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Holdsworth, E. , Bowen, E. , Brown, S. and Howat, D

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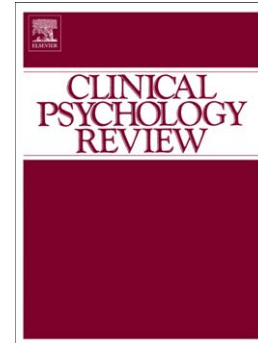
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Emma Holdsworth, Erica Bowen, Sarah Brown, Douglas Howat

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Client engagement in psychotherapeutic treatment and associations with client characteristics, therapist characteristics, and treatment factors

Running head: Client engagement in psychotherapeutic treatment

Emma Holdsworth¹

Erica Bowen¹

Sarah Brown¹

Douglas Howat¹

Correspondence regarding this article should be addressed to Emma Holdsworth, Department of Psychology and Behavioural Sciences, Coventry University, Priory Street, Coventry, England, CV1 5FB; Email: emma.holdsworth@coventry.ac.uk

¹ Coventry University
Priory Street,
Coventry
CV1 5FB
Tel. +44 (0)24 7688 7688
Fax +44 (0)24 7688 8300
emma.holdsworth@coventry.ac.uk

Abstract

Client engagement has been associated with positive psychotherapeutic outcomes, yet it is relatively under-theorized. The aims of this review were to establish how client engagement with psychotherapeutic interventions targeting psychological or behavioral change has been operationally defined and assessed, and the associated client characteristics, therapist characteristic, and treatment factors. Seventy-nine studies were selected for review, revealing inconsistent definitions and assessments of engagement and a broad array of client characteristics and treatment factors investigated. Attendance was frequently used as a proxy for engagement, but may not be reliable. Participation or involvement in conjunction with homework compliance which reflects clients' efforts within and between sessions may more reliably reflect engagement. The findings of associations between client characteristics and engagement variables were equivocal, although clients' capacities to address their problems tended to be positively associated with engagement. Nearly all therapist characteristics, particularly therapists' interpersonal skills, and most treatment factors, particularly strengths-based approaches and the therapeutic relationship, were positively associated with engagement. A theory of engagement is needed that characterizes the function and inter-relations of variables across different psychotherapeutic settings.

Key words: engagement; client; psychotherapy; treatment; program; intervention

Client engagement with treatment has frequently been cited as directly associated with positive treatment outcomes in psychotherapeutic interventions (LeBeau et al., 2013; Orlinsky, Grawe, & Parks, 1994), substance abuse treatment (Rowan-Szal, Joe, Simpson, Greener, & Vance, 2009; Simpson & Joe, 2004), alcohol abuse treatment (Dearing, Barrick, Dermen, & Walitzer, 2005) and correctional treatment (Drieschner & Verschuur, 2010; McCarthy & Duggan, 2010). Poor treatment attendance is generally accepted as an indicator of non-engagement (e.g. Wang et al., 2006), which is one of the biggest threats to intervention effectiveness. Poor treatment attendance leads to poor outcomes not only for clients (Cahill et al., 2003; Klein, Stone, Hicks, & Pritchard, 2003; Lampropoulos, 2010; VanDeMark et al., 2010), but for program providers, including poor job satisfaction and low staff morale (Mensing, Diamond, Kaminer, & Wintersteen, 2006) and a sense of failure and uncertainty (Klein et al., 2003; Piselli, Halgin, & MacEwan, 2011). Attrition rates of up to 50% have been reported (Hatchett, 2004; Melville, Casey, & Kavanagh, 2007; Wierzbicki & Pekarik, 1993), but in a more recent meta-analysis Swift and Greenberg (2012) reported lower rates of approximately 20%. This figure represents a wide range of rates but it still equates to around one in five clients terminating treatment prematurely; consequently attrition remains an on-going concern for treatment providers.

Variation in dropout rates may be attributable to a number of client characteristics, therapist characteristics, and treatment factors that relate to completion and attrition (Swift & Greenberg, 2012) and more broadly, treatment outcomes. Client characteristics that have been found to be associated with treatment outcomes include attachment style (Byrd, Patterson, & Turchik, 2010; Illing, Tasca, Balfour, & Bissada, 2011; Strauss et al., 2006), motivation (Frei & Peters, 2012; Jenkins-Hall, 1994), reasoning ability (Frei & Peters, 2012), avoidant coping style and somatic symptoms (Kim, Zane, & Blozis, 2012), symptom severity (Boswell, Sauer-Zavala, Gallagher, Delgado, & Barlow, 2012) and readiness to change (Boswell et al., 2012; Melnick, De Leon, Hawke, Jainchill, & Kressel, 1997). Therapist characteristics that have been found to be associated with positive treatment outcomes include therapists' warmth, optimism and humor (Beck, Friedlander, & Escudero, 2006) and therapists' professional self-doubt (Nissen-Lie, Monsen, Ulleberg, & Rønnestad, 2013). Treatment factors that have been found to be associated with treatment outcomes include motivational enhancement (Scott, King, McGinn, & Hosseini, 2011) and group climate (Illing et al., 2011; Kirchmann et al., 2009). In particular the therapeutic alliance (Bachelor, 2013; Horvath, Re, Flückiger, & Symonds, 2011; Johansson & Jansson, 2010; Martin, Garske, & Davis, 2000; Priebe, Richardson, Cooney, Adedeji, & McCabe, 2011) and the therapeutic relationship (Norcross, 2011) have demonstrated consistent positive associations with treatment outcomes. Authors have gone as far as to argue that the therapeutic relationship between clients and counsellors has a greater influence on treatment outcomes than therapeutic techniques (Duncan, Miller, Wampold, & Hubble, 2010; Lambert & Barley, 2001). It is conceivable that the associations between these factors and treatment outcomes are mediated by clients' engagement in treatment.

While it has been frequently cited in relation to treatment outcomes, there is little in the way of a general definition for, and theory of, engagement (Ammerman et al., 2006; Graff et al., 2009). Much of the engagement research has been in relation to parent and family therapy interventions (Baydar et al., 2003; Thompson et al., 2007) and substance abuse treatment (e.g. Simpson, 2004), perhaps because this is where

motivation or client resistance is likely to be a prominent issue, compared to the working alliance that has attracted more widespread attention (Ackerman & Hilsenroth, 2003; Byrd et al., 2010; Cournoyer, Brochu, Landry, & Bergeron, 2007; Horvath et al., 2011; Kietaibl, 2012; Kirsh & Tate, 2006; Mackrill, 2011; Taft & Murphy, 2007). The lack of theory might be because the term ‘engagement’ within the context of psychotherapy can be employed informally as well as clinically, unlike the ‘therapeutic alliance’ (e.g. Bachelor, 2013), or the therapeutic relationship (e.g. Priebe et al., 2011) that tends to have a more specific clinical use. Even though it is recognized as being important, the need to establish a clear conceptualization and definition for engagement may have been overlooked. If clients’ engagement influences their treatment outcomes, and treatment outcomes represent the amount or degree of change in clients’ functioning (e.g. reductions in depression, increases in self-esteem), then clients’ engagement should constitute any of the efforts they make toward these changes.

Given the importance of client engagement to treatment outcomes, the first aim of this review is to establish how it has been defined and assessed, and to what extent these definitions and assessments reflect the process of treatment and clients’ efforts toward the achievement of change. Researchers have argued that “engagement in the process of change is *almost* the same as engagement in the treatment process” (Drieschner, Lammers, & van der Staak, 2004, p.1121) [emphasis added]. The subtle distinction might reflect that some clients can be ‘engaged’ in the treatment process, yet do not achieve the desired level of change that is the target of the treatment. Therefore for engagement to predict treatment outcomes, it should reflect any efforts clients make during the course of treatment toward achieving measurable changes. Furthermore, given the potential for engagement to mediate the relationships between client characteristics, therapist characteristics, treatment factors and treatment outcomes, the second aim is to draw together the factors that are, or are not, associated with clients’ engagement as it has been defined and assessed. The overarching aims are to prompt future research toward clearer conceptualization and theory of engagement across psychotherapeutic settings, and to provide practitioners with clear guidance on which factors are (or are not) of relevance to inferring and enhancing engagement.

Method

A search of PsycINFO, Medline, and Academic Research Complete was undertaken for peer-reviewed empirical studies published in English since 1980, excluding dissertations. The search terms including all their potential derivatives and spellings were: engagement and; program; treatment; intervention; counselling; psychotherapy; change. This search returned 251 articles. Studies were included if ‘engagement’ had been operationally defined or assessed, or defined by participants in qualitative studies, and if client characteristics and/or therapist characteristics and/or treatment factors had been assessed for their associations with engagement pre and/or during treatment. The focus of the review was not on outcomes (factors assessed at follow-up) associated with ‘engagement’ on the basis that these associations have been established (e.g. LeBeau et al., 2013; Orlinsky et al., 1994) and have led to the focus of this review on what ‘engagement’ constitutes, and which factors are, or are not, associated with it.

Studies involving children or adolescents who cannot provide consent for treatment, or studies focusing entirely on clients within forensic settings or offenders in the community who were court-mandated to undertake treatment were excluded. This is because how clients are referred to treatment is likely to impact upon their engagement (Bowen & Gilchrist, 2004) in ways that may compromise the synthesis of findings relating to the engagement of clients who have consented or volunteered for treatment and those who have not. Studies focusing on client engagement with health-related treatments or occupational therapy were excluded because whilst these programs are likely to bring about psychological change, their primary targets relate to specific health outcomes or physical rehabilitation, such as improving strength, coordination, and balance (Lequerica, Donnell, & Tate, 2009). Forty-two studies met the review criteria and are henceforth referred to as the 'engagement-defined' studies.

Following a review of these studies, the specific terms employed in the definitions or assessments of engagement in these forty-two studies were then employed in a second search to draw together a broader review of the client characteristics, therapist characteristics and treatment factors associated with these engagement proxies. This search was identical to the first, but the term 'engagement' was replaced with: attendance; participation; involvement; homework; therapeutic relationship; counsellor rapport. In line with the same inclusion criteria for the first search, 37 studies met the review criteria and are henceforth referred to as the 'engagement proxy' studies. Consequently a total of 79 studies were included in this review.

Working Definitions of Terms

This review reveals that the literature is characterized by complex terms that have been used inconsistently. Therefore, in order to help guide the reader, the authors of the review propose a working definition of 'engagement', as well as working definitions of the terms the authors of the studies reviewed have included in their definitions and assessments of engagement.

Engagement represents all the efforts clients make during the course of treatment (both within and between sessions) toward the achievement of changes (treatment outcomes). **Motivation** is a cognitive construct that may influence clients' attitudes toward treatment and their treatment-related behaviors. **Attendance** represents clients' presence in treatment sessions and is the minimum behavioral effort clients make toward treatment. **Participation or involvement** represents any observable, voluntary, active efforts clients make toward treatment within sessions. **Homework compliance or practice** represents clients' voluntary, active efforts toward the completion of treatment-prescribed tasks or practice and application of treatment strategies between sessions. **Counsellor rapport** represents therapists' characteristics that are conducive to the development of the **therapeutic relationship**, which represents how clients and counsellors relate to each other and work with each other over the course of treatment. **Treatment satisfaction** represents clients' perceptions of their experiences in treatment.

Results

The results are divided into two sections with corresponding tables. The first section clarifies the various operational definitions and assessments of engagement in the 42 engagement-defined studies. The second section comprises a summary of the client characteristics, therapist characteristics, and treatment factors that are associated with the previously identified variables used to define or assess engagement.

Operational Definitions and Assessments of Engagement

A brief summary of the 42 engagement-defined studies including how engagement was operationally defined or assessed along with details of samples, treatment type, research aims and other factors assessed is presented in Table 1, appendix A.

Engagement as attendance. Attendance was included in five multifarious definitions or assessments of engagement (Baydar, Reid, & Webster-Stratton, 2003; Dowling & Cosic, 2011; Fiorentine et al., 1999; Korfmacher et al., 1998; Murphy et al., 2009) but was employed as a single proxy for engagement in 15 studies (Ammerman et al., 2006; Geers et al., 2009; Granholm et al., 2006; Joe, Simpson, & Broome, 1999a; Noel & Howard, 1989; Simpson et al., 1995; Simpson et al., 1997; Tryon, 1985; Tryon & Tryon, 1986; Tryon, 1986; Tryon, 1989a; Tryon, 1989b; Tryon, 1992; VanDeMark et al., 2010; Wang et al., 2006).

