The application of Positive Psychotherapy in mental health care: a systematic review

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Abstract

Context: Positive Psychotherapy (PPT) stems from the positive psychology movement. It is a multicomponent model promoting therapeutic change by developing engagement, pleasure and meaning. There is some evidence it is effective for depression. PPT is recommended as a flexible model that can be applied to other patient groups alongside other treatments approaches. However, it remains unclear which of the many components are applied.

Objective: The aim was to identify how PPT is applied in mental health care.

Methods: We systematically searched online databases including Medline, Embase, PsycINFO, BNI, CINAHL and Cochrane registers (CENTRAL) and completed complementary hand and citation searches. Narrative synthesis was used for analysis.

Results: Twelve papers (from nine studies) were found which widely applied some PPT components (e.g. blessings journal and character strengths) and scarcely applied others (e.g. satisficing plan or family strengths tree). However, papers poorly described the intervention and rationale for applying components.

Conclusions: Given the lack of rationale for applying PPT, further research is needed to establish which components are acceptable and feasible for use in different patient groups and settings.

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Background

Positive psychotherapy (PPT) originates from the positive psychology movement (Seligman, Rashid, & Parks, 2006), a discipline which promotes wellbeing and flourishing in individuals, institutions, and society (Seligman & Csikszentmihalyi, 2000). The focus of the movement is not only to treat mental distress but to ensure people’s lives are productive, fulfilling and utilize talents (Seligman & Csikszentmihalyi, 2000). The conceptual framework of PPT therefore focuses on treating depression by promoting engagement (involvement in daily life), pleasure (positive emotions), and meaning (belonging to and serving something greater than the self) (Rashid, 2015; Seligman et al., 2006). This is in contrast to some traditional psychotherapies which focus on problems, or changing maladaptive patterns of thoughts and behaviors (Seligman et al., 2006). PPT is therefore recognized as a resource-oriented approach aiming to utilize patients’ personal and social resources to promote therapeutic change (Priebe, Omer, Giacco, & Slade, 2014).

There is some evidence that PPT is effective. The complex and multicomponent intervention model, shown in Table 1, was trialed with major depressive disorder and significantly improved symptoms of depression and wellbeing, compared to treatment as usual, or treatment as usual with medication (Seligman et al., 2006). A shorter version of the model was also piloted as group therapy and improved depressive symptoms in students with mild-to-moderate depression (Seligman et al., 2006). Both versions of PPT are described in detail in the original paper (Seligman et al., 2006) and elsewhere (Rashid & Seligman, 2014; Rashid, 2008, 2015). However, further systematic trials are lacking. One impediment to further trials is that there is no clear model of processes or mechanisms of change (Rashid, 2015) which is necessary for the evaluation of complex interventions (Craig et al., 2008). This is important because it can help to clarify how effective different stages of the
intervention are likely to be, and how each component may contribute to improving outcomes. Although the authors suggest the model is flexible and can be adapted to different patient groups (Rashid, 2008) or applied alongside other treatment approaches (Rashid & Seligman, 2014), there is no guidance on this. This had led to adaptations for different populations that vary considerably in structure and content (Schrank, Brownell, Tylee, & Slade, 2014). Accordingly, the aim of the present study is to systematically review how PPT is applied in mental health care, including modifications to the model.

Method

A systematic review was conducted in April 2015 to identify papers using PPT in mental healthcare. A protocol informed by PRISMA guidelines (Moher & Liberati, 2009) was used for the Electronic Database search and hand searches in key journals. Search terms were a combination of MeSH and keywords amended for each database and included positive psychotherapy terms: ‘positive psychotherapy’, ‘positive psychology’ ‘positive psychology interventions’, and key words related to mental illness: ‘schizophrenia’, ‘affective disorder’, ‘anxiety disorder’.

Eligibility Criteria

Studies were included if the majority (at least 50%) of the participants were working age adults (18-65 years) and had either: a) a diagnosis of a mental health condition classified by the treating clinician or researcher, or (b) met criteria for clinical symptoms of a mental health condition on a recognized scale. The cut-off scores used were 16 for the The Center for Epidemiologic Studies Depression Scale (20 items) (Radloff, 1977; Ware, Kosinski, Turner-Bowker, & Gandek, 2002) and 42 for the Form Health Survey(SF-12) Mental Component Summary (MCS-12) (Gill, Butterworth, Rodgers, & Mackinnon, 2007).
To ensure that included papers were similar to the original model a minimum of two components of the original multicomponent PPT (Seligman et al., 2006) had to be present. There was no limitation on study design, comparator, or outcome measurement. The papers had to be in English and published in a peer-reviewed journal.

