within a group or individual sessions (not feeling judged or shamed)	

Qual 5	but doing more things together as a group…However, we really don't do anything. And if we always stay inside or if we have little time to go somewhere together, that is just not fun for us. Yeah, not difficult to imagine why we always behave like that.ˆ (girl, fourteen years old)	Expressing the need for a therapeutic alliance within a group or individual sessions (not feeling judged or shamed)	
	When I am having a bad day. When I haven't slept good…and when I do one thing wrong. Suddenly [caregivers] come and start talking to you. Then they really do everything. But when you are calm and quiet, and don't do much wrong, then they don't even look at you.ˆ (girl, seventeen years old)	Expressing a relational source of distress	
	[I feel good when] there is a good atmosphere [in the group]. I don't like it when the group climate is terrible, when everyone is fighting with each other. That makes me very frustrated and then I'm not able to enjoy it here.ˆ (girl, seventeen years old)	Expressing the need for a therapeutic alliance within a group or individual sessions (not feeling judged or shamed, being listened to)	
	When I get angry, they [caregivers] always start shouting at me. I told them a hundred times that when I'm angry, just talk to me in a calm manner. Try to calm me down. Or just let me be. Let me go outside and smoke a cigarette … If you don't do that, things will get worse. I say the same thing each time to my mom, but she can't get her head around it.ˆ (boy, fourteen years old)	Expressing social and cultural beliefs about distress	
	I have a lot of friends here. However, it is not that I'm so excited to go back to the group. I think everyone would rather be home. But, that you also have to hand over your belongings…[caregivers] put it in lockers…but I feel that you should be able to keep your own personal items. You are here because you need support, so [caregivers] should in fact, I believe, don't take anything away.ˆ (boy, seventeen years old)		Expressed social and cultural beliefs that can inform or equate to a personalised intervention
	We can always say our opinion, but [caregivers] never acknowledge that we are right. That is sometimes difficult for me.ˆ (boy, fourteen years old)	Expressing social and cultural beliefs about distress	
	What I find important in my life, is that I will have a good future … It is important to do good at school. Later in life you will regret not doing good at school if you're not able to make your own living.ˆ (boy, fourteen years old)		
	There are a lot of men setting bad examples (e.g., doing drugs) and you can learn from the mistakes they make … You can join them or you can learn from them. Some youth get caught in this. I can understand why, because some youth just can't handle freedom. Then they do the wrong things.ˆ (boy, fourteen years old)		
	When we become eighteen, we will also have to go to work. We have to go to school. We will have much more responsibilities. I believe that when you are young, you should be able to benefit from that. That you don't have to learn everything, don't need to know everything … not everyone is ready for that. (boy, fourteen years old)		Expressed subjective experiences which can inform or equate to a personalised intervention
	I first went to a Special Education school. In the beginning, they told me that this would be the best option for me, but they let me go to a regular school and I was able to cope. The courses, however, were not really my thing because you had to study constantly. That is why I changed to a vocational school. However, I think it is good that they give you the opportunity to at least try.ˆ (boy, fourteen years old)		
	I first played in a [soccer] club for normalˆ children. But I wasn't having a good time over there. I wasn't allowed to play any games. I was just sitting on the bench. The [organization] thought that wasn't ok, so they told me I could go to another club. Now I play in a club for persons with disabilities. That is going much better…those people are more considerate and they explain more than the other clubs.ˆ (boy, fourteen years old)	Expressing subjective experiences of what could be improved	