Studies equating engagement to attendance variously quantified the amount of attendance needed to qualify as engagement. The most rudimentary of these quantifications was attendance at a minimum of one session (Tryon, 1985; Tryon & Tryon, 1986; Tryon, 1986; Tryon, 1989a; Tryon, 1989b; Tryon, 1992; Wang et al., 2006) or more than 50% of sessions (Granholm et al., 2006). VanDeMark et al. (2010) defined participants as 'engaged' in an online pre-treatment motivation program for substance abuse if they received three or more service contacts. This threshold originated from the stage of early engagement in the Texan Christian University (TCU) treatment model (Simpson, 2004) based on face-to-face contacts between therapists and clients, which are dissimilar to service contacts involving phone calls, e-mails, bulletin boards, and text messaging (VanDeMark et al., 2010). However, this does raise an important question about how engagement in on-line interventions should be assessed, given they are becoming increasingly implemented (White et al., 2010).

Attendance thresholds have also been aligned to the concept of 'treatment dose' across different interventions. The concept of treatment dose has then dictated how much attendance represents engagement (Joe et al., 1999; Noel & Howard, 1989; Simpson et al. 1997). More comprehensive assessments of attendance have incorporated treatment interest (Geers et al. 2010), or the duration (length of time active in treatment) and consistency (gaps between home visits: Ammerman et al. 2006). However, confining definitions or measures of client engagement to attendance, no matter how comprehensively it is assessed, is potentially misleading. Tryon (1985) argued that "counselling cannot occur unless the client *attends* the counselling session" (emphasis added), also stating that "*engagement* of the client is needed for counselling to occur" (emphasis added). Both statements appear intuitive but when presented within the same argument the terms attendance and engagement become misleadingly conflated. It is quite plausible that clients can attend

treatment, even at a level equivalent to a 'treatment dose' without necessarily being engaged. Equally, clients may be engaged within the therapeutic process without being present at every session, or even before they have attended the first session. Lee, Uken and Sebold (2004) argued that as soon as clients make the first initial contact with a service provider they are engaged in the treatment process. The causes of non-attendance for some clients may not always be related to treatment, but they may still be committed to achieving change. Consequently, attendance in isolation does not reliably indicate engagement. Although researchers have briefly argued that attendance is only one component of engagement (Ammerman et al., 2006; Tryon, 2003), it is important for researchers to either confine their operational definitions to exactly what is being assessed (i.e. attendance, not engagement) or extend their research designs to include other relevant variables in order that they can reasonably declare that they are assessing client 'engagement'. For the process of engagement to be conceptualized as constituting clients' efforts in the achievement of change, it should incorporate active components that, when assessed, can demonstrate the extent of these efforts.

Engagement as participation or involvement. Participation was employed as a proxy for engagement in two studies (Dingle et al., 2008; Fiorentine et al., 1999) but in an earlier study the reverse was the case; i.e. engagement was employed as a proxy for participation (Nelson & Borkovec, 1989). Participation was also assessed by the three measures of engagement (discussed below). Involvement was incorporated within operational definitions of engagement in six studies (Baydar et al., 2003; Boardman et al., 2006; Joe et al., 1999; Klag et al., 2010; Moyers et al., 2005) or disengagement (Frankel & Levitt, 2009).

Motivation (Dingle et al., 2008), intentions (Klag et al., 2010) or commitment (Joe et al. 1999) to participate, rather than the acts of participation, have been employed as proxies for engagement. Motivation can predict behavior (Chatzisarantis, Hagger, Smith, & Sage, 2006) and has thus been conceptualized by some researchers (e.g. Drieschner et al., 2004; Simpson, 2004) as a factor that influences participation (and thereby engagement) rather than an engagement component. Behavioral intentions are considered an immediate antecedent of behavior in the Theory of Planned Behavior (Ajzen, 1985). However, self-reported motivation and intentions may not always predict subsequent behaviors (Hardeman, Kinmonth, Michie, & Sutton, 2011; Scholz, Schüz, Ziegelmann, Lippke, & Schwarzer, 2008) and therefore may not reflect participation or involvement in treatment, and by extension, 'engagement'.

Observations of participation (Fiorentine et al., 1999) or involvement (Baydar et al., 2003; Moyers et al., 2005), or recorded observations combined with interviews in treatment (Frankel & Levitt, 2009) may be more reliable assessments, but how participation was operationally defined, classified or rated was not always reported (e.g. Fiorentine et al., 1999), making it difficult to interpret the type or degree of participation that was being referred to. Consequently, it cannot be ruled out that observations of participation in some cases may have only reflected attendance. A range of observational coding systems of parents' involvement in discussions in a parenting program were employed in the study by Baydar et al. (2003). Moyers, Miller and Hendrickson (2005) employed the Motivational Interviewing Skills Code (discussed below) while Boardman et al. (2006) employed the patient involvement dimension of the Vanderbilt Psychotherapy Process Scale (VPPS: O'Malley, Suh, & Strupp, 1983). Frankel and Levitt (2009) obtained interviews of participants about

their disengagement, defined as clients' 'lessening of involvement in therapy' (2009, p.171) as they observed a recording of one of their treatment sessions. Observations employing reliable coding systems may prove to be a more effective method for assessing involvement than self-reported involvement, but a combination of both may provide greater detail and insight into clients' involvement (or lack thereof).

The terms 'participation', 'involvement' and 'engagement' appear to have been used interchangeably and become conflated in the literature, leading to a lack of clear differentiation and consistent operational use of these terms. For example the *involvement* subscale of the Treatment *Engagement* Scale (Hiller, Knight, Leukefeld, & Simpson, 2002) is used to assess clients' perceptions of their levels of *participation*. Nelson and Borkovec (1989) obtained clients' self-rated *engagement* as a dimension of *participation*, while others (e.g. Fiorentine et al., 1999; Joe, Broome, Rowan-Szal, & Simpson, 2002) have considered *participation* to be a dimension of *engagement*. The latter appears to have been more common, with measures of engagement (discussed below) all incorporating subscales for participation or involvement in treatment. Consequently, it might be concluded that clients' participation or involvement are one, multidimensional component of engagement that reflects clients' observable, voluntary, active efforts within treatment sessions. However, participation is confined to clients' efforts *within* sessions, and therefore as a proxy for engagement it is confined to their efforts in treatment, which may not capture *all* their efforts toward the achievement of change.

Engagement as homework compliance or practice. Homework is common within psychotherapeutic settings (Dattilio, Kazantzis, Shinkfield, & Carr, 2011; Kazantzis & Dattilio, 2010) and homework compliance has been directly associated with treatment outcomes across different client groups (Kazantzis, Whittington, & Dattilio, 2010; Morgan & Flora, 2002). It is odd therefore, that homework compliance or practice was only employed to define engagement in five studies (Baydar et al., 2003; Graff et al., 2009; Korfmacher et al., 1998; LeBeau et al., 2013; Westra & Dozois, 2006). Moreover, researchers assessing homework compliance have argued that there is weak measurement of engagement variables (LeBeau et al., 2013) and a lack of "universally accepted measure [of engagement] in the field" (Graff et al., 2009, p. 280). Therefore, the relevance of homework compliance to treatment engagement and its potential as an engagement proxy appear to have been largely overlooked. Furthermore, from the studies reviewed, it appears that the emphasis has been on quantifying the time and effort spent on homework (Westra & Dozois, 2006) or homework completion (Baydar et al., 2003; Graff et al., 2009) rather than considering the quality of homework. A focus on clients' application of strategies, such as problem solving (Korfmacher et al., 1998), may be a more useful proxy for engagement as it demonstrates clients' volitional efforts to apply treatment concepts to their day-to-day functioning; i.e. the achievement of change. However, quality assessments of homework or practice may also need to reflect the extent to which clients feel confident and able to integrate these practices on a long-term basis.

Homework compliance or practice reflecting out of session efforts may be as important, if not more important, than participation within treatment in inferring engagement, as these reflect clients' efforts toward the achievement of change beyond the treatment session environment. However, there may be barriers

to the completion of homework (Detweiler & Whisman, 1999) that may have little or no bearing on clients' involvement during sessions. Consequently homework should be assessed alongside clients' involvement in treatment sessions (e.g. Baydar et al., 2003). Furthermore, in order to help overcome homework barriers and arguably to capture the full extent of clients' engagement, therapists may need to look beyond compliance to prescribed homework for *any* voluntary efforts clients have made toward the achievement of change between sessions.

Engagement as the therapeutic relationship. The therapeutic relationship was central to the definitions of engagement employed in five studies (Dowling & Cosic, 2011; Korfmacher et al., 1998; McFarlane et al., 2010; Murphy et al., 2009; Simpson & Joe, 2004) and is also assessed by the Client Evaluation of Self and Treatment (discussed below). A rudimentary assessment of the therapeutic relationship was the number of home visitors' notations of their responses to clients' issues (McFarlane et al., 2010), which ranged from talking about the client's issue to making a referral to an appropriate service. However, the responses themselves, rather than simply the number of responses, may have provided a more comprehensive assessment of clients' engagement and valuable insight into the therapeutic relationship.

More comprehensive but incomplete and potentially biased assessments of the therapeutic relationship have been made, as researchers have assessed either therapists' ratings (Simpson & Joe, 2004) or clients' ratings (Murphy et al., 2009). However, others (Dowling & Cosic, 2011; Korfmacher et al., 1998) have assessed both therapists' and clients' perceptions of the therapeutic alliance. The quality of the contact between nurses and patients in the study by Korfmacher et al. (1998) was operationalized as clients' 'emotional engagement'. This focus on emotional engagement may explain why participation, defined as the total contact time between the client and nurse (in other words attendance), was not employed as a proxy for engagement. This inconsistency in use of proxies contributes to confusion about engagement, but at the same time indicates diversity in how engagement is conceptualized. If engagement consists of clients' treatment-related behaviors and efforts within and between sessions toward the achievement of change, the therapeutic relationship may influence these behaviors and efforts. Furthermore, the therapeutic relationship has been found to predict attendance (Joe et al. 1999; Lecomte et al., 2012; Principe et al., 2006; Simpson et al., 1995; Simpson et al., 1997; Simpson & Joe, 2004; VanDeMark et al., 2010) and participation (Boardman et al., 2006; Fiorentine et al., 1999; Lecomte et al., 2012) in treatment. Consequently, the therapeutic relationship might most usefully be considered a key determinant of engagement rather than a constituent variable.

Measures of engagement. In six of the studies reviewed, engagement was assessed using existing measures of engagement. Greener et al. (2007), Simpson, Joe and Rowan-Szal (2007), Simpson et al. (2009) and Thompson et al. (2009) employed the Client Evaluation of Self and Treatment (CEST: Joe et al., 2002), McMurrin et al. (2013) employed the Treatment Engagement Rating Scale (TER: Drieschner & Boomsma, 2008b) and Tait et al. (2003) employed the Treatment Engagement Scale (TES: Tait et al., 2003). These three engagement measures are now discussed in turn.

Client Evaluation of Self and Treatment (CEST). The CEST was developed to assess patient functioning and perceptions in drug-abuse treatment programs according to the Texas Christian University

(TCU) Treatment Process Model (Simpson, 2001). Engagement is assessed as a composite scale reflecting, participation, treatment satisfaction and counselling rapport. The participation subscale assesses cognitive and behavioral involvement and progress, but the analysis reported by Joe et al. (2002, p. 191) brings the homogeneity of the subscale into doubt. Nelson and Borkovec (1989) found support for what they termed as 'participation' to be a multidimensional construct. Treatment participation is likely to include a variety of types of participation that will vary across different treatment contexts, but from a generic perspective it should be considered a multidimensional engagement component, requiring taxonomy for reliable assessment.

The treatment satisfaction subscale of the CEST consists of seven items. Treatment satisfaction has been considered a component of the group environment (Wilson et al., 2008) related to treatment outcomes (Carlson & Gabriel, 2001; Maton, 1988) and may therefore be relevant to treatment engagement. However, just because clients perceive satisfaction with treatment does not necessarily mean that they are engaged. Clients who are engaged may at some point during treatment experience some level of cognitive dissonance (Cooper, 2012), resulting in lower levels of perceived satisfaction with treatment. Clients' treatment satisfaction may therefore fluctuate over the course of treatment, as will how it relates to their engagement. Treatment satisfaction does not constitute clients' efforts toward treatment, but it may (particularly post treatment) represent the outcome of these efforts, and therefore an outcome of engagement rather than a constituent variable.