**Search Strategy and Screening**

The databases searched were MEDLINE, Embase, PsycINFO, British Nursing Index (BNI) and Cumulative Index of Nursing and Applied Health (CINAHL) and Cochrane registers (CENTRAL). Databases were searched from 1998 onwards as this was the inception of the positive psychology movement (Seligman & Csikszentmihalyi, 2000). Web of Science and Google Scholar were used for forward citation searching of the included papers and the original PPT paper (Seligman et al., 2006). The reference lists of all included papers and any systematic reviews were also screened. Secondary hand searches were completed in the Journal of Positive Psychotherapy, Journal of Happiness Studies, Psychology of Well-Being, and International Journal of Wellbeing.

After the removal of duplicates there was a two stage screening process. Firstly, the first author screened all titles and abstracts whilst a second independent researcher (MC) screened a random selection of 25% of titles and abstracts to ensure the consistency of screening. Secondly, full texts were accessed and both researchers independently reviewed all papers. Any disagreements were resolved through discussion. In a number of cases the authors had to be contacted to provide clarification on whether the paper met the eligibility criteria or to provide additional detail. Some authors confirmed this (Cohn, Pietrucha,
Saslow, Hult, & Moskowitz, 2014) and information provided is included in the analysis (Asgharipoor et al., 2012).

**Data Extraction**

Data from each study including details on study design and the intervention were extracted into a Microsoft Excel spreadsheet. Study data included design, recruitment, population, number of participants, comparators, methods, and outcomes. Intervention data was informed by the Template for Intervention Description and Replication (TIDieR) checklist (Hoffmann et al., 2014) and included name, materials, provider, delivery mode, location, duration, intensity, and modification.

**Critical Appraisal**

The TIDieR checklist was also used to assess the quality of the intervention reporting (Hoffmann et al., 2014). Study quality was assessed using tools recommended for qualitative evidence synthesis (Noyes et al., 2015): the Quality Assessment Tool for Quantitative Studies (Effective Public Health Practice Project, 1998) and the Qualitative Checklist (Critical Appraisal Skills Programme (CASP), 2014).

**Analysis**

Narrative synthesis was used to analyze the data, which involves four elements: theory development, preliminary synthesis, exploring relationships within and between studies, and assessing robustness of synthesis (Popay et al., 2006). These elements were not undertaken sequentially but in an iterative process described below.
Some mechanisms of the intervention have been identified (Lyubomirsky & Layous, 2013; Rashid, 2015; Seligman et al., 2006) and were depicted in Figure 1. Tabulation and grouping data were utilized to create a preliminary synthesis of how the PPT model was used, including modifications and additions. This preliminary synthesis was shared amongst study authors for discussion and refinement. The relationships within and between studies were then explored using the visual approach of idea webbing (spider diagram). This helped to conceptualize the application of the components and the similarities and differences between changes to the model across studies. Critical reflections were recorded throughout the synthesis and are reported along with the results, as recommended (Popay et al., 2006).

**Results**

A total of 889 unique references were retrieved and the inclusion process is depicted in Figure 2. After title and abstract screening 821 articles were excluded largely on the basis that they were unrelated \((n=504)\), were not peer reviewed \((n=150)\), involved a non-mental health population \((n=82)\), were not in English \((n=33)\), were not PPT \((n=31)\), did not meet the age criterion \((n=12)\) or were commentaries or reviews \((n=9)\). Sixty-eight full texts were examined, twelve of which were included. A list of excluded studies and reasons for exclusion from this screening stage is available from the authors on request. The twelve papers represent nine unique studies as the WELLFOCUS study was evaluated both quantitatively (Schrank et al., 2015; Schrank, Riches, et al., 2014) and qualitatively (Brownell, Schrank, Jakaite, Larkin, & Slade, 2015; Riches, Schrank, Rashid, & Slade, 2015). The study characteristics, treatment protocol and description of findings are outlined in Table 2. The following results compare the eight PPT adaptations (Asgharipoor et al., 2012; Carr & Finnegan, 2014; Cohn et al., 2014; Huffman et al., 2014; Lambert D’raven et
Application of the PPT Model

Papers often utilized a different format to the original model which delivered individual therapy (Seligman et al., 2006). Instead, the model was modified for use as group therapy in community mental health settings for people with a diagnosis of depression (Asgharipoor et al., 2012; Carr & Finnegan, 2014) or psychosis (Brownell et al., 2015; Riches et al., 2015; Schrank et al., 2015). Components of the model were delivered as a smartphone application (app) for those with depressive symptoms (Roepke et al., 2015). The briefer group therapy model outlined in the original paper (Seligman et al., 2006) was modified for psychosis (Meyer et al., 2012).