Qual 5	Just treat us normally. Ok, we are here and we are young people with problems, with behavioral problems … you shouldn't look at us strangely because we are a little bit different than a normal person without those problems, with a normal life.^ (girl, seventeen years old) Caregivers] always say to go out and do a sport, but if you can only go outside for an hour. That is going for a jog and come back ….^ (boy, fifteen years old) [We] have to take moments to relax, so that we would calm down. Everyone has to be in his room and you have to keep yourself busy. That is really boring.^ (boy, fourteen years old)		
Qual 6	I don't mind. She's somebody who doesn't work here, so if I've got a moan about here, I can actually moan without anyone going, 'You can't do that.' It's actually all right having someone who's not here all the time to sit and chat to. (Beth, 19 years old) Yeah, so, I just saw her like once a fortnight. But when I was going through my worst stages, she really helped me out like over the phone, really helped me out . . . In the evenings, she'd just ring me up when I went through a rough patch . . . Well, it's a nice feeling, isn't it, like have someone there for me. (Charlie, 18 years old)	Expressing the need for a therapeutic alliance within a group or individual sessions (not feeling judged or shamed, being listened to)	Evidence of collaborative or participatory therapeutic engagement with mental health professionals/researcher/or group facilitator which can inform or equate to a personalised intervention i.e. co-construction, forming a therapeutic alliance, feedback on what helped or what improvements are needed
Qual 7	Interviewer: What might she [mother] have done for you to moan at her? David: I think, I don't know, tell me to do something or, I'm not sure. (Mm). I don't sit in my room as much either. I used to sit in my room all the time, just on my own. Interviewer: When was that? David: Before I got ill. Interviewer: Aha.Why do you think that was, that you were sitting in your room on your own? David: I don't know. Interviewer: What is psychosis to you? John: Psychosis to me is just being absolutely drooned off the planet, like floating in space sort of thing, with no idea what is going on or where it's going or stuff like that, just living for the moment. But when you have psychosis you unfortunately can't live for the moment. Interviewer: Why can't you? John: Because your feelings, they're just dragging you down. Interviewer: What are your feelings when you have a psychosis? John: Cos that's what causes it obviously. And I think, fair enough, a conversation is a good thing and making stuff is a good thing. But a conversation is really just a way of showing your feelings towards a certain thing, like the colour green, it's a good colour, it excites me, eh. And the feeling I get from my brain gets, but that doesn't necessarily mean that I can transcribe it, eh, if you know what I mean. So words aren't really the most important thing, eh. So therefore psychosis is just a feeling, eh, and you say some stupid crap whilst you're on it, eh. Sarah: It's as much part of me, cos it's my brain, as it is my liking of computing. It kind of just made it seem more neutral. (ref psychosis) Interviewer: Do you cry sometimes? Leon: Sometimes I feel like crying but I don't cry. Interviewer: How come? Why do you not cry even though you feel like it? Leon: At home, I'm like the bigger brother and should set an example, like if they [younger brothers] see me crying its ok for them to be crying, you know what I mean (uhuh). They're quite old now, well not old but, I'm old. You don't	Expressing internal source of distress (unconscious) Expressing internal source of distress (conscious) (and unconscious) Expressing subjective experiences about how they wanted to explore their own distress Expressing internal distress (unconscious)	Expressed subjective experiences which can inform or equate to a personalised intervention Expressed social and cultural beliefs that can inform or equate to a personalised intervention

Qual 7	see my dad crying. If I see my dad crying, well then, it must be serious. Well, I think about crying, I like I think like, I go and take my medication 'Oh, I'm taking my medication', then think like of taking an overdose and start crying and everything you know. Interviewer: Has that happened? Leon: No, I'm just thinking of an example.	Expressing social and or cultural beliefs about distress Expressing internal distress (unconscious)	Expressed subjective experiences which can inform or equate to a personalised intervention
	Sarah: Ideally, I'd notice it just as my mood starts to drop. (. . .) Em, if it does get that bit worse, generally I opt for a sort of curling up and just kind of embracing the fact that at the moment I don't feel good (uhuh) but I'll just keep myself safe and fairly contented as much as possible (ok) and like I'll go before I do it I'll make a drink and get some food and put it on the table, just like crisps and chocolate, junk food but kind of comforting food (yeah) and I'll just have it there so that as soon as I get a vague passing 'Oh, I could do with some food' it's there and I can eat it. Cos if I have to go to the kitchen for it, I won't do it (yeah) so I just try and ride out the storm either until my mum gets home or it just passes by itself.	Expressing internal distress (conscious)	
	Interviewer: When you said you would get angry when they [people in general] didn't understand, how do you feel about it now when you keep it [psychotic experiences and interpretations] to yourself? Anna: Em, I feel like it's a bit annoying at times. It can be really annoying in fact still because I'm like . . . *{3 sec}* because I'm not exactly being who I am because of the way people are. That annoys me. But then other times I'm quite happy with it because I think, well fine then if you think that, like more fools you lot, but . . . *{3 sec}* I mean it's a kind of angry feeling both ways but the other way I try and think that I know things that they obviously don't know I know and it makes me feel better. (Mm). Yeah. But I think they've got small minds quite a lot of the people in my own head because they're thinking she's stupid and I'm thinking I'm not really that stupid as you think.	Expressing internal distress (unconscious)	
	Interviewer: Yeah. Do you think that's affected how you relate to people, how you make new friends? Anna: Na, no, because I feel I'm too, what's the word, I can come across to people as a right walkover.	Expressing internal distress (unconscious)	
	Interviewer: What's it like these days then? What's your everyday life like? John: I sit in my house and get absolutely drunk out of my face, as in out of control drunk with friends, eh, and sit and get stoned and take eccies and stuff like that, eh. I was taking a drug called 'Salvia' for a while, eh which is really intense trip which comes off an acid plan (uhuh) and helps you have self- realisation, eh (alright ok), and em, it's a hell of a trip as well eh. I had the best experience of my entire life on it, eh, I tell you the whole story, em. (..)	Expressing relational distress	
	Julia: It's much the same, but I've always had quite a weird self-confidence cos like, I'm quite self-confident in that I make friends really easily, I chat to complete strangers and I can be quite loud and I'm always running off to ther countries and stuff to see concerts and stuff so I guess, I can't use telephones because they frighten me (laughs). So, its things like that I'm really not confident with at all, so it's quite warped.		
	David: I'm not looking forward to it [growing up] that much. I'd rather stay at home all the time. That will probably change. Interviewer: Would you say that having become ill has affected your growing up in any way do you think? David: Yeah, I think so. I probably would want to move. Well, I did want to move out.		