The counsellor rapport subscale of the CEST consists of 13 items assessing counsellor respect and interactions with the counsellor (e.g. 'you are motivated and encouraged by your counsellor'). It appears that counsellor rapport, or the therapeutic relationship, was conceptualized as a constituent variable of the treatment (and engagement) process. However the 'motivation' and 'encouragement' offered by counsellors arguably influences this process as opposed to constituting it. Counselling rapport may enhance the likelihood of engagement (and subsequently change) occurring, but an assessment of counselling rapport may not reveal that engagement *is* occurring.

The Treatment Engagement Rating Scale (TER). The TER was designed for use in forensic settings, and is based on a definition of engagement as 'the patient's behavior which is desirable or necessary for the treatment to be effective and under the patient's volitional control' (Drieschner & Boomsma, 2008). Unlike the CEST, neither treatment satisfaction nor counsellor rapport is assessed by the TER, but similarly to the CEST the TER assesses participation, defined as attendance and punctuality. However, the other scales of the TER are used to assess what appear to be specific aspects of participation within and between treatment sessions: constructive use of sessions; openness; efforts to change behavior; efforts to improve socio-economic situation; making sacrifices; goal directedness; and reflecting between sessions. Thus the TER demonstrates the multi-dimensionality of treatment participation and combines this with efforts clients make to apply treatment concepts to their personal lives. The TER has demonstrated excellent reliability and validity (Drieschner & Boomsma, 2009), however, the selection of behavioral efforts comprising the TER scales were those judged by the authors and other therapists as relevant to treatment effectiveness in forensic settings (Drieschner & Boomsma, 2008, p. 300). Some of these behaviors (improvement to socio-economic

status, making sacrifices) may be treatment context-specific and not capture the full extent of clients' voluntary efforts toward achieving change across treatment settings, and may tend to reflect treatment compliance more than engagement.

The Service Engagement Scale (SES). The SES comprises four scales used to assess engagement with community mental health services: availability (for visits); collaboration (actively participating in the management of illness); help-seeking, and treatment adherence (clients' attitudes toward taking medication). Availability reflects attendance, and as with the TER, there appears to be a focus on clients' behavioral efforts (participation) in relation to treatment but behaviors that reflect compliance with treatment requirements as dictated by therapists' observations of clinical practice (Tait, Birchwood, & Trower, 2002). Regardless of the treatment setting, engagement should be conceptualized as a broader construct than compliance. Behaviors indicative of compliance may be confined to those prescribed by the therapist, treatment approach, or treatment setting, whereas behaviors indicative of engagement should also include *any* voluntary behaviors and efforts initiated and defined by clients as most relevant and useful to their progress in achieving change.

Client and therapist perceptions of engagement. Qualitative methods (interviews, focus groups, observations – see Table 1, appendix A) were employed in only four of the engagement-defined studies (Godlaski et al., 2009; James, Cushway, & Fadden, 2006; Thompson et al., 2007; Wagner et al., 2003). In all but the study by Wagner et al. (2003), engagement was interpreted as representing clients' perceptions of the therapist or the therapists' perceptions of the development of the therapeutic relationship. Family intervention therapists in the study by James et al. (2006) referred to engagement as “the careful establishment of a trusting relationship involving a commitment to an agreed piece of work” (James et al., 2006, p.363). Families (Thompson et al., 2007) and female clients in substance abuse treatment (Godlaski et al., 2009) referred to non-judgemental counselling staff that treated them with respect, listened to them and understood their experiences. These interpersonal skills described in the qualitative literature are consistent with conceptualizations of the therapeutic alliance (Horvath et al., 2011) and in keeping with a solution-focused approach (Berg & De Jong, 1996) and the global characteristics assessed by the motivational interviewing skills code (MISC: Miller, Moyers, Ernst, & Amrhein, 2003) of empathy, acceptance, egalitarianism, warmth and genuineness. Both treatment approaches are person-centered and strengths-based, rather than problem-focused; thus it would appear that clients regard therapist qualities consistent with these approaches as important to their engagement.

The multifaceted nature of engagement was captured by Wagner et al. (2010) who identified five dimensions of engagement. ‘Say yes’ was what parents exhibited when they were attracted by the program and were keen to participate. ‘Be there’ reflects parents’ motivation to remain in the program. ‘Be involved’ was the active involvement of families during their visits. ‘Do the homework’ reflected parents’ use of information and ideas in between visits. The final dimension of ‘look for more’ referred to parents’ seeking of information about parenting issues beyond that offered by the program. These dimensions can be mapped on to the other general proxies for engagement employed in the literature. ‘Say yes’ appears to relate to commitment, motivation, or intentions for treatment (e.g. Dowling & Cosic, 2011; Klag et al., 2010). ‘Be

there' appears to reflect attendance (e.g. Ammerman et al., 2006; Wang et al., 2006). 'Be involved' directly reflects involvement (e.g. Joe et al. 1999) or participation (e.g. Fiorentine et al., 1999); likewise 'do the homework' reflects homework or practice (e.g. Baydar et al., 2003; Graff et al., 2009). The final dimension of 'Look for more' is a unique aspect of engagement that does not appear to have been investigated elsewhere. The extent to which clients independently seek other resources to address their issues is relatively unexplored yet potentially highly relevant to engagement. A particular finding that speaks to the inadequacy of relying on the assessment of a single proxy to infer engagement was that parents would engage on one dimension for engagement but not others (Wagner et al., 2003). Hence, clients may well 'be there' (attend), but not necessarily 'be involved' in treatment. The implications are that researchers need to investigate all aspects of engagement concurrently, or at least carefully consider which proxies for engagement are most relevant to the intervention they are investigating, and the limitations of what can be inferred from employing only a select number of variables to assess engagement.

Summary. The 42 engagement-defined studies have produced various and mainly quantitative definitions and assessments of engagement. Attendance has commonly been employed as a proxy but may be misleading in isolation, as it represents clients' minimum active effort toward treatment. Participation or involvement is a more comprehensive, multifaceted variable reflecting clients' efforts within sessions and thereby engagement in the treatment process. Homework or practice was only employed by a handful of studies, but represents clients' efforts toward the achievement of change beyond the treatment session environment. The therapeutic relationship was investigated in a number of studies as a proxy for engagement, but mostly from only one perspective (the client *or* the counsellor). It might most usefully be conceptualized as an engagement determinant variable on the basis that it influences the efforts clients make toward achieving change, rather than constituting these efforts. Measures of engagement reflect multifarious and different conceptualizations of engagement and may therefore be confined for use only in the treatment setting they were developed within. However, they reflect a generic focus on participation. Clients' and therapists' perspectives of engagement evidence support for some of the engagement proxies employed, particularly for a focus on efforts clients make between sessions toward achieving change.

Associated Client Characteristics, Therapist Characteristics, and Treatment Factors

This section of the review comprises a summary of the client characteristics, therapist characteristics, and treatment factors investigated in all 79 studies reviewed that are associated with the variables underpinning the engagement definitions and assessments in the 42 engagement-defined studies. A summary of the 37 engagement proxy studies can be found in Table 2, appendix B, listed in alphabetical order under different subheadings corresponding to the variables assessed. Tables 3, 4 and 5 (appendices C, D and E) present the findings in relation to associations (or lack of) between each variable and the client characteristics, therapist characteristics, and treatment factors respectively. A lack of any significant association is indicated by a strike through the engagement variable (e.g.). Superscript footnotes in the tables refer to the studies as listed in the reference list for tables.

Client characteristics, therapist characteristics, and treatment factors associated with attendance. Associations between client demographics and attendance appear to depend on how the intervention is delivered, specifically if it was face-to-face or online. For instance, being employed (Simpson et al., 1995) and white (Ammerman et al., 2006; Simpson et al., 1995) were associated with face-to-face attendance, but not if it was pre-treatment substance-abuse intervention delivered online (VanDeMark et al., 2010). Van De Mark et al (2010) also found income, living situation, or being on parole were not associated with on-line attendance but being female and having children had a positive association (VanDeMark et al., 2010). Although similar online and face-to-face attendance rates have been reported (Jones et al., 2001; Kay-Lambkin et al., 2011), online interventions may pose fewer barriers for some clients than face-to-face programs and subsequently reach a demographically wider range of clients. Online interventions are also able to harness therapeutic features such as web-based group discussions that positively influence online attendance (VanDeMark et al., 2010). While there may still be some therapeutic limitations, there is strong support for their utility (for a review and meta-analysis, see Barak, Hen, Boniel-Nissim, & Shapira, 2008), perhaps for clients whose need for treatment means they may be less likely to attend to face-to-face attendance.

Surprisingly however, clients in greater need of treatment were generally more likely to attend. Clients with substance abuse problems (Ammerman et al., 2006), a negative outcome expectancy of alcohol use (Dale et al., 2011), a history of criminal activity, mental illness, low levels of social support or increased multiple crises and stressors (Ammerman et al., 2006) and clients not progressing in treatment (Lambert et al., 2002) had higher levels of attendance. Clients with greater capacities to address their problems also appear to be more likely to attend. Clients' recognition of their problems (Collins et al., 2012), a more active than avoidant recovery style (Tait et al., 2003), motivation (Simpson et al., 1995), self-confidence (Bogenschutz et al., 2006; Dale et al., 2011; Simpson et al., 1995), high levels of optimism (Geers et al., 2009), greater self-efficacy (Bogenschutz et al., 2006), greater control over social interactions and a positive life direction (Ammerman et al., 2006), higher scores in social desirability (Zemore, 2012), a greater social network (Dale et al., 2011) and contemplative stage of change (Principe et al., 2006) were all associated with greater attendance. Apart from a few discrepant findings (see Table 3, appendix C) it would appear that, in general, clients' sense of need for treatment (Collins et al., 2012) along with their perceptions of greater capacities to address their problems (e.g. VanDeMark et al., 2010) serve as intrinsic motivators for attending treatment. However, as clients' need for treatment increases their capacities to address their problems may become diminished, indicating the importance of timing in treatment intervention.

Nearly all the therapist characteristics investigated were unequivocally positively related to attendance. Clients were also more likely to attend counselling if the therapists were: experienced (Tryon, 1985; Tryon, 1989a; Tryon, 1989b; Tryon, 1992; Wang et al., 2006); female (Tryon, 1989b); older (Tryon & Tryon, 1986); motivated (Tryon, 1985); and had received feedback about the clients' progress (Lambert et al., 2002; Wang et al., 2006). Clients were also more likely to attend counselling if the therapists were more interested in the client and rated their problems as more severe (Tryon, 1986) and rated clients as more

interpersonally attractive (Tryon, 1992). These latter findings may help to explain why clients' needs for treatment and their capacities to address their problems were generally associated with higher attendance, i.e. these are clients that may receive greater attention and encouragement in treatment. However, many of these findings were obtained from University counselling centers and thus may not generalize to other populations.

The therapeutic relationship was consistently associated with greater attendance (Joe et al., 1999; Lecomte et al., 2012; Simpson et al., 1995; Simpson et al., 1997; VanDeMark et al., 2010). It may also be for this reason that person-centered, strengths-based treatment approaches (Murphy et al., 2009; Thompson et al., 2009) were associated with attendance on the basis that they are more conducive to the development of the therapeutic relationship than problem-focused/deficits approaches.

Client characteristics, therapist characteristics, and treatment factors associated with participation or involvement. Client demographics associated with participation or involvement were investigated in only four studies (Bowersox et al., 2013; Fiorentine et al., 1999; Joe et al., 1999; Wagner et al., 2003) but in two studies (Bowersox et al., 2013; Fiorentine et al., 1999) the operational definitions of participation reflected assessments of attendance, not participation (please refer to Tables 1 and 2, appendices A and B, for operational definitions). Being older was negatively associated with attendance at mental health appointments and being younger was positively associated with participation in a parenting program (Wagner et al., 2003). However, Fiorentine, Nakashima and Angling (1999) found age, race, education, employment, and relationship status were unrelated to involvement in substance abuse treatment. Certain demographics may be characteristic of particular client groups and treatment settings, but the findings suggest that client demographics may be of little use in predicting those more likely to participate in treatment.