Table 3 shows how the original intervention components, 14 therapy sessions and 12 corresponding homework activities, were applied in the studies. It is clear that although these papers all modified PPT they offered fewer components than the original (median 11, range 3-16) over a similar number of sessions (median 12, range 11-28).

The remaining studies did not reference the PPT model but used some of its components alongside interventions from the wider positive psychology movement. Interventions were delivered in a group setting in primary care to those with depressive symptoms (Lambert D’raven et al., 2015). They were also delivered individually with brief therapist guidance on an inpatient ward to people hospitalized due to suicidal ideation or a suicide attempt (Huffman et al., 2014), or without therapist support on a website for people with diabetes who had depressive symptoms (Cohn et al., 2014). On average these studies
offered few PPT components (median 8, range 5-6) over a small number of sessions (median 6, range 3-9).

Table 3 shows that the most often applied components of PPT were the blessings journal, which all studies used and the character strengths and gratitude sessions, which most studies used. Some original intervention components were not applied at all including good vs. bad memories, satisficing vs. maximizing and the family strengths tree. It is also clear from Table 3 that studies mostly used interventions focusing on promoting engagement (median 3.5, range 2-5), rather than interventions focusing on promoting pleasure (median 2 range 0-6) or meaning (median 2.5 range 0-6).

**Modifications to the PPT Model**

Of the studies applying the PPT model (Asgharipoor et al., 2012; Brownell et al., 2015; Carr & Finnegan, 2014; Meyer et al., 2012; Roepke et al., 2015) few provided a rationale for modifying the PPT model (Carr & Finnegan, 2014; Meyer et al., 2012; Schrank et al., 2015). Those which made amendments did so to make the intervention suitable for psychosis (Brownell et al., 2015; Schrank et al., 2015) and schizophrenia (Meyer et al., 2012) or to incorporate it with group cognitive behavioral therapy (CBT) (Carr & Finnegan, 2014). Adaptations were guided either by a literature review (Carr & Finnegan, 2014; Meyer et al., 2012) or by a review supplemented by qualitative interviews and expert consultation (Riches et al., 2015).

For those with psychosis and schizophrenia the resulting adaptations involved omitting interventions that were challenging and possibly unsuitable for this patient group (e.g. satisficing, gift of time) and developing an order of sessions which focused on easier
interventions first (e.g. savoring before forgiveness) (Riches et al., 2015). Given the possible history of trauma in this patient group, the forgiveness letter and optimism exercises were modified to focus more on day-to-day disappointments, rather than more serious transgressions, with a view to minimizing potential distress (Riches et al., 2015). Studies also accommodated more general psychosis-specific challenges such as cognitive impairments, by providing additional experiential and interactive exercises, rather than literacy-based ones. For example, the blessings journal was changed to a good things box for storing mementoes or notes of positive daily events (Brownell et al., 2015) and images were used to elicit character strengths, rather than using the character strengths assessment (Riches et al., 2015). In-session practice was also greatly encouraged, for example the skill of active-constructive responding, i.e. responding enthusiastically to others’ good news was broken into smaller steps, demonstrated, and then role-played during the session (Meyer et al., 2012) or at an end of therapy celebration (Riches et al., 2015).

Where PPT was integrated with CBT, modifications to PPT included focusing the savoring on rediscovering nature, and the gift of time exercise on connecting with the community to increase social networks (Carr & Finnegan, 2014). Although this study incorporated these components the paper does not report how these modifications were decided, or why other components were not used. The remaining studies which altered the PPT model provided no rationale for inclusion or exclusion of components. For example, where PPT was adapted to a smartphone app for depression only three components were offered though no rationale was given for this selection (Roepke et al., 2015). Where PPT was offered as a group therapy for depression (Asgharipoor et al., 2012) the full life session was replaced by an alternative model of happiness; it’s origins are not referenced, nor is a
rationale provided for why this component was amended or why other components were not used.

Where studies offered some components of PPT but did not reference the model, the selection of intervention was usually guided by literature reviews (Cohn et al., 2014; Huffman et al., 2014; Lambert D’raven et al., 2015) supplemented by expert consultation (Huffman et al., 2014). However, only one study (Cohn et al., 2014) provided reference to a methodology paper detailing the development of the intervention (Moskowitz et al., 2012).