Qual 7	Interviewer: Did you? When was that? David: Just last year, before I got ill. Interviewer: Mm, so that's changed? David: I wasn't bothering to move out. Interviewer: What do you think happened then between you wanting to move out and becoming ill? David: I don't know, I just think it became more scary to move out Interviewer: Can you say a bit more what was scary about it? David: Just cos you would be on your own all the time, not all the time but..*{2 sec}* I don't know what changed actually. Interviewer: Could you maybe say a bit more about the days you really feel like you want to move out? What are they like? Julia: Oh, I just feel really suffocated like I don't know, it's hard to explain (laughs). I don't know, I just feel a bit alienated in my own house, well not my house, cos like . . . *{3 sec}* em, just getting this feeling that I don't belong here anymore and it's time that I did something else and move on, that's pretty much all I can say. Interviewer: Do you have any idea of what is creating that feeling of being suffocated? Julia: I don't know, I mean. Just sort of like. I would say everyone always wanting to know what I'm doing and where I am and why, but that doesn't really bother me so I'm not really sure if that's it, em		
Qual 8	Talking about not being able to attend school P4: I was timid and withdrawn (…) I didn't like myself, I just stayed in my room being depressed. P8: Even when I felt bad, everyone thought I was well. P2 Just as I was about to leave, I had trouble breathing, I had a knot in my stomach; it just came over me, it made me anxious, just thinking about it, I was stuck. In fact, it was me; I was stuck, I couldn't even get out the door, I didn't want to. P19 (on the subject of her father and the suggestion for full-time hospitalization): To start with, he doesn't really like shrinks. I don't know exactly why. He wants me to have a regular education, for me to go to middle school. So he finally agreed, but it was a little harder. P3: I was feeling good here, I was feeling like I belong. P5: After it's not necessarily the place itself, being in a hospital that helps. It can be the people, if you run into good people. P1: With one nurse, I had a good relationship, we liked each other a lot; she gave me advice. When she left for somewhere else, that hurt me a lot. I had succeeded in having a very good relationship with her. P10 (what do you think of your relationship with your psychiatrist?): It was a professional relationship. We talk, we assessed the month, she gave me tools and helped me understand. I think it was good. P9: Frankly, it's thanks to my mother that I'm here now; she's really the one who supported me and got me here. P11: Conversation with the people around me was very complicated; I didn't dare say anything to people.» P1: I found my two best friends, I met them here. P4 (Do you sometimes talk about your problems?) Yes, sometimes. To reassure myself. To talk, yes. I think that also is sort of the aim of this place. There are nurses, but there are also teens. I think it also helps to talk to people your own age. P6: I had a taxi driver who I got along with really well. He was more a friend for me, than anything	Expressing internal distress (conscious and unconscious) Expressing the need for a therapeutic alliance within a group or individual sessions (not feeling judged or shamed, being listened to) Expressing the need for a therapeutic alliance within a group or individual sessions (not feeling judged or shamed, being listened to)	Evidence of collaborative or participatory therapeutic engagement with mental health professionals/researcher/or group facilitator which can inform or equate to a personalised intervention i.e. co-construction, forming a therapeutic alliance, feedback on what helped or what improvements are needed

Qual 8	else, more than a taxi driver, finally (…) I talked to him about a lot of things, he introduced me to a lot of movies… P8 The teachers here, they give us confidence, they explain things clearly. They follow us, they really don't want to leave us in something we don't know. And that helps a lot. We feel that it pleases them, that they want us to succeed, so that does a lot for us.			
Qual 9	Bewilderment about why they were depressed: 'I don't know, it just happened, it just grew' (Poppy, 17) ref depression Jenny (15), who said: 'I just feel like I have nothing to be upset about, which makes me even more upset'. While some people seemed to want to understand why Lola (16) said: I do not really like to think too far into things I know are gonna make me upset… so I have never really like sat down and gone through all the thoughts and that's why they have got so jumbled…	Expressing internal distress (unconscious)	Expressed subjective experiences which can inform or equate to a personalised intervention	TAU CAMHS (IMPACT STUDY)
	I got my [exam] results which were really good and so you know I don't have much of a reason […] I should have been really happy, I got into the 6th form that I'd wanted to go to, and everything and I started and it was like, it was ok at first….and then like I talked to people, I met new people, but then suddenly I started losing interest, it was quite slow the whole like cutting myself off from everything but it like gradually snowballed, like suddenly I could not stand the company… 'I can't think of a single event or anything that sparked it off' (Poppy,17)	Expressing internal distress (unconscious)		
	Ellie (16) The combination of things. I think some pressure and stress from school and just from my sleeping problem have been really bad for the past few weeks, it is just, then all of its combined, and it is just made it worse 'It's too much pressure on me and it just builds up inside…' (Nicole, 17).	Expressing internal distress (conscious)		
	Nicole (17) spoke about the difficulty of having cared for her mum who had been ill, about how her mum would say to her 'Oh like you're stupid or ugly'. She described how this affected her: I felt sad as well for letting her down […] like I'm not good enough, I do not try hard enough…. So I can not love her enough…	Expressing relational distress		
	Judi (17) described how verbal from her aunty 'made me feel like really down about myself and just doubting myself every time' Aleksander (16), explained: My real dad do not get in touch with me at all. Like, it was my birthday and he did not even sent a text or anything to say happy birthday. So I suppose that like,I think that sucks and it makes me feel like crap, if like my Dad doesn't care, who will? So I suppose that could be why I'm where I am. .	Expressing internal and external distress		
	For example, Hayley (17) described how having witnessed	Expressing relational distress		