Unlike the generally positive associations between clients' needs for treatment and attendance, the majority of factors relating to clients' needs for treatment were negatively associated with participation or involvement. Anxiety (Greener et al., 2007; Simpson et al., 2009), avoidance (Edelman & Chambless, 1995), hopelessness (Fiorentine et al., 1999), hostility, risk-taking (Greener et al., 2007; Simpson et al., 2009) and medical comorbidity (Bowersox et al., 2013) were all related to decreased participation or involvement. This indicates that clients' problems bring them to treatment but tend to have an adverse effect on their abilities to become involved in treatment. However, there were inconsistent findings with regards to depression, which was positively associated with involvement in mental health appointments (Bowersox et al., 2013) but unrelated to participation in CBT (Edelman & Chambless, 1995; Granholm et al., 2006). Although there were different treatment settings in each study, clients' responsivity to treatment has been argued to vary as a function of depression (Zettle, Haflich, & Reynolds, 1992). It is plausible that when depression does have an influence on participation, the relationship may be curvilinear; i.e. depression and participation might positively correlate up to a certain point, but beyond which depression negatively impacts upon clients' capacities to be involved within treatment. There may be a similarly complex relationship between substance use and involvement. Negative associations (Bowersox et al., 2013) and positive associations were found, but only among females (Fiorentine et al., 1999). However, females have been found to engage more in treatment

with different characteristics related to their engagement than males (Fiorentine, Anglin, Gil-Rivas, & Taylor, 1997; Staton-Tindall et al., 2007), indicating the complexity of engagement.

As was the case with the attendance studies, factors relating to clients' capacities to address their problems were positively related to participation, including decision-making, social consciousness (Simpson et al., 2009), perceived utility of treatment services (Fiorentine et al., 1999), expressions of affect and optimism (Allen et al., 1984), and behavioral coping skills (Granholtm et al., 2006). Although cognitive insight at baseline among clients with schizophrenia was not related to participation, participation was associated with increased cognitive insight among clients with schizophrenia as a function of treatment (Granholtm et al., 2006). Therefore, clients' insight may be initially irrelevant to participation but become increasingly relevant as their insight develops through treatment. Motivation is particularly likely to change as a function of treatment and how it relates to participation, which may explain the mixed findings. Treatment readiness (Joe et al., 1999; Simpson, Joe, Knight, Rowan-Szal, & Gray, 2012; Simpson et al., 2009) and higher levels of integrated motivation (Klag et al., 2010) were positively associated with involvement, but so was legal pressure (Joe et al., 1999) and higher levels of external motivation (Klag et al., 2010). Amotivation (client perceives no control over behavior) was not related to participation (Klag et al., 2010), indicating that this treatment standpoint is not necessarily detrimental to clients' involvement. The mixed findings may reflect the assessments of these factors, particularly motivation, at only one, varying time point during the course of treatment (Greener et al., 2007; Joe et al., 1999; Klag et al., 2010; Simpson et al., 2009), but they also reflect that factors such as motivation should not be regarded as a fixed trait, but a dynamic treatment target to enhance participation.

The findings of associations between therapist characteristics and participation or involvement were consistent. Clients' perceptions of therapists' qualities such as their acceptance and understanding, commitment, motives to act in the clients' best interests (Allen et al., 1984), compassion (VanDeMark et al., 2010), empathy and interpersonal skills (Allen et al., 1984; Boardman et al., 2006; Moyers et al., 2005) were all positively associated with participation. These therapist qualities in turn are likely to influence the development of a stronger therapeutic alliance (Fiorentine et al., 1999; Lecomte et al., 2012), which along with nearly all the treatment factors investigated, was unequivocally, positively related to participation or involvement. The development of a stronger therapeutic alliance may depend on therapists' perceptions of institutional resources (Simpson et al., 2009) and mutual support among staff (Greener et al., 2007), which were also positively associated with client involvement, indicating the overarching influence of the organization on clients' participation. However, specific behaviors such as motivational interviewing behaviors (MI); asking open-ended questions, affirming statements and listening reflectively (Miller & Rollnick, 2002) were not associated with involvement (Boardman et al., 2006). Furthermore, Moyers et al. (2005) found that MI inconsistent behaviors of confronting and warning clients was *positively* associated with involvement, but only when these behaviors were combined with therapists' empathy, acceptance, and egalitarianism. These findings indicate that confrontation may be an important catalyst for greater involvement in some cases but this relies on the interpersonal skills of the therapist in developing a strong

therapeutic relationship to manage and support this behavior, because this may only work if clients perceive this to be in their best interests (Allen et al., 1984).

Client characteristics, therapist characteristics, and treatment factors associated with homework compliance. Client demographics related to homework compliance were only investigated in three studies (Gonzalez et al., 2006; Graff et al., 2009; Wagner et al., 2003). Women completed more homework than men in alcoholism treatment (Graff et al., 2009), which is consistent with the findings that women were also more likely to attend (VanDeMark et al., 2010) or be involved (Joe et al. 1999) in substance abuse treatment. However, and perhaps counter-intuitively, neither education (Gonzalez et al., 2006; Wagner et al., 2003) nor fear of negative evaluation in CBT (Edelman & Chambless, 1995; Westra et al., 2007) was related to homework compliance. As homework is defined by CBT therapists as emphasizing clients' responsibilities for change and increasing their adaptive skills (Kazantzis & Dattilio, 2010, p.765), this may dispel concerns therapists may have that a lack of education or fear of failure presents a barrier for homework compliance.

Fear of negative evaluation was among a variety of factors relating to clients' need for treatment investigated in relation to homework, but the associations between these factors and clients' needs for treatment is not straightforward. Dependent personalities (Edelman & Chambless, 1995) and having a partner who accepts and/or encourages alcohol misuse (Graff et al., 2009) were positively associated with homework compliance, but symptom severity (Graff et al., 2009; Granholm et al., 2006), personal fear, social avoidance, distress (Edelman & Chambless, 1995) and depression (Burns & Nolen-Hoeksema, 1991; Burns & Spangler, 2000; Edelman & Chambless, 1995; Gonzalez et al., 2006; Graff et al., 2009) were unrelated to homework compliance. It is difficult to establish a pattern from these findings, but it may be the case that while clients' needs for treatment tend to positively impact upon their attendance and negatively impact upon their abilities to participate within treatment, their needs for treatment do not have the same impact on their efforts outside of the treatment environment. Clients' home-life and personal circumstances may harness a variety of factors that influence their efforts to complete homework, but which have less of an influence on attendance or participation within the treatment environment.

Similarly to the attendance and participation studies, the majority of factors relating to clients' capacities to address their problems were positively associated with homework compliance. Greater belief and intention to complete treatment (Hebert et al., 2010), acceptance of the treatment rationale (Addis & Jacobson, 2000), greater skill acquisition (Granholm et al., 2006) and greater social support (Hebert et al., 2010) were all positively related to homework compliance. However, as with the participation studies there were mixed findings in the associations between motivation and homework compliance that may be the consequence of single, self-report assessments. Clients' willingness to try new strategies (Burns & Nolen-Hoeksema, 1991), willingness to engage in relevant activities (Neimeyer et al., 2008) and clients' motivation (Graff et al., 2009; Westra, 2011) were all unrelated to homework compliance. However, observations of clients' resistance did predict homework completion (Westra, 2011), which suggests that observational assessments of clients'

behaviors in treatment may be more beneficial to assessing clients' motivation and likelihood of homework compliance.

A notable gap in the homework research is the lack of focus on associated therapist characteristics and treatment factors, which were investigated in only three studies (Burns & Nolen-Hoeksema, 1992; Magen & Rose, 1994; Westra & Dozois, 2006). Homework compliance was significantly higher among clients assigned to behavioral skills training rather than problem-solving training (Magen & Rose, 1994), but what may be of greater importance than program orientation is how homework is introduced to clients. Positive associations were found between homework compliance and therapists' empathy (Burns & Nolen-Hoeksema, 1992) and the use of motivational interviewing (Westra & Dozois, 2006), which requires therapists' empathy and compassion (Catley et al., 2006; Moyers et al., 2005). Therefore, while greater examination of the treatment factors associated with homework compliance is required, there is an indication that therapist characteristics influencing motivation may be of greater relevance to homework compliance than program factors, and requires further research.

Client characteristics, therapist characteristics, and treatment factors associated with the therapeutic relationship or counselling rapport. The majority of studies investigating the therapeutic relationship focused on clients' needs for treatment and their capacities to address their problems, the former of which produced some mixed findings. Psychological distress (Principe et al., 2006), anxiety and depression (Simpson et al., 2009) were unrelated to the therapeutic relationship, whereas low anxiety, low depression (De Bolle et al., 2010; Simpson & Joe, 2004), low hostility (Simpson et al., 2009), low risk-taking (Simpson & Joe, 2004; Simpson et al., 2009) but greater medical comorbidity (De Bolle et al., 2010) were positively associated with counseling rapport. Inconsistent findings may be due to an assessment of the therapeutic relationship at only one time point (Principe et al., 2006) but variations may also depend on how much emphasis there is on the development of this relationship, which was greater among clients with greater personality pathologies and interpersonal problems but less so among clients with greater expressed aggression (Kuutmann & Hilsenroth, 2012). It is likely that the symptoms of particular dysfunctions that are inherently antisocial (e.g. hostility, aggression) naturally pose a challenge to the development of the therapeutic relationship, whereas it is easier among clients with greater capacities to address their problems, such as social compliance (Simpson & Joe, 2004), treatment compliance (Goldberg et al., 2013), and confidence (Kuutmann & Hilsenroth, 2012; Simpson & Joe, 2004; Simpson et al., 2009). The findings indicate that motivated, pro-treatment clients are easier to work with but these clients are also likely, by virtue of their higher capacities to address their problems, to provide higher ratings of the therapeutic alliance.

As might be expected, most therapist characteristics, including therapists' reassurance, care, compassion and empathy (Korfmacher et al., 1998; Palmstierna & Werbart, 2013) were positively associated with the therapeutic relationship. Clients' perceptions of therapists as professional and skilled (Palmstierna & Werbart, 2013) and ratings of therapists' psychodynamic interviewing 'style' (Multon et al., 1996) were positively associated with the therapeutic alliance, but the use of specific strategies (Multon et al., 1996), ratings of therapists' competencies (Trepka et al., 2004) and a greater focus on the development of the client-

therapist relationship (Kuutmann & Hilsenroth, 2012) were not related to the therapeutic alliance. These findings indicate that as with participation (e.g. Boardman et al., 2006) the therapeutic relationship may be more related to therapists' characteristics and therapeutic style than their use of particular treatment strategies, and that it develops naturally rather than because of conscious efforts on the part of therapists. Similarly to participation, counseling rapport was greater in strengths-based approaches (Murphy et al., 2009; Thompson et al., 2009), which are non-confrontational (Berg & De Jong, 1996; Miller & Rollnick, 2002) and consequently more conducive to the development of a therapeutic alliance. Therapists' perceptions of institutional resources, cohesion, autonomy and communication (Greener et al., 2007; Simpson et al., 2009) were also related to counseling rapport, indicating the importance of perceived organizational support.

Summary. Few factors relating to the engagement variables were investigated in more than one study (see Tables 3, 4, and 5 in the appendices) therefore replication studies are required to substantiate the findings. Collectively, however, the studies indicate that most client demographics were unrelated to attendance or participation. Factors relating to clients' needs for treatment were positively associated with attendance, negatively associated with participation, and highly equivocal in their associations with homework. Lower symptomatology was positively associated with the therapeutic relationship, but antisocial symptoms were negatively associated with it. Clients' capacities to address their problems, therapist characteristics, and treatment factors (particularly the therapeutic relationship) all appear to be positively related to attendance, participation and homework, although therapist and treatment factors associated with homework are greatly under-researched.

Discussion

Operational Definitions and Assessments of Engagement

The various operational definitions and assessments of engagement employed in the studies reviewed reflect a lack of clarity in the role of engagement-related variables. Therefore a model is proposed that characterizes the role of the engagement variables. Engagement determinant variables comprise inter-related variables that influence clients' engagement. In contrast, engagement process variables: attendance; participation or involvement; homework or practice are behaviorally-based; i.e., they represent clients' efforts within and between sessions toward the achievement of change across the course of treatment. Attendance is a requirement for participation and homework/practice, which are of equal importance in reflecting engagement. These engagement process variables lead to engagement outcome variables: treatment satisfaction and degrees of changes (treatment outcomes, such as a reduction in depression or an increase in self-esteem).