**Additions to the PPT Model**

All studies offered additional interventions not present in the original PPT model. Most of the additional interventions could be conceptualized as promoting engagement, pleasure or meaning similar to components from the original model (Seligman et al., 2006)

**Engagement.**

Participants involvement with their lives or absorption in work, leisure or relationships was promoted through interventions such as goal setting, i.e. setting an appropriately challenge yet feasible goal, with the aim of increasing the relevance of and active participation in treatment (Carr & Finnegan, 2014; Cohn et al., 2014; Lambert D’raven et al., 2015; Meyer et al., 2012). To increase positive interactions with the environment participants were encouraged to schedule important, enjoyable or meaningful activities, (Asgharipoor et al., 2012; Cohn et al., 2014; Huffman et al., 2014; Roepke et al., 2015) a technique from behavioral activation (Mazzucchelli, Kane, & Rees, 2010). To increase awareness of character strengths some participants were encouraged to keep a daily strengths journal (Carr & Finnegan, 2014; Cohn et al., 2014). Another addition was to teach
participants about the concept of flow, where time passes quickly when one is fully immersed in an engaging activity (Csikszentmihalyi, 1990), followed by practicing time-control, i.e. attending to one’s experience of the passing of time (Lambert D’raven et al., 2015).

**Pleasure.**

Additional interventions focusing on developing positive emotions in the here-and-now used positive reappraisal, i.e. changing interpretations of daily stressors (Cohn et al., 2014). Another study encouraged participants to use humor in daily life (Carr & Finnegan, 2014). Positive emotions about the future were developed through the ‘best possible selves’ exercise in which participants wrote their vision and goals for the future and how their character strengths may help to achieve this (D’raven et al. 2014; Huffman et al. 2014) or through an undefined optimism exercise (Lambert D’raven et al., 2015). Occasionally, studies tried to promote positive feelings about things that have happened in the past, through the use of positive writing tasks (Lambert D’raven et al., 2015) or considering what they have learnt from grieving following loss (Carr & Finnegan, 2014).

**Meaning.**

Additional interventions sometimes encouraged participants to connect with something greater than themselves. Most often this was through kindness interventions, termed as ‘acts of kindness’ (Cohn et al., 2014; Huffman et al., 2014), or ‘good deeds’ (Lambert D’raven et al., 2015). These were pro-social tasks such as donating blood, or helping a person in difficulty, sometimes recorded in a reflective journal (Cohn et al., 2014; Huffman et al., 2014). The behavioral commitment to value-based activity was also used in which participants selected a guiding principle for their life, e.g. creating beauty, and documented how to achieve this (Asgharipoor et al., 2012; Huffman et al., 2014). Some
studies offered alternative interventions for promoting positive relationships (Carr & Finnegan, 2014; Huffman et al., 2014). For example, identifying (Carr & Finnegan, 2014) or envisaging (Huffman et al., 2014) their best possible social and interpersonal relationships and planning how to achieve these.

**Other interventions.**

A number of other interventions were offered which differ conceptually from the PPT model. Some of these were components of traditional cognitive behavioral therapy (CBT), such as reducing overthinking (Lambert D’raven et al., 2015) challenging negative core beliefs and self-statements and managing catastrophizing, or anger (Carr & Finnegan, 2014). Others were from different theoretical orientations such as from the field of coaching e.g. ‘self-talk’ (Lambert D’raven et al., 2015). Physical activity was also promoted in some studies (Carr & Finnegan, 2014; Lambert D’raven et al., 2015). Many interventions could be conceptualized as ‘third wave’ CBT approaches (Hunot et al., 2013) as they included forms acceptance and commitment therapy (Roepke et al., 2015) and mindfulness (Bolier et al., 2013; Brownell et al., 2015; Carr & Finnegan, 2014; Cohn et al., 2014; Lambert D’raven et al., 2015; Meyer et al., 2012). Mindfulness was included as authors suggested it is useful for the management of psychotic symptoms (Meyer et al., 2012), for chronic stress (Cohn et al., 2014) and depression (Carr & Finnegan, 2014). It was also suggested that practicing mindfulness may facilitate the PPT components as it may allow participants to more easily recognize and appreciate positive events (Cohn et al., 2014), and more easily participate in the savoring activity (Meyer et al., 2012).

**Robustness of Synthesis**
An important factor in a robust synthesis is having clear information on the complex intervention. Although we aimed to minimize bias by clearly defining the intervention, we used the TIDieR checklist (Hoffmann et al., 2014) to identify that many of the primary studies did not provide full information on the intervention rationale or procedures. Although poor intervention reporting is generally an issue across healthcare research, which is why the checklist was recently produced (Hoffmann et al., 2014), it nevertheless limits the robustness of this synthesis. The overall strength of the evidence is moderate.