Qual 9	her father beating up her mother and siblings was connected to her own difficulties with anger an aggression: I thought it was the right thing to do so I had tried to fight with my siblings, but as I grew up I knew it wasn't the right thing to do, and I just… my anger issues are probably brought from him and what I see him doing…	Expressing relational distress
	Megan (14) described how she was 'so angry' about her father's violent death when she was a child.	Expressing relational distress
	Eleni (13) also described the changes in her life, as she had lived in a different country, and had moved house and school several times. She described how the upheaval of having moved around had left her feeling: Not really safe 'cause like I feel like as soon as I friends or I get settled in again that I will just like have to be, I'd have to go somewhere else, or like move somewhere else or somewhere different…Lola (16) described the violence she witnessed between her parents, her father's inconsistency in her life, and a number of other family difficulties. She went on to describe how this had left her feeling: There's loads and loads of things that are flying around in my head and I can not stop them and look at them and find out what exactly it is and what caused them, I just know that like when it happens it makes you feel sick and dizzy and just horrible…	Expressing relational distress Expressing relational distress
	Beth (16)felt that her difficulties with self-esteem started with the bullying she experienced as a child, and when asked why she thought things had become this way, she said 'it's because I always feel like I don't do nothing right in anyone's eyes'.	Expressing internal distress (conscious and unconscious)
	Brian (12), there was a sense of having given up on trying to make connections with peers because of the hurt they had caused him in the past: What's the point of like even trying to make any friends at all, if they are only ever going to hurt me, or turn their back on me?	Expressing internal distress (conscious and unconscious)
	Gemma (15), who described how 'it all started from being bullied'. She described how the bullying had started when her dad passed away, which had made her an 'easy target'.	Expressing internal distress (conscious and unconscious)
	Erhan (15) I think it's mainly to do with school, I think. Because when I'm at school it's like it's dark like there's nothing to do, nothing to make me feel good or I can not I do not know I just feel moody at school… I feel like school sort of brings me down…	Expressing relational distress, and internal distress (conscious and unconscious)
	Hakan (15) I made too big a deal and it's like a snowball and when you just roll it down the hill it'll start getting bigger and bigger and that's what happened to me. I mean everything was getting bigger and I know I should not make it this big but it was just getting bigger and I let that snowball roll down instead of putting it somewhere safe if you know, but that's life innit. And it just kept rolling down and it kept getting bigger…	
	Sabrina(17) I do not know if it's genetic or if it's actually physical or if it's environmental but I am prone to um feel like this and I guess it's a combination of factors, um I do not know, maybe I feel like this whatever's going on in my life…	
	Kyle (11), who spoke about how things had been this way 'since I was born […] I have done so many things wrong', Lana (14) spoke about how 'I think Ihave just let, let kind of stuff get on top of me and I have just let the bullying just get to me…',	
	Shauna (14) said 'I don't think I handle things very well so I think that when things happen to me, I over analyse things so I worry way too much and then I think it's what I sorta brought it upon myself'.	

Qual 9	Claire (17) also wondered whether it was because of who she was: 'maybe I'm just like a really pessimistic person'. Similarly, when asked what would need to happen for things to get better, Danae (16) commented 'just me, like it's not really about anything significant that has happened or it's just kind of me and the way I feel. Like it's not triggered by anything, I am just the way I am, kind of thing'.	
Qual 10	''Because, you know, everywhere in our society it's all about grades or credits, and stuff, and it's so nice to go to dance. Because there you can let go of everything else and, like, just be. Without always trying to achieve something. That's amazing.''*S	Expressing social and cultural beliefs about distress
	''That, I mean, there's been such high demands at school sometimes . . . And then, when you dance like this in your free time, there are no demands at all* it's really nice.'' *K1	
	Well, it's great that you've done this, but you could be even better and now you have to do this even better.'' Yeah, basically everything is about achieving. [. . .] That's why it's so nice to enter a dance studio where achievement just isn't that important.''*T1	
	''And that it's much better, I mean, it's a way worse feeling when you know that you're always being judged. You know that someone is standing and watching you and is going to, like, rate you.''*S1	
	I mean, you're supposed to be a good friend; you're supposed to be good at school, be a girlfriend, and be special. But when you went to dance, you didn't have to be someone special* that's just how it was. You didn't have to achieve anything in particular and then, well, that's why I felt safe there*I could just be myself. There, I could relax and be this person*I didn't have to present myself as happy and strong. I could relax and just dance and stuff.*J	Expressing the need for a therapeutic alliance within a group or individual sessions (not feeling judged or shamed, being listened to) Expressing the need for a therapeutic alliance within a group or individual sessions (not feeling judged or shamed, being listened to)
	And there was a lot like jealousy and snide remarks, and people watching each other to see what the other person was doing. It wasn't really like people were supporting each other, it was more a competitive thing among girls . . . But in the dance project, it was really the opposite of that, like, I have never met such a big group of girls in which everyone feels, like ''No, we support each other. This is not about competition. We can just relax and be ourselves here.'' So that was a bit of a shock*it really was.*J	
	If you make a wrong move, you just look at each other and laugh your head off. So I thought it was really fun to be in a group, and not have to dance alone.*A1	