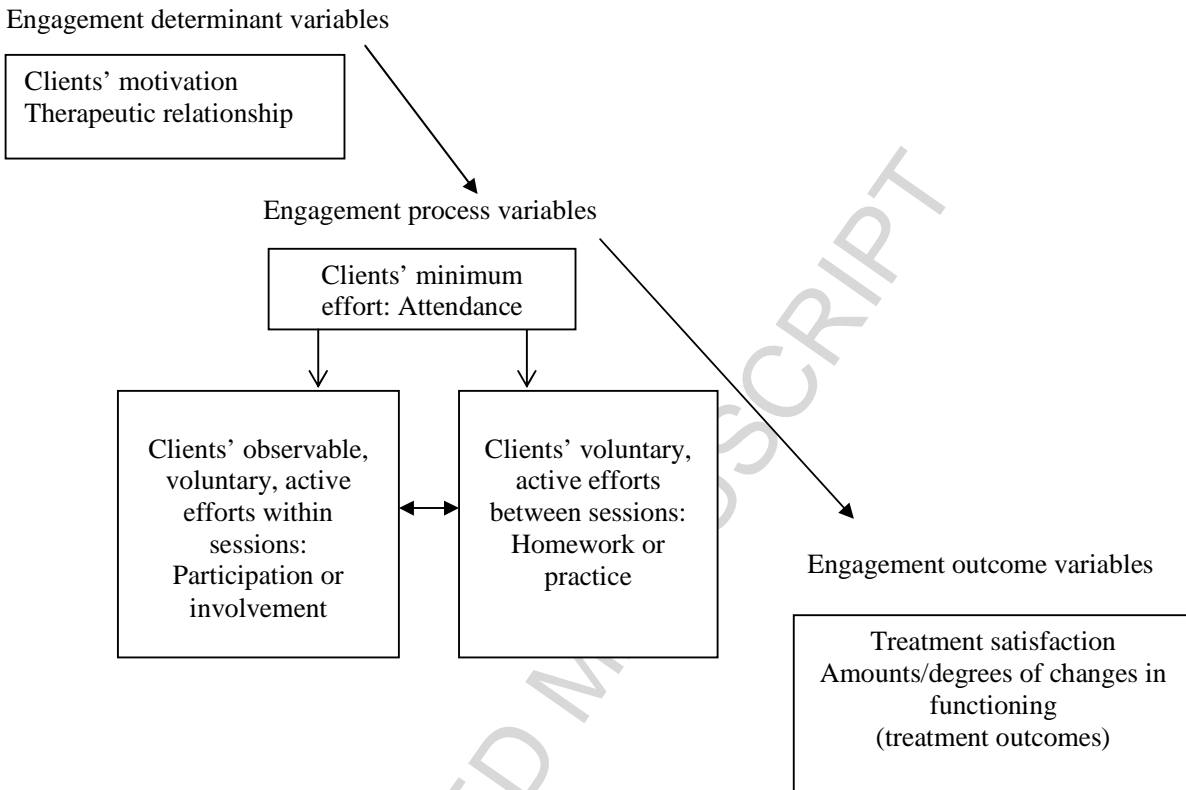


Figure 1. Model of client engagement in psychotherapy

Attendance alone was employed to define engagement in over a third of the engagement-defined studies or incorporated within multifaceted definitions of engagement. The findings of an association between attendance and other engagement variables such as participation (e.g. Thompson et al., 2009; Wagner et al., 2003) or the therapeutic alliance (e.g. Joe et al., 1999; Lecomte et al., 2012) were equivocal, which suggests that the relationship between attendance and engagement is complex. Attendance may only link with treatment outcomes through its association with other engagement variables. It may be important in as much as it provides the opportunity for other engagement process variables to occur (e.g. participation or involvement), but it does not guarantee that they *will* occur. Consequently, attendance is of limited use when assessing the process of engagement in treatment. However, attendance should be considered an engagement process variable on the basis it represents the minimum but necessary effort clients make toward treatment. Participation or involvement was the most common engagement variable among the studies reviewed and was assessed by all three measures employed. The conflation of the terms participation, involvement and engagement indicates that engagement has generally been conceptualized as clients' behavioral contributions to treatment (Drieschner et al., 2004). But participation or involvement may specifically refer to clients' observable, voluntary active contributions within sessions, while engagement is the overarching process that also encompasses between session contributions and efforts toward change. Participation or involvement as restricted to clients' in-session contributions should not undermine the complexity of participation or

involvement, which represents an important, multifaceted engagement process variable requiring strict operational definitions and taxonomy for assessment. The types of participation or involvement expected to be in evidence are likely to depend on the type of psychotherapeutic intervention. Even cognitive effort must still be made evident through action (e.g. through discussion), i.e. regardless of the type of participation or involvement there must be some clear and identifiable signs so that practitioners know what to look for to infer the degree to which clients are engaged in the treatment process.

Homework has been found to be directly associated with treatment outcomes (for a recent meta-analysis see Mausbach, Moore, Roesch, Cardenas, & Patterson, 2010) yet it was only incorporated within assessments of engagement in five studies. There may be limitations in employing homework as a proxy for engagement on the basis that clients may reject homework for a number of reasons, such as beliefs in non-compliance, or a fear of failure (Kazantzis, Deane, & Ronan, 2004). In turn, clients may comply with homework as a matter of social desirability (Persons, 1989) rather than engagement. This may have led to reluctance among researchers to employ homework as a proxy for engagement, but homework, or more usefully, any treatment-related efforts clients make between sessions that impact their day-to-day functioning, i.e. toward the achievement of change, represents their engagement. As with participation, efforts between sessions represent not only a useful opportunity to infer engagement, but also enhance it. Whether homework invokes non-compliance or a fear of failure in clients is likely to depend on how it is introduced by therapists' and clients' perceptions of its relevance to the issues that brought them to treatment. Any treatment-related efforts clients make between treatment sessions, not just those prescribed through treatment, should be conceptualized as part of the engagement process that can be incorporated in to treatment sessions through discussion and reflection, integrating with clients' in-session participation.

The therapeutic relationship was only employed to define or assess engagement in nine studies; however, across all the studies reviewed, the therapeutic relationship was the most commonly investigated treatment factor in terms of its associations with other engagement variables. In his early work, Frank (1961) proposed that all clients experience demoralization, which is their perceptions of failure to tackle their symptoms, representing an obstacle to their recoveries. Remoralization occurs through therapists' suggestions and persuasion, regardless of the form of psychotherapy, which mobilize clients' strengths to tackle their problems (Frank 1991). The combination of clients' hopes and faith, and therapists' suggestions and persuasion are some of the universal operative constituents of treatment (Frank, 1991). A benign, helping relationship supports clients toward recommitting to necessary changes (Frank, 1991). Consequently, the therapeutic relationship has long since been intuitively recognized as the most catalyst for clients' achievement of change and thereby important to engagement. If clients' efforts within and between sessions toward change is what constitutes their engagement, the therapeutic relationship might be the essential treatment component that has the necessary diffuse influence on engagement.

Measures of engagement reflect the differences in conceptualizations of what constitutes the process of engagement and what influences it. For instance the CEST (Joe et al., 2002) assesses counseling rapport and treatment satisfaction (arguably engagement determinant and outcome variables respectively), which are

not assessed by either the TER (Drieschner & Boomsma, 2008) or the TES (Tait et al., 2002). As the measures were developed in different treatment settings, there may be limitations to their general use; however, they propose generic features of engagement, such as efforts to change behavior and reflecting between sessions (TER) that can be adapted to apply to any treatment setting. The use and adaptations of measures should ideally account for any efforts clients make in order to avoid confining measures to that of treatment compliance, not engagement. With the exception of the TER (Drieschner & Boomsma, 2008), the designs of engagement measures do not appear to have involved the use of applied methods such as structural equation modeling (SEM) to discern the latent constructs underlying engagement (although the use of SEM has been applied to discerning relations between early engagement and treatment recovery: Simpson & Joe, 2004). This is perhaps the most useful methodological approach for the future development of engagement measures, by testing the causal relations among engagement-related variables, engagement determinant, engagement process, and engagement outcome variables. There is also a demand for exploratory approaches to establish the nature of client engagement and distinguish it from compliance. The findings of the four qualitative studies provide some support for the variables employed to define or assess engagement, and the importance of the therapeutic relationship and therapist qualities consistent with the therapeutic alliance (Horvath et al., 2011) to engagement. But 'Look for more' (Wagner et al., 2003) captured an important aspect of engagement thus far overlooked, which may represent an important difference between engagement and compliance.

Associated Client Characteristics, Therapist Characteristics, and Treatment Factors

Client demographics may be frequently relied upon to predict treatment outcomes but nearly all the demographic factors assessed produced equivocal findings in terms of how they were related to the engagement variables. This is partly due to few demographics being investigated by more than one study, but the few consistent findings indicate that clients' educational attainments are unrelated to engagement, but it may still be important to match treatment with clients' learning styles (for a review of the responsivity principle in substance abuse programs see Prendergast, Pearson, Podus, Hamilton, & Greenwell, 2013). Females tend to engage more in substance abuse treatment than males (e.g. Graff et al., 2009). Females have been found to benefit more than males from substance abuse treatment (Marsh, Cao, & Hee-Choon Shin, 2009) and psychotherapeutic treatment (Braun, Gregor, & Tran, 2013; Karatzias et al., 2007; Tarrier, Sommerfield, Pilgrim, & Faragher, 2000) through higher levels of motivation (Tarrier et al., 2000), greater treatment needs (Marsh et al., 2009) and therefore, quite plausibly, greater treatment engagement. A review by Meier, Barrowclough and Donmall (2005) showed that client demographics did not appear to predict the therapeutic alliance, but motivation and treatment readiness did. Consequently it might be psychological factors related to demographic factors that are of importance to engagement variables rather than the demographic factors themselves.

Factors relating to clients' needs for treatment were generally equivocal in their associations with engagement variables, but three tentative conclusions are proposed to explain these mixed findings. First, each of the factors investigated are likely to, and indeed should, fluctuate as a function of treatment, and therefore how they relate to engagement is likely to change. For example, anxiety and depression levels at

baseline may not relate to engagement but become negatively related as treatment progresses (Burns & Spangler, 2000; Simpson & Joe, 2004), requiring repeated assessments to infer their associations with engagement. Second, the extent to which these factors initially relate to engagement depends on their bearing on clients' functioning in treatment, which in turn depends on the treatment setting (e.g. individual or group settings) and context (e.g. motivational enhancement therapy or behavioral activation therapy) which has implications for practitioners (discussed below). Third, the extent to which factors relating to clients' needs for treatment are associated with engagement is likely to be moderated by factors relating to clients' capacities to address their problems.

A much clearer trend was evident between factors relating to clients' capacities to address their problems, which were generally positively related to engagement; however, motivation produced some equivocal findings. Notwithstanding the fact that motivation is dynamic and susceptible to change as a function of treatment, the determinants of motivation are also likely to differentiate clients' motivation to engage in treatment. Drieschner et al. (2004) identified six internal determinants of motivation including level of suffering and outcome expectancy (a key concept within the theory of planned behavior). Clients' suffering may motivate them toward treatment but other determinants such as their outcome expectancies may influence whether or not this is the case (and therefore help explain the equivocal associations between clients' needs for treatment and engagement). However, the generally positive associations between clients' capacities to address their problems and engagement, along with the positive associations between therapists' perceptions of clients as more attractive or improving during treatment and attendance (e.g. Ammerman et al., 2006; Tryon, 1986), suggests that such clients may become a self-fulfilling prophecy, i.e. they may receive greater attention and encouragement in treatment. The issue of concern that needs to be considered is that clients who are less attractive or less motivated may receive less attention and encouragement, leading to lower levels of engagement, yet they may well be the clients most in need of treatment.

