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Case Report

A Pilot Investigation of the Use of Positive Psychotherapy for People with a First Episode of Psychosis

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Abstract

Objective: Mental health services are placing a greater emphasis on wellbeing and recovery. Services are also prioritizing the early intervention for people with psychosis in order to support mental health and to reduce the negative impact on the person's life. Positive Psychotherapy is the therapy that directly cultivates subjective wellbeing and it also aligns with attaining personal recovery.

Method: A pilot single case experimental design investigated the use of Positive Psychotherapy for people with a first episode of psychosis. Five people (2 males, 3 females) aged between 20 and 47 years, were recruited from the North Dublin Mental Health Services.

Results: Positive