Qual 11	No engagement themes	No engagement themes	No engagement themes	Offered personalised intervention adapted to youth subgroup
Qual 12	Much of it was very good, I really liked that the therapist dared to be rather intrusive and put me on the spot and push things that used to be pretty hard for me. It helped me go deeper into things. I think it went very well. Even if you go to therapy, there's no guarantee that you'll get along. I think she understood me in a good way. She helped me to think in certain ways. Coming here was like a safe haven, to know the time was mine, and I could talk, I don't know, like 45 minutes? I wish she had been the type to give me more advice and not just listened, since I feel I missed out on certain things as a kid and as teenager. I didn't get it at first, I thought you just came here and talked about your problems and things would solve themselves without having to actively do anything. All through this, my spouse, yeah we're married now, has been a great help, supported me, has been there when it matters.	Expressing internal distress (unconscious) Expressing the need for a therapeutic alliance within a group or individual sessions (not feeling judged or shamed, being listened to) Expressing subjective beliefs on how they want to deal with their distress Expressing subjective beliefs on what helped	Evidence of collaborative or participatory therapeutic engagement with mental health professionals/researcher/or group facilitator which can inform or equate to a personalised intervention i.e. co-construction, forming a therapeutic alliance, feedback on what helped or what improvements are needed	TAU psychotherapy service

Study ID	Supportive Text	Descriptive code	Analytical code for treatment outcomes	Views based on
Qual 1	"It probably did nothing for me, I mostly went because mother wanted me to"	No recovery theme	Expressing subjective experiences of dissatisfaction with treatment/intervention	Based on CAMHS TAU
Qual 2	"I'm in a much better mood and stuff. . . I even heard it from a classmate . . . and normally we boys don't talk about each other's mood and that kind of stuff, but I was actually told that I have become a much happier person. . ." "I used to think negatively . . . that life sucks. . . That there wasn't any hope for me and that I would turn out to be a bad person. . . But after starting therapy I started to think that things change and it's only me that controls the possibilities and that I should start doing my best and if I get. . . when I get the chance, I shouldn't lose it." "There has been a big change because before I thought a lot about the incident and then I had stomach aches all the time. . . but when I came to the clinic, they helped me talk about it so now. . . now I feel much better. "The whole purpose of the treatment was that the assault was to become like an ordinary memory and not something to be afraid of. And that turned out very well. The first time she read the story we had written out	Reported improvement in relationships/social outlets Reported increased awareness of issues and coping strategies Reported decrease in symptoms, coping with symptoms, decrease in stress/distress Reported increased awareness of issues and coping strategies	Expressing subjective experiences of recovery Expressing subjective experiences of recovery Expressing subjective experiences of dissatisfaction with treatment/intervention/therapist	Offered personalised intervention adapted to youth subgroup

Qual 2	loud, I started crying, but after a while she could read it many times and I could read it myself without feeling overwhelmed. "She (the therapist) said that if it was difficult, we could stop and do some breathing exercises and that helped very much "It was okay to talk about it in the beginning, but I got over it by myself quite fast and then it was quite frustrating that I had to talk about it every session when I really had forgotten about it. . .. I said it many times, but she always thought that I was just trying to keep it inside and that I wasn't over it." "Since I didn't get along with the therapist, I didn't get much out of it really."	No recovery themes No recovery theme		
Qual 3				Offered Personalised Intervention adapted to youth subgroup
Qual 4	I've improved so much, and it's given me a lot of things that I can continue to improve on … there's always going to be things that make me nervous so there's always going to be things that I'm going to want to push myself to do if that makes sense so I wouldn't say I'm over it but I've improved so much and it's given me the building blocks to continue to improve (Matthew) I've always had a little bit of fight left inside me no matter what I'm going through, always wanted to be a better person and you know live a normal life, so no matter how depressed or sort of ill so to speak in those terms I can become there's still something inside me that says you will, you need to beat this, you need to carry on (Liam) I was worried that things would go sour after [the intervention ended] and it turns out that they didn't stay quite as good after he left … I didn't haven't take quite long enough to really absorb [the techniques] (Harry) **TAU group** I'll admit to thinking oh maybe that was a bit of a	Reported increased awareness of issues and coping strategies Reported increased sense of self-esteem, self-worth or belonging No recovery themes No recovery themes No recovery themes No recovery themes	Expressing subjective experiences of recovery Expressing subjective experiences of dissatisfaction with treatment/intervention/therapist Expressing subjective experiences of dissatisfaction with treatment/intervention/therapist	Personalised Intervention adapted to youth subgroup V TAU