Practically all of the therapist characteristics and most of the treatment factors were positively related to engagement, but they also particularly advocate the importance of therapists' characteristic; i.e. interpersonal skills or therapeutic style over therapeutic behaviors or strategies. Strengths-based approaches to treatment (motivational enhancement, solution-focused therapy) versus traditional approaches and group settings versus individual settings seem to provide the therapeutic context for better engagement, perhaps because they foster peer support and therapist qualities related to engagement. The relevance of the therapeutic relationship to engagement is perhaps unsurprising given the generally consistent findings of positive associations between the therapeutic alliance and clients' treatment outcomes (Martin et al., 2000), but it is likely that clients' engagement mediates this association. For instance, clients who are motivated may be more encouraged in treatment, leading to the development of a strong therapeutic alliance. This in turn enhances clients' attendance and participation, which then have a direct, positive impact on treatment outcomes. Clients' engagement may, to an extent, rely on their perceptions of therapist qualities and a strong therapeutic relationship, consequently the powerful influence therapists have on clients' engagement in any treatment setting should not be overlooked.

General Limitations

There are two main limitations to this review. Firstly, the review has only captured research where the specifically-termed variables underpinning the definitions and assessments of engagement were investigated. For instance, the terms therapeutic relationship and counseling rapport employed in the engagement-defined studies were then employed in the second search to capture studies assessing associations with client characteristics and treatment factors. While this captured some of the studies assessing the therapeutic or working alliance (Horvath & Greenberg, 1994), these specific terms were not employed in the search, because these terms had not been employed to define engagement in the studies reviewed. Consequently the review only partially represents the literature that has documented the therapeutic relationship, or therapeutic/working alliance, the full extent of which was beyond the scope of this review. There are existing reviews and meta-analyses that have shown that a weak therapeutic alliance is associated with attachment avoidance and attachment anxiety (Bernecker, Levy & Elison, 2014), while a strong therapeutic alliance is associated with a secure attachment style (Diener, Hilsenroth & Weinberger, 2009; Smith, Mfseti & Golding, 2010), motivation, treatment readiness, positive treatment experiences (Meier, Barrowclough & Donmall, 2005), and therapists' empathy (Feller & Cottone 2003), all of which are consistent with the findings of this review (Korfmacher et al., 1998; Lecomte et al., 2012; Palmstierna & Werbart, 2013; Simpson et al., 2009).

The second limitation was that the very nature of the review led to a diverse range of client characteristics and treatment factors investigated in relation to engagement, requiring an imposed taxonomy for interpretation. Any taxonomy of these factors determines the extent to which some of the findings appear equivocal or unequivocal, which in turn informs the authors' interpretations. For instance factors were broadly grouped into those relating to clients' need for treatment, and those relating to clients' capacity to address their problems. However, factors classified as the latter (e.g. coping strategies) may also have qualified as the former and vice versa (e.g. hopelessness). The authors' intentions were for a conceptually useful taxonomy by differentiating between those factors that bring clients to treatment in the first place, and those related to the processes of treatment and outcomes

Future Research Directions

The model for client engagement proposed at the start of the discussion seeks to clarify the role of engagement-related variables. Future research might consider applying methods such as structural equation modelling to clarify causal relations among latent variables underpinning engagement. Assessments of engagement should be behaviorally-based, or a combination of behavioral assessments and interviews to explore clients' experience of engagement/disengagement (e.g. Frankel & Levitt, 2009) during treatment in order to infer the extent to which clients are engaged. Greater exploration of clients' treatment experiences in different settings is also warranted to discern the different types, scope, and nature of efforts clients make toward the achievement of change (particularly between sessions). This may go some way toward developing more inclusive conceptualizations of engagement, assessments that measure engagement more than compliance, and providing practitioners with a more comprehensive picture of what to look for and explore in treatment.

Implications for Practice

Client demographics and historical factors may be of little use in predicting engagement in treatment. Clients with greater needs for treatment may be more motivated to engage, but quite conceivably this is because of the presence of other factors relating to their capacities to address their problems. Therefore, these factors represent important treatment targets, i.e. motivation should be regarded as a treatment target, not a treatment requirement. But more than any client characteristic, therapists may have the greatest influence on clients' engagement.

The therapeutic relationship should take center stage in engaging clients regardless of the type of intervention or psychotherapeutic orientation. Therapists need to perceive support from their organization in order to develop relationships with clients and maximize their engagement. Therapists' interpersonal skills and therapeutic style should be considered to be of greater importance to this end than particular therapeutic strategies. This might mean that the treatment approach should not be overly prescriptive and allow therapists some flexibility and autonomy in the delivery of treatment. Therapists should support or, if necessary, challenge clients' beliefs about change and focus on clients' efforts between sessions during treatment. Clients are more likely to participate in treatment and make efforts between sessions, if the two domains are aligned. Clients should be provided with opportunities as part of treatment, to reflect and evaluate their progress and consider the extent to which they feel confident they are able to integrate any treatment efforts within their day-to-day functioning. This might reveal the extent of their engagement and provide therapists with important opportunities to enhance it.

Conclusion

Engagement is a multifaceted process influenced by a variety of inter-relating client and therapist characteristics, and treatment factors but inconsistent definitions and assessments have generated confusion as to the precise scope and nature of the engagement process, or how the state of being engaged in treatment should be characterized. Researchers are likely to assess particular engagement proxies that are theoretically linked to an intervention they are evaluating, but defining them as engagement is insufficient for a multifaceted process. Furthermore, what are intuitive determinants of engagement (e.g. therapeutic relationship, readiness to change) are employed to assess engagement, thereby only assessing a likelihood of clients engaging, not whether they actually do. Engagement in treatment requires behavioral assessments rather than assessments of intentions that account for *any* efforts clients make *within* and *between* sessions toward change in order to more reliably infer the extent and nature of clients' engagement.

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Appendices

Appendix A

Table 1. Summary of samples, treatment types, and how engagement and other factors were defined or assessed in the engagement-defined studies

Authors	Sample & treatment type	Research aim	Operational definition/ assessment of engagement
<i>Engagement as attendance</i>			
Ammerman et al. (2006)	515 mothers in a community-based home visitation program	Predictors of early engagement	Length of time active in program in first year, number of home visits received, gaps in service
Geers et al. (2009)	Study 1: 95 students – nutrition education Study 2: 91 students - psychotherapy	Study 1: Influence of goal importance on dispositional optimism and program interest Study 2: Influence of goal importance on dispositional optimism and attendance to psychotherapy	Study 1: Treatment interest Study 2: Treatment attendance
Granholtm et al. (2006)	32 outpatients with schizophrenia attending Cognitive Behavioral Skills Training	Contribution of participation, homework, cognitive insight and skill acquisition to change	Attendance to > 50% sessions
Joe et al. (1999b)	396 clients attending methadone treatment	Model testing of treatment process and outcomes	Number of sessions attended during the first 90 days of treatment
Noel and Howard (1989)	418 outpatients attending a psychotherapy program	Effect of the same or different therapist at intake on attendance	Remaining in treatment beyond eight sessions
Simpson et al. (1995)	557 clients attending methadone maintenance programs and 34 counsellors	Differences in psychosocial and behavioral functioning over time in treatment, and as a function of level of attendance	Number of sessions attended in first 90 days low engagement = 3-5 sessions medium engagement = 6-8 sessions high engagement = 9 or more sessions
Simpson et al. (1997)	527 clients attending methadone treatment	Model testing for time in treatment	Combined number of group and individual sessions attended during the first 60 days of treatment
Tryon (1985)	3 senior counsellors, 8 students, 2 first-year trainees	The development of the engagement quotient (EQ)	Attendance to at least one session following intake
Tryon (1989a)	5 trainee counsellors, 4 professional counsellors,	Association between attendance and client and counsellor characteristics Difference between professional and trainee	Attendance to at least one session following intake Attendance to at least one session following

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	308 students	counsellors' approach to clients and clients' perceptions of counsellors	intake
Tryon (1989b)	4 trainee counsellors, 5 professional counsellors, 295 students	Difference between professional and trainee counsellors' and male and female counsellors' approach to clients	Attendance to at least one session following intake
Tryon (1992)	5 trainee counsellors, 5 professional counsellors, 163 students	Association between attendance and therapist ratings of client attractiveness	Attendance to at least one session following intake
Tryon and Tryon (1986)	43 trainee counsellors	Association between attendance and trainee characteristics	Attendance to at least one session following intake
VandeMark et al. (2010)	157 clients attending a technology-supported substance abuse intervention	Differences in characteristics of engagers and non-engagers and clients' intervention experience	Service contact: engagers = 3 or more contacts, non-engagers = 2 or less contacts
Wang et al. (2006)	30 clients attending family therapy	Associations between attendance and clinic, therapist, and client factors	Non-engagement: non-attendance following schedule of first appointment
<i>Engagement as participation</i>			
Baydar et al. (2003)	607 mothers attending a Parent Training Program, 275 controls	Influence of maternal mental-health risk factors on participation and training benefit	Attendance, parent discussion and involvement: Weekly session observations and records of homework completed.
Boardman et al. (2006)	46 clients attending a smoking cessation trial	Associations between ratings of therapist and client behaviors	Patient involvement dimension of the VPPS ^{hhh}
Dingle et al. (2008)	24 clients attending an open-group CBT substance misuse program	Levels of motivation to participate in CBT with music	Self-rated levels of motivation to participate and enjoyment
Fiorentine et al. (1999)	302 clients attending outpatient drug-free programs	Client and treatment factors associated with participation	Average number of weekly counselling sessions in which client participated multiplied by number of weeks in treatment
Frankel and Levitt (2009)	9 clients and 8 therapists from community and University centers	Model of clients' disengagement in therapy	Disengagement: when clients withdraw, distance, or lessen their intensity of involvements
Joe et al. (1999a)	1362 long-term residential patients 866 outpatient drug-free patients 981 outpatient methadone treatment patients	Model of client retention	Therapeutic involvement (counseling rapport, confidence in treatment, and commitment to treatment) and session attributes (no. of counselling sessions plus no. of times drug addiction or related health topics or other topics were discussed in first month).
Klag et al. (2010)	350 resident clients from 6 therapeutic communities	Model of the predictors, motivation roles and	Personal involvement subscale of TES ^{ff}

Client engagement with treatment

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(Westra & Dozois, 2006)Moyers et al. (2005)	for substance abuse 103 clients attending substance abuse counselling	affects Model of the relationship between therapist skills and behaviors and client involvement	Observations of active involvement, expression of interest, and seeking of information
Nelson and Borkovec (1989a)	30 Generalized Anxiety Disorder clients attending cognitive or nondirective therapy	Dimensionality and stability of participation	Self-ratings of engagement in therapy activities as dimension of participation
<i>Engagement as homework compliance or practice</i>			
Baydar et al. (2003)	607 mothers in a Parent Training Program, 275controls	Influence of maternal mental-health risk factors on participation and benefit of training	Attendance, parent discussion and involvement: weekly session observations, and records of homework completed Percentage of homework completed
Graff et al. (2009)	102 women and partners attending alcoholism treatment	Predictors of retention and engagement within couple and gender-specific treatment	
Korfmacher et al. (1998)	228 mothers in a nurse home visitation program	Program involvement factors relating to outcomes	Attention, interaction with facilitator, understanding of program materials, amount of problem-solving practiced
LeBeau et al. (2013)	84 clients with anxiety disorder attending CBT or attendance and commitment therapy	Association between compliance and homework, and prediction of outcomes by compliance and homework	Homework rated by therapist after each session
Westra and Dozois (2006)	55 clients with an anxiety disorder receiving MI then CBT or CBT alone	Effectiveness of MI as pre-treatment to CBT for anxiety disorders	Treatment completion and client and therapist rated homework compliance (effort, amount of homework, and amount of time spent on homework)
<i>Engagement as the therapeutic relationship or counseling rapport</i>			
Dowling and Cosic (2011)	15 counsellors, 475 gamblers	Prediction of outcomes by engagement variables, therapist-rated and therapeutic alliance	Client-rated and therapist-rated therapeutic alliance, client attendance, and therapist-rated client commitment
Korfmacher et al. (1998)	228 mothers in a nurse home visitation program	Program involvement factors relating to outcomes	Attention, interaction with facilitator, understanding of program materials, amount of problem-solving practiced
McFarlane et al. (2010)	48 home visitors, 328 mothers attending the HSP ¹	Associations between therapeutic relationship and home visitors' and mothers' attachment security	Dose of visits received, maternal trust in home visitor, home visitor's response to IPV and poor maternal health
Murphy et al. (2009)	114 combat veterans attending a PTSD clinic	Randomized control trial of a PTSD motivation enhancement group	Problem-specific readiness to change: URICA ^{zz} , genera readiness to change: Treatment program