**Discussion**

**Main Findings**

This systematic review aimed to identify how PPT is applied in mental health care, including modifications to the model. The main finding is that some PPT components were widely applied (e.g. blessings journal, character strengths and gratitude) whilst others were not applied beyond the original study (e.g. satisficing vs. maximizing, good vs. bad memories and family strengths tree). Furthermore, PPT components targeting engagement were applied more often than those promoting pleasure or meaning. It could therefore be concluded that the components of PPT which target engagement, particularly the blessings journal and character strengths, are acceptable and feasible. A secondary finding is that PPT was integrated with a range of additional interventions, many of which were conceptually similar. These may be useful complements to the PPT model.

**Strengths and Limitations**

This study is the first to systematically explore how PPT is applied in clinically relevant populations. The advantages are that it is replicable and provides a critical consideration of the quality of intervention reporting. However, the synthesis is only
Moderately robust and was limited by the fact that few papers provided rationale for applying (or not), or modifying components of PPT. A second limitation is that the study was not able to investigate the factors depicted in Figure 1 related to person and intervention features and person-intervention fit, which could inform how the PPT model is applied (Lyubomirsky & Layous, 2013; Rashid, 2015). For example, baseline affective state may influence the extent to which people can engage with and use certain PPT components. However, a scoping exercise of the data reported in the identified papers found only two moderate quality studies which specifically investigated such factors (Brownell et al., 2015; Huffman et al., 2014), therefore there was insufficient evidence to consider this in the present study. Consequently, further research is needed to understand the application and modification of the PPT model and whether particular components are more acceptable and feasible than others. Despite these limitations the study adds to the literature on PPT and identifies some candidate interventions that may complement the model which is likely to be of use for future researchers and clinicians.

Comparison with Original Model

This paper provides support for the idea that PPT is a flexible model that can be applied with various diagnoses, alongside other treatment approaches as intended (Rashid & Seligman, 2014; Rashid, 2008). However, it has been acknowledged that the mechanisms by which PPT operate have not been systematically identified (Rashid, 2015). The findings support this and indicate that much work needs to be done to establish a model of processes and outcomes necessary for the evaluation of complex interventions (Craig et al., 2008). The following uncertainties need to be addressed. Firstly, the importance of the therapist was originally emphasized (Seligman et al., 2006), however this review identified interventions reporting to adapt PPT without any therapist support (Roepke et al., 2015). By definition
without interpersonal contact this is not psychotherapy, therefore the original model must be explicit about the therapist role. Secondly, PPT aims to attend to both negative and positive emotions (Rashid, 2015), mainly through components such as good vs. bad memories, forgiveness and hope and optimism. However, as these components were rarely, or never, applied in the included studies their importance is unclear and the mechanism related them is called into question. Thirdly, the conceptual similarity between PPT components and practices from other movements such as mindfulness, goal pursuit, values (Schueller & Parks, 2014), behavioral activation (Layous, 2014) and acceptance based approaches (Parks & Biswas-Diener, 2013) has previously been acknowledged and is further supported by the review findings. However, if such interventions are to be substituted with the PPT model, the processes and outcomes must be mapped to ensure that any modifications or additions are appropriate. Finally, it is interesting to note that the most often applied components (e.g. blessings journal, character strengths, gratitude, savoring) mainly constitute those in the group model of PPT (Seligman et al., 2006). It may be that this model is more acceptable or feasible than the longer individual version, but this needs to be established.

Implications for Research and Practice

The main implication for research is that the PPT processes and outcomes need to be mapped. Following this, systematic research must explore how the application of PPT may be affected by person features, intervention features and a person intervention fit (Lyubomirsky & Layous, 2013; Rashid, 2015) and whether certain components are more feasible and acceptable for some people. This is likely to involve in-depth interviews with patients of varying clinical profiles, in different settings. Only once an appropriate and acceptable PPT model is established, can it be rigorously tested in effectiveness trials. This is to ensure good adherence during a clinical trial, so that we can obtain rigorous, high quality evidence on the
effectiveness of PPT. The main implication for practice is that PPT can be modified for a range of patients, treatment modalities and alongside other interventions. However, as the evidence has not yet firmly established effectiveness, the clinical utility of PPT remains uncertain.

Conclusions

Further systematic research is needed to establish which PPT components are acceptable and feasible across diagnostic groups and modalities of delivery. Once the appropriateness of the model is established, and there is a clear model of processes or mechanisms of change, rigorous, high quality efficacy trials can definitively establish whether or not PPT is effective and can enhance mental health care.

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Figure legends

Figure 1. Theory of Positive Psychotherapy

Figure 2. Study selection

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