Qual 4	waste of time but … as a scientist this research may help other people so at the same time as much as I might not have received direct treatment … you need a control group (Ewan) on being in TAU group TAU ('I didn't even get a phone call … I've got no one' (Joshua) '[I'm] stuck in the house all day doing nothing, just eating and that, just doing nothing' (Max). I don't want to sound big headed, but I think myself… I was the one that had to do everything like to help sort of overcome it like sort of thing so and I have done it. Doing things that like I wouldn't normally you know stuff that would make me feel really anxious just like I know I have to just do it like regardless of the feelings I've got or thoughts or anything I know I have to just do it (Amelia)	Reported increased sense of self-esteem, self-worth or belonging	Expressing subjective experiences of recovery	
Qual 5	No recovery themes	No recovery themes	No recovery themes	Based on TAU
Qual 6	She's helped me see in different ways. Instead of seeing the bad of everything, seeing the good things about life as well. (Anna, 18 years old) I wouldn't go to the doctors on my own, I couldn't . . . and so she would come with me just to make sure, keep me at ease, allow me to know that it wasn't that bad, that I was all right and so she would just like keep reassuring me . . . That increased my confidence and made me able, like, to go to the doctors whenever now. (Donna, 19 years old)	Reported increased awareness of issues and coping strategies Reported increased sense of self-esteem, self-worth or belonging	Expressing subjective experiences of recovery	Offered personalised intervention adapted to youth environment
Qual 7	Interviewer: So how come you've changed with them [friends], do you think? John: Cos I appreciate them a hell of a lot more now, eh. Interviewer: How come? John: Just from having nothing, eh. Interviewer: What do you mean by having nothing? John: As in nothing to do but just sit and watch TV and take drugs all day. Very weird existence like. Interviewer: So, you appreciate their company and that's why you're making more of an effort with them? John: Yeah. Sarah: But with the mood changes, it's, it's made me able to tap into a different bit of myself that's obviously done quite a bit of growing up while I haven't noticed (aha?). And it's obviously just sorts of there waiting for it being needed, and when something does go badly wrong it sort of kicks in, and is a bit more like my mum and does the sensible thing	Reported improvement in relationships/social outlets Reported increased awareness of issues and coping strategies	Expressing subjective experiences of recovery (it should be noted here that in the engagement section there is still distress being disclosed, and those with higher reflective function, and healthier attachments appeared to have adapted to psychosis symptoms and therefore had better treatment outcomes	Based on TAU CAMHS

Qual 8	P18: It is a personal development; I think I became more mature. P9: It transformed me (…) the day hospital helped me to make myself into a person. And today, all those things that I received there for two years made me the person that I am today, right now. P 16 After, the antidepressant, it would be a little harder to attribute the effects, to the extent that there was a change, but I can't really say how much the antidepressant was responsible for it. P11: I was changing, but it wasn't really clear in my head (…) In fact, there was a sort of fog, and the fog made it … I wasn't sure about it, and when it was gone, I saw what they were telling me, I understood that it was better. P2 It's me, and also time. Time helps, being able to think about myself. P16 I've grown up some, and I feel ready. I think I needed some time. P2: There were a lot of failures. But I don't think you can say that it didn't help me, either. Because it's from these mistakes that we learned things and exactly how we were able to find other solutions. P20: During my hospitalization, they finally understood that they shouldn't protect me all the time, that they needed to have a little more confidence in me …. The hospitalization helped them too, in fact.	Reported increased awareness of issues and coping strategies Reported improvement in relationships/social outlets	Expressing subjective experiences of recovery	TAU Inpatient
Qual 9	No recovery themes	No recovery themes	No recovery themes	TAU CAMHS (IMPACT STUDY)
Qual 10	''When you do a dance, you can experience those feelings for yourself.''*A3 ''There's a feeling you have, and when you then take some (dance) steps you know*you think, 'Well, this is something I can really relate to!'*You heighten the feeling and really show it.'' Free. Because in real life it's not often that you can really let go*throw out your arms, run around, leap and twirl around like that. I feel free. *A2 It feels like, you know, you're breaking free from what you've done earlier that day and really go in there and give it all you've got, here I don't have to think about anything else, just be happy and give it all I got, and you know, have fun with everybody else. *A2 Plus, as soon as I get dancing, I feel like, ''This is me. I'm standing on my own two feet and I can do whatever I want. No-one else can come and tell me what I should be doing.''*A1 At first, I looked at myself*God! I'm moving	Subjective expressions of improved satisfaction with life or quality of life Reported increased sense of self-esteem, self-worth or belonging Reported increased sense of self-esteem, self-worth or belonging	Expressing subjective experiences of recovery	Offered personalised intervention adapted to youth subgroup