Simpson and Joe (2004)	711 patients attending outpatient methadone treatment	Models of relationships among pre-, process, and treatment outcomes	evaluation and perception of program relevance, attendance and dropout rates, group-specific engagement: WAI-S-C ^{gg} Attendance and counsellor ratings of counselling rapport
<i>Measures of engagement</i>			
Greener et al. (2007)	3475 clients & 531 staff across 163 substance treatment units	Associations between client motivation, psychosocial functioning, staff attributes, organizational climate, and client engagement	Participation, treatment satisfaction, counseling rapport: CEST ^{ll}
McMurran et al. (2013)	38 clients attending Personal Concerns Inventory-based Motivational Interview plus treatment, 38 clients attending treatment	Feasibility study for a randomized control trial evaluating the effects of Personal Concerns Inventory-based Motivational Interview	Participation, constructive use of sessions, openness, efforts to change behavior, efforts to improve socio-economic situation, making sacrifices, goal directedness, reflecting between sessions: TER ^s
Simpson et al. (2007)	59 counsellors, 1147 clients attending substance abuse treatment	Impact of innovative processes on training ratings and progress in adopting innovations	Participation, treatment satisfaction, counseling rapport: CEST ^{ll}
Simpson et al. (2009)	1539 clients, 439 staff across 44 substance treatment units	Comparison of US and UK data on associations between client motivation, psychosocial functioning, staff attributes, organizational climate, and client engagement	Participation, treatment satisfaction, counseling rapport: CEST ^{ll}
Tait et al. (2003)	50 in-patients diagnosed with schizophrenia	Influence of recovery style on engagement	Availability for visits, collaboration, help-seeking, adherence: SES ^{sss}
Thompson et al. (2007)	42 intervention families, 41 comparison families	Comparison of retention in solution-focused family therapy and treatment as usual	Participation, treatment satisfaction, counseling rapport: CEST ^{ll}
<i>Qualitative studies</i>			
Godlaski et al. (2009)	12 women in a substance abuse treatment	Grounded theory	Defined by clients as being respected, listened to, and understood by counsellors
James et al. (2006)	7 therapists, 7 clients in a psycho-educational family intervention	Grounded theory	Defined by therapists as 'The careful establishment of a trusting relationship involving a commitment to an agreed piece of work'
Thompson et al. (2007)	19 families in a family therapy intervention	Content analysis	Defined by clients as being listened to, understood, and accepted by, calm, non-judgemental, friendly, genuine therapists
Wagner et al. (2003)	24 home visitors and 667 families from PAT ^{kkkk} sites	Exploratory study resulting from a randomized experimental study	Five dimensions: 'say yes'; 'be there'; 'be involved'; 'do the homework'; 'look for more'

Appendix B

Table 2. Summary of samples, treatment type, and how variables were defined or assessed in the engagement proxy studies

Authors	Sample and treatment type	Research aim <i>Attendance</i>	How attendance was defined or assessed
Bogenschutz et al. (2006)	952 outpatients, 774 post-inpatients attending cognitive behavioral, motivational enhancement therapy or twelve step facilitation Alcoholics Anonymous	Structural equation modelling to evaluate role of self-efficacy on changes in drinking	Form- 90 ^{bbb} AA attendance divided by number of days in assessment interval
Collins et al. (2012)	95 homeless individuals receiving substance abuse treatment	Generalized estimate equation modelling exploring relationships between motivation attendance and treatment outcome	ASI ^{aaa} : Substance attendance treatment in past 30 days
Dale et al. (2011)	422 clients with alcohol problems attending motivational enhancement therapy and 320 attending social behavior and networking therapy	Prediction of attendance by client characteristics	Number of sessions attended
Jones (2001)	112 clients with schizophrenia attending computer-only, nurse-only, combination intervention, or no intervention	Difference in attendance and outcome	Completion rates
Kay-Lambkin et al. (2011)	97 clients with depression attending brief, therapist delivered, or computer-based intervention	Comparison of acceptability of treatment across different modalities	Number of sessions attended
Kwan et al. (2010)	106 clients with major depressive disorder attending psychotherapy or receiving pharmacotherapy	Effects of treatment preference on attrition, alliance, and depressive symptoms	Percentage of attended sessions
Lambert et al. (2002)	1020 clients attending a University Counselling center and 49 counsellors with or without feedback on clients' progress	Effects of feedback about clients provided to therapists on clients' attendance and outcomes	Number of sessions attended
Lecomte et al. (2012)	36 clients with psychosis attending group interventions	Prediction of attendance and participation by therapeutic alliance	Percentage of attended sessions
Magen and Rose (1994)	56 parents of children with problem behaviors	Comparison of problem-solving versus behavioral skills training	Observational ratings of clients' attendance
Presnell et al. (2012)	111 rural, older clients (63 African-American, 48 white) attending CBT	Effects of race/ethnicity match between client and therapist on process and outcomes	Number of sessions attended
Principe et al. (2006)	91 clients with psychological distress attending psychotherapy	Associations between stages of change, alliance, and psychological distress	Return for a second session
Pulford et al.(2011)	109 clients in an outpatient alcohol and other drugs treatment service	Prediction of treatment assistance aspirations by attendance	< 5 appointments vs. 5+ appointments
Whipple et al. (2003)	981 clients attending a University Counselling center 48 therapists with or without feedback on clients' progress	Effects of feedback about clients provided to therapists and clinical support tools on clients' attendance and outcomes	Number of sessions attended

Zemore (2012)	200 clients in an outpatient program for substance abuse	Prediction of attendance by psychosocial factors	Number of sessions attended
<i>Participation or involvement</i>			
Allen et al. (1984)	Transcripts of 16 sessions of psychotherapy	Reliability assessment of a therapeutic alliance scale	Behavioral collaboration
Bowersox et al. (2013)	7408 discharged veterans attending mental health appointments	Factor analysis of scale to measure treatment satisfaction and participation	Attendance to follow-up appointments
Buirs and Martin (1997)	6 clients in substance-abuse treatment	Comparison of clients' EXP scores in relation to negative-self or positive-self role-play	EXP ^{pp} (progression of client involvement with inner referents)
Edelman and Chambless (1995)	52 clients attending CBT for social phobia	Relationship between adherence to group CBT and outcomes	Therapists' ratings of adherence to role-play and participation in the group
Lecomte et al. (2012)	36 clients with psychosis attending group interventions	Prediction of attendance and participation by therapeutic alliance	Therapists' ratings of group participation
Vivino et al. (2009)	14 psychotherapists nominated by peers as compassionate	Interviews to explore conceptualizations of therapists' compassion	Client involvement in the therapy process
<i>Homework compliance</i>			
Addis and Jacobson (1996)	98 clients with depression attending behavioral activation (BA) or cognitive therapy (CT)	Effect of pre-treatment reason giving on process an outcome of BA and CT	Therapists' and clients' ratings of degree to which homework was completed
Addis and Jacobson (2000)	150 clients with depression attending CBT and 4 therapists	Relationship between acceptance of treatment rationale, compliance and change	Therapists' and clients' ratings of degree to which homework was completed
Burns and Nolen-Hoeksema (1991)	307 clients with depression attending CBT	Associations between baseline coping styles and compliance and response to CBT	Therapists' and clients' report of frequency of homework compliance
Burns and Nolen-Hoeksema (1992)	185 clients with depression attending CBT	Associations of therapeutic empathy and homework compliance with clinical recovery	Therapists' and clients' report of frequency of homework compliance
Burns and Spangler (2000)	521 clients with depression attending CBT	Bidirectional causal relationships between homework compliance and changes in depression	Therapists' and clients' report of frequency of homework compliance
Edelman and Chambless (1995)	52 clients attending CBT for social phobia	Associations between adherence to group CBT and outcomes	Therapists' ratings of degree to which homework was completed after each session
Gonzalez et al. (2006)	123 clients attending CBT for substance abuse	Associations between substance use, homework compliance and readiness to change	Average percentage of homework completion as rated by therapist (daily monitoring, coping strategies)
Hebert et al. (2010)	94 clients attending web-based treatment for insomnia	Ability of TPB ^d and TTM ^{mmm} to explain adherence and attrition	Practice of homework (sleep hygiene, relaxation therapy, sleep restriction) at least 4 nights a week
Magen and Rose (1994)	56 parents of children with problem behaviors	Comparison of problem-solving versus behavioral skills training	Observational ratings of clients' report of homework completion
Neimeyer et al. (2008)	46 clients with depression attending CBT and 14 therapists	Associations between willingness to participate, cognitive skill acquisition, homework compliance and treatment progress	Clients' weekly report plus independent ratings as 'complete' or 'not complete'
Westra (2011)	Data from 75 clients with an anxiety disorder	Comparison of observed resistance to self-reports	Clients' ratings on HCS ^{kkk} (single item)

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	attending MI then CBT or CBT alone	of motivation on ability to predict compliance and outcome	assessing degree of completion)
Westra et al. (2007)	67 clients with an anxiety disorder attending CBT	Mediating role of homework between anxiety change expectancy and outcomes	Client rated homework compliance (effort, amount of homework, and amount of time spent on homework)
<i>Therapeutic relationship</i>			
De Bolle et al. (2010)	567 clients with depression receiving supportive therapy, CBT, or psychodynamic therapy with medication and 141 psychiatrists	Prediction of outcomes by therapeutic alliance	HAQ-1 ^{ww} (client and therapist rated)
Goldberg et al. (2013)	37 clients attending smoking cessation therapy	Relationship between therapeutic alliance and outcomes in the context of mindfulness	WAI-G ^{hh} (client rated)
Holmes and Kivlighan (2000)	40 clients attending group or individual counselling	Therapeutic process similarities and differences in group and individual counselling	Relationship climate – GCHIS ^{mm} (ratings of clients' critical incident questionnaire)
Kay-Lambkin et al. (2011)	97 clients with depression attending brief, therapist delivered, or computer-based intervention	Comparison of acceptability of treatment across different modalities	ARM ^c (client rated)
Kuutman and Hilsenroth (2012)	76 clients attending psychodynamic psychotherapy and 26 therapists	Client characteristics and treatment processes associated with focus on early therapeutic relationship	CASF-P ^{dd} (client rated)
Lecomte et al. (2012)	36 clients with psychosis attending group interventions	Prediction of attendance and participation by therapeutic alliance	WAI ^{gg} (client and therapist rated)
Multon et al. (1996)	36 student counsellors and 36 student clients attending TLDP ^{rr}	Development of adherence and alliance among novice counsellors	WAI ^{gg} (client rated)
Palmstierna and Werbart (2013)	11 clients attending psychodynamic therapy and 9 counsellors	Clients' experiences of successful psychotherapy	Clients' perceptions of the successful psychotherapy
Principe et al. (2006)	91 clients with psychological distress attending psychotherapy	Associations between stages of change, alliance, and psychological distress	WAI ^{gg} (client rated after first session)
Trepka et al. (2004)	30 clients attending cognitive therapy and six therapists	Associations between therapist competence, alliance and outcomes	CALPAS ^{yy} and ARM ^c (client rated)

Appendix C

Table 3. Client characteristics associated with variables underlying operational definitions and assessments of engagement

Client characteristics	Engagement variables (number of studies finding an association) and (number of studies finding no association)
<u>Demographics</u>	
Age	(2 ^{ppp cccc}) (2 ^{v ii})
Older	< Participation/involvement (1 ⁱ) > Participation/involvement (1 ^{eeee}) > Homework compliance (1 ^{aa}) < Homework compliance (1 ^{eeee})
Education	(1 ^{cccc}) (1 ^v) (2 ^{z eeee})
> level	> Participation/involvement (1 ^{eeee})
Employment	(1 ^{cccc}) (1 ^v)
Employed	> Attendance (1 ^{ppp})
Unemployed or between jobs	> Therapeutic relationship/counseling rapport (1 ^p)
Gender	(1 ^{ppp})
Female	> Attendance (1 ^{cccc}) > Participation/involvement (1 ⁱⁱ) > Homework compliance (1 ^{aa})
Income	(1 ^{cccc})
> Income	> Participation/involvement (1 ^{eeee})
< Income	> Homework compliance (1 ^{eeee})
Living situation	(1 ^{cccc})
On parole/probation	(1 ^{cccc})
Race	(1 ^{cccc}) (1 ^v)
White versus non-white	> Attendance (2 ^{f ppp}) > Participation/involvement (2 ^{i eeee}) < Participation/involvement (1 ⁱⁱ)
White & African American versus Hispanic	> Homework compliance (1 ^{eeee})
Race/ethnicity match with therapist	(1 ⁱⁱⁱ)
Relationship status	(1 ^v)
Divorced/separated	> Therapeutic relationship/counseling rapport (1 ^p)
More satisfying relationship	> Homework compliance (1 ^{bb})
Children	> Attendance (1 ^{cccc})
<u>Factors relating to needs for treatment</u>	
<i>Historic factors</i>	
Criminal activity	> Attendance (1 ^f) (1 ^{ppp})
Males only	< Participation/involvement (1 ^v)
Females only	> Participation/involvement (1 ^v)
Mental illness	> Attendance (1 ^f)
Mental illness treatment	(1 ^{cccc})
Substance-use treatment	(1 ^{ppp})
No treatment	> Attendance (1 ^{cccc})
<i>Personality factors</i>	

- Personality disorder
 Avoidant personality trait
 Dependent personality trait
Psychological factors
 Anxiety
 < Anxiety
 > Anxiety
 Bipolar disorder
 Chronic mental illness diagnosis (males only)
 Depression
 > Depressive symptoms
 Reduction in symptoms during treatment
 > Reasons for depression (cognitive therapy)
 > Reasons for depression (behavioral activation)
 > Hopelessness
 > Medical comorbidity
 Psychological distress symptoms
 Psychotic symptoms
 Schizophrenia symptoms
Social factors
 Aggression
 Cold/vindictive
 > Hostility
 Parenting practices
 Negative, harsh, inconsistent, ineffective
 Positive, supportive
 Partner who accepts/encourages alcohol misuse
 Personal fear and avoidance
 Social avoidance
 > Risk-taking
Substance/alcohol related factors
 Negative alcohol outcome expectancies
 Substance or alcohol misuse
 males only
 < misuse (motivated clients only)
- > Therapeutic relationship/counseling rapport (1^{tr})
 < Participation /involvement (1^u)
 > Homework (1^u)
 (1^u) (2^u iii) (1^{qqq})
 > Therapeutic relationship/counseling rapport (1^{ooo})
 < Participation/involvement (2^{cc} qqq)
 > Participation/involvement (1ⁱ)
 < Participation (1^v)
 (2^u bb) (6^k 1^m u^{bb} z) (1^{qqq})
 > Participation/involvement (2ⁱ ii) < Participation/involvement (2^{cc} qqq) <Therapeutic relationship/counseling rapport (1^p)
 > Homework compliance (4^k 1^m fff) > Therapeutic relationship/counseling rapport (1^{ooo})
 < Homework compliance (1^a)
 > Homework compliance (1^a)
 < Participation/involvement (1^v)
 < Participation/involvement (1ⁱ) > Therapeutic relationship/counseling rapport (1^p)
 (1^{lll})
 (1^{sss}) (T^{sss})
 (1^{bb}) (1^{bb})
 (1^{tr})
 > Therapeutic relationship/counseling rapport (1^{tr})
 < Participation/involvement (2^{cc} qqq) <Therapeutic relationship/counseling rapport (1^{qqq})
 > Homework compliance (1^z)
 > Homework compliance (1^z)
 > Homework compliance (1^z)
 (1^u) (1^u)
 (1^u) (1^u)
 < Participation/involvement (1^{qqq}) <Therapeutic relationship/counseling rapport (2^{ooo} qqq)
 > Attendance (1^o)
 > Attendance (1^o) (2^{ppp} cccc) > Participation/involvement (1^v) < Participation/involvement (1ⁱ) < Homework compliance (1^{aa})
 (1^z)
 < Participation/involvement (1^v)
 > Homework compliance (1^z)

Factors relating to capacities to address problems*Attitude to problem/treatment*

Acceptance of the treatment rationale/treatment compliance	> Homework compliance (1 ^b) (1 ^{uu}) > Therapeutic relationship/counseling rapport (1 ^y)
Ambivalence about problem	(1 ⁿ)
Avoidant versus active recovery style	< Attendance (1 ^{sss}) < Participation/involvement (1 ^{aaa})
Commitment	(1 ^t)
Perceived barriers to treatment	(1 ^v)
Perceived utility of treatment & ancillary services	> Participation/involvement (1 ^v)
Problem recognition/cognitive insight	> Attendance (1 ⁿ) (1 ^{sss}) (2 ^{bb sss}) (1 ^{bb})
Resistance to treatment	< Homework compliance (1 ^{gggg})
Treatment progress	> Attendance (1 ^u)
<i>Motivation/change</i>	
Change	
Change expectancy	> Homework compliance (1 ⁱⁱⁱⁱ)
Stage of change - contemplative	(2 ^{llll}) > Therapeutic relationship/counseling rapport (1 ^{lll})
Taking steps	> Attendance (1 ⁿ)
Motivation/treatment readiness/willingness/belief and intentions to complete	> Attendance (2 ^{o ppp}) (2 ^{cccc llll}) > Participation/involvement (3 ^{ii cc qqq}) > Homework compliance (2 ^{ee gggg}) (4 ^{k aa fff gggg})
Amotivation	> Therapeutic relationship/counseling rapport (1 ^{qqq})
Motivation (females only)	(1 ^{oo})
< External motivation	> Participation/involvement (1 ^y)
> External motivation	> Participation/involvement (1 ^{oo})
> Integrated motivation	> Participation/involvement (1 ⁱⁱ)
> Integrated motivation	> Participation/involvement (1 ^{oo})
<i>Psychosocial factors</i>	
Basic functional living skills	> Participation/involvement (1 ^{bb}) > Homework compliance (1 ^{bb})
Capacity for attachment	> Therapeutic relationship/counseling rapport (1 ^{vv})
Coping strategies (use of) pre-treatment	(1 ^k)
Decision-making	> Participation/involvement (1 ^{qqq}) > Therapeutic relationship/counseling rapport (2 ^{ooo qqq})
Expression of affect	> Participation/involvement (1 ^e)
Optimism	> Attendance (1 ^w) > Participation/involvement (1 ^e)
Perceived control in immediate social interaction	> Attendance (1 ^f)
Positive life direction	> Attendance (1 ^f)
Self-esteem/efficacy/confidence	> Attendance (3 ^{h o ppp}) > Participation/involvement (2 ^{cc qqq}) (1 ^y) > Therapeutic relationship/counseling rapport (2 ^{ooo qqq})
Skill acquisition	> Participation/involvement (1 ^{bb}) > Homework compliance (1 ^{bb}) (1 ^{fff})
Social connectedness/consciousness/conformity	(1 ^{cccc}) > Participation/involvement (2 ^{cc qqq}) > Therapeutic relationship/counseling rapport (2 ^{ooo qqq})
Social desirability	> Attendance (1 ^{lll})
Social support/network	> Attendance (2 ^{f o}) > Homework compliance (1 ^{ee})

Appendix D

Table 4. Therapist characteristics associated with variables underlying operational definitions and assessments of engagement

Therapist characteristics	Engagement variables (number of studies finding an association) and (number of studies finding no association)
<i>Therapist demographics</i>	
Different to therapist at intake	> Attendance (1 ^{egg})
Experienced	> Attendance (5 ^{www zzz yyy bbbb ffff})
Older	> Attendance (1 ^{aaaa})
<i>Therapists' treatment approach</i>	
> Commitment	> Participation/involvement (1 ^e)
> Interest/motivation	> Attendance (2 ^{yyy xxx}) > Participation/involvement (1 ^{ttt})
<i>Interpersonal style</i>	
> Acceptance/understanding of the client	> Attendance (1 ^{ffff}) > Participation/involvement (1 ^{uuu}) > Therapeutic relationship/counseling rapport (2 ^{uuut x})
> Confronting	> Participation/involvement (1 ^{ccc}) < Participation/involvement (1 ^g)
> Care/compassion/empathy	> Participation/involvement (3 ^{k qq dddd}) > Homework compliance (1 ^k) > Therapeutic relationship/counseling rapport (2 ^{qq iii})
> Collaboration/cooperation/disclosure/expression of affect/egalitarianism	> Participation/involvement (2 ^{qq k})
<i>Interpersonal skills and competence</i>	
> Interpersonal skills and competence	(1 ^{vvv}) > Attendance (1 ^{xxx}) > Participation/involvement (3 ^{ttt qq k}) > Therapeutic relationship/counseling rapport (1 ^{tt})
<i>Perceptions/ratings of the client</i>	
> Clients' improvement	> Attendance (1 ^f)
> Clients' problem as more severe	> Attendance (1 ^x)
> Clients' attractiveness	> Attendance (1 ^{aaaa})
> Feedback on clients' progress	> Attendance (2 ^{tt iiiii})

Appendix E

Table 5 . Treatment factors associated with variables underlying operational definitions and assessments of engagement

Treatment factors	Engagement variables (number of studies finding an association) and (number of studies finding no association)
<u>Treatment referral & treatment preference</u>	
Care information	> Participation/involvement (1 ^l)
Preferred treatment versus non-preferred treatment	> Attendance (1 ^{ss})
<u>Program</u>	
<i>Orientation/approach</i>	
Behavioral skills versus problem-solving	(1 ^{xx}) > Homework compliance (1 ^{xx})
Cognitive behavioral versus supportive therapy versus psychodynamic therapy	(1 ^p)
Motivational Interviewing (pre CBT)	> Homework compliance (1 ^{hhhh})
Pharmacotherapy versus psychotherapy	(1 ^{ss})
Post-traumatic stress disorder motivational enhancement versus psycho-education	> Attendance (1 ^{ffff}) > Therapeutic relationship/counseling rapport (1 ^{ffff})
Solution-focused versus usual family therapy	> Attendance (1 ^{ttt}) (1 ^{ttt}) > Therapeutic relationship/counseling rapport (1 ^{ttt})
<i>Therapeutic strategies</i>	
Asking open-ended questions, affirming statements, Listening reflectively	(2 ^{ccc g})
Focus on the client-therapist relationship	(1 ^{rr})
Psychodynamic strategies	(1 ^{ddd})
Psychodynamic interviewing style	> Therapeutic relationship/counseling rapport (1 ^{ddd})
<i>Content/features</i>	
Cognitive mapping strategies	> Therapeutic relationship/counseling rapport (1 ^{ooo})
Empathy building	> Attendance (1 ^{ppp})
Music incorporated within CBT	> Participation/involvement (1 ^q)
Problem-solving	> Attendance (1 ^{ppp})
Role-play	
Positive possible self	< Participation/involvement (1 ^j)
Negative possible self	> Participation/involvement (1 ^j)
Strategies for making/maintaining changes	> Attendance (1 ⁿⁿⁿ)
Support during crisis	> Attendance (1 ⁿⁿⁿ)
Talking to a professional	> Attendance (1 ⁿⁿⁿ)
Treatment dose (number of sessions and number of times topics discussed)	> Participation/involvement (1 ^{kk})
<u>Treatment environment</u>	

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Computer-based treatment versus therapist delivery
 Group counselling versus individual counselling
 Therapeutic relationship/alliance/counseling rapport

(1^{mm}) (1^{mm})
 > Therapeutic relationship/counselling rapport (1^{rr})
 > Attendance (5^{kk vv ppp i ss})
 > Participation/involvement (2 v^g)
 > Attendance (1^{ccc})

Talking to others

Organization

Institutional resources

Staff attributes

Influence on other staff

Organizational climate

> Participation/involvement (1ⁱ) (1ⁱ) > Therapeutic relationship/counseling rapport (2^{cc qqq})
 (2^{cc qqq}) (1^{qqq}) > Therapeutic relationship/counseling rapport (1^{cc})
 > Participation/involvement (1^{cc})
 (2^{cc qqq}) > Therapeutic relationship/counseling rapport (2^{cc qqq})

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ACCEPTED MANUSCRIPT

Highlights

- There is a lack of definition and theory for client engagement
- Engagement is a multifaceted process influenced by a interrelating client, therapist, and treatment factors
- Clients' greater capacities to address their problems are associated with engagement
- More than any treatment factor, the therapeutic relationship had the greatest influence on clients' engagement
- Research is needed to develop a theory for engagement to help practitioners enhance it