Qual 10	my arm wrong; it looks really weird when I do it, all different from how everyone else is doing it. But now it's like; ''But this is such a nice movement!''*A1 I became proud of myself, you know. Like, ''Wow! Here's another thing I can do! I can! I don't have to be so prepared for everything. I can trust myself . . . trust my own ability.''*C2 Yeah, but if you feel good about yourself you automatically take up more space*maybe not physically, but you have the attitude that ''I'm here*I can actually do something. I'm good at something, or I perform . . . I can dance. Even if I'm not that great, I can dance'' . . . and then it's like, well, you stand a bit taller. Yep, I think you really do take up a little more space. *C You find yourself able to ask for what you need*anywhere, in any situation. And I think you get better at handling new situations, because dance changes all the time*yeah, it makes you better prepared to deal with all the different things that happen in your life. *S4 Because*and this is also like after a workout*I love it when I'm all sweaty and flushed, like, I just get so much energy . . . I get so stubborn and angry . . . I turn into the girl I want to be. *J It's, like, you've sweated out all the old shit you bring from school or whatever, and a whole new person opens up inside. I don't really know what it is, but that's how it feels to me in any case. *A1 And I think that, more than anything, I've stopped looking at everything as being so emotionally charged*like, things don't have to be perfect. There's no need to be perfect all the time. You can do things that make you feel good instead. *M	Reported increased awareness of issues and coping strategies

Qual 10	So, I feel that . . . I always feel so much better, I feel so up . . ., once I get dancing . . .. I feel that dance is like another language*it's like, the person you really are is expressed in the movements. So, it's like a whole new thing, I think. I really love expressing myself in this way. *A1 It was in this Marilyn Manson dance . . .. I said, "When we die, it's like life . . . you fall and you get up again." And right away, it made me think about how life has been for me: I've fallen, but I've got up again. *M			
Qual 11	She (the horse Duchess) kind of made me feel like, you know, I'm the queen of the world kind of thing because I was higher up. (Lucy) 'I can't believe I am doing this!' ref leading the horse (Freya)	Reported increased sense of self-esteem, self-worth or belonging	Expressing subjective experiences of recovery	Offered personalised intervention adapted to youth subgroup
	Lucy: Um, when I'm angry, they make me feel a lot calmer because you have to be calm around them. Me: Hmm, yes. Lucy: Otherwise, they pick up on you. Me: Absolutely. Lucy: And then you won't get such an enjoyable ride. So, if you go in with a cross mind and stamp around, then they're not exactly going to be very helpful to you, are they? Me: No.	Reported increased awareness of issues and coping strategies		
	Lucy: If you, if you play the opposite of what you actually feel, with me I start feeling the opposite way. Me: Ah, I see, so if you start acting it, then you start feeling it. Lucy: Yes. It really helps with confidence and things. Me: Right. So, if you sort of act confident . . . Lucy: I get confident. When I asked Cinderella how she felt Sherry was feeling and the best way to respond to her anxiety, she replied, 'Well, she's probably scared and missing her mum' and that it was important to be 'calm and kind to her'. I love Louis the best because he's an old boy who needs loads of TLC. He loves being groomed and cuddled, feeding and general attention and stuff, and I feel I can give him love. Today when we measured the hard feeds out into the buckets for the horses, I gave him a bit extra coz he's special! (Cinderella) I think I've got more of a connection with Timmy now really, it's like I know him better now and he sort of needs you more. It's like Ruby doesn't really need you, she's more sort of solid and sure of herself, like she doesn't really need anyone. (Lucy)	Reported improvement in relationships/social outlets		

Qual 12	I work out these days and find martial arts to be very relaxing. I'm now stronger and know more, and I see more clearly. I know I can manage my problems by myself, and that what you do depends on the situation. As they say, "No pain, no gain", in this case…but I'll never get over how hard it was. That will always be there, but at the same time I get to choose whether to feel miserable or put it behind me, and I think that I've now put it behind me. I can set limits without that seeming odd because I had been assuming more and more family responsibilities, and it got so that I could not say no. What I've now learned is that it's not strange to set limits; not privately, within my family or at work. The difference is that I can now reflect logically, like "Whoops, I've done something to make this person angry. Have I just done something pretty stupid?" Right now, I think that I have to force myself to do something I actually want to. Of course, a lot of that is meeting people, spending time with old friends, being more open and honest with them…in other words doing what I actually want to but used to feel I couldn't or wasn't allowed to.	Reported increased awareness of issues and coping strategies Reported improvement in relationships/social outlets	Expressing subjective experiences of recovery	TAU psychotherapy service

Appendix O - *Cross Study Synthesis*

Analytical themes that indicate user involvement in novel or personalised interventions either through expressing their views or beliefs or co-construction that promoted engagement and recovery	Extent to which they were incoroproated into the quantitative studies
Expressed subjective experiences which can inform or equate to a personalised intervention	Quant studies 1, 3, 5, 6, 7,8, 9 had no evidence of gathering subjective expressions on locations of distress or preferences in which young people may have wanted to explore their distress through modilities such as directive or non directive methods, or group or individual therapies. Quant studies 2 and 4 did take a case formulation approach and modified CBT, however there was no evidence that the subjective experiences of the young people contributed to the case formulation itself and was therefore science practitioner led.
Expressed social and cultural beliefs that can inform or equate to a personalised intervention	Quant 9 conducted an embedded qualitative study with participants and it contained supportive text evidencing expressed social and cultural beliefs that can inform or equate to a personalised intervention. However no ethnic or social background was reported in Quant 9 other than the number of children born outside of Sweden. Family status appeared to be the main SES reported demographic where the majority of youth were living with either one or both birth parents. The majority of youth appeared to be living with birth families where reported. Quant 5 gave a detailed recording of demography ranging from being married, working, attending college, and was the only study to record childhood adversity experiences (ACES) where 56% of their participants had experienced more than one. Quant 5 did appear to use this information to inform their intervention as they had an outreach team which took their help seeking and context into consideration, and offered a range of non-directive/directive therapies proportionate to levels of distress. However it did not reach treatment effectiveness on the measure it used. But was predictive of remission at 1 year post intervention so is still considered an effective treatment. Ethnic background was only reported in Quant 2 where all were of Danish ethnic background and 4 where the participant was British Asian, and SES was minimally reported in Quant 2, 3 and 6. Quant 7 recorded that all participants were white British and 45% lived with both biological parents. There was no evidence in any other study at pre or post intervention that participants had an opportunity to express social or cultural beliefs or that they were taken into consideration in formulating or potentially modifying the intervention.
Evidence of collaborative or participatory therapeutic engagement with mental health professionals/researcher/or group facilitator which can inform or equate to a personalised intervention i.e. co-construction, forming a therapeutic alliance, feedback on what helped or what improvements are needed	Quant 2 found that 91.7% of all youth participants indicated 'true' that 'treatment helped'. 100% of youth indicated 'true' that 'I trusted my therapist' compared to 85% in manualised group. Most families reported that the individualised treatment allowed them more time to use the tools and techniques with support Quant 3 did use questionnaires to gather views on patient satisfaction and expectancy of the intervention appeared to indicate that under 50% were satisfied, and expectations being met was at 58% but with a high degree of variance .Alliance with therapist on WAISR was also gathered indicating that the majority felt they had a meaningful therapeutic alliance with their therapist. Quant 7 incorporated qualitative feedback on their intervention and if they would recommend it to a friend, this study had strict exclusion criteria that resulted in a small number of participants i.e. no ADHD, no school refusal and no learning difficulties. Therefore the views that were expressed were limited to inclusion criteria. Quant 9 conducted an embedded qualitative study with participants, and it contained supportive text evidencing collaborative therapeutic engagement with participants No evidence found in the Quant studies 1,4, 5, 6, and 8 No dropouts in Quant 2, 4 and 7 and the remainder of studies had 11-18% dropout rates which is considered low overall indicating a good level of engagement and therapeutic alliance.
Expressing subjective experiences of recovery	Quant 2 found that 91.7% of all youth participants indicated 'true' that 'treatment helped' Quant 3 did gather patient views on intervention/treatment via questionnaires and under 50% appeared satisfied and 58% found that treatment met expectations. Also 24% at post treatment said they had not required to meet with psychiatric service during treatment, 59% felt they only required monthly meetings with psychiatric treatment. This equates to the qualitative outcome measures of expressed decrease on dependency of services and or medication. Quant 7 gathered qualitative feedback that 81% of participants said they would recommend to a friend, 5/11 =kind of enjoyable, 3/11 very enjoyable, 1/11 extremely enjoyable. Quant 9 conducted an embedded qualitative study of participant's experiences and it contained supportive text evidencing subjective experiences of recovery. No other studies Quant 1, 4, 5, 6, 8, gathered information on experiences of recovery post treatment.

	Treatment effectiveness was found in medium to large effect sizes in Quant 3, Quant 2, 6 and 8 where there appeared to be a higher degree of personalisation in the intervention. Quant 4 and 7 strong differences in the change score pre and post interventions and again they used higher degrees of personalisation. Quant 5 and 9 did not report their effect sizes but did report significance.
Expressing subjective experiences of dissatisfaction with treatment/ intervention/therapist	Quant 3 did gather patient views on intervention/treatment via questionnaires and under 50% appeared satisfied and 58% found that treatment met expectations. Quant 7 gathered qualitative feedback that 2/11 did not really find the intervention enjoyable No other studies gathered any feedback on satisfaction/dissatisfaction **The only other indication of this was recorded through drop rates and attendance**. Quant 2 and Quant 4 both used case formulation had no drop outs. Quant 7 had no drop outs Quant 1 17/103 (16%) drop outs no indication of reason or if different from the group Quant 3 2/17 (11%) dropped out due to not being comfortable with treatment format Quant 5 14/120 (11%) dropped out no indication of reason Quant 6 13/115 (11%) and were recorded as not being significantly different to the rest of the group Quant 8 12/64 (18%) did not follow treatment and 2 went on medication which was in exclusion criteria. No indication of reason. Quant 11/59 (18%) girls dropped out no indication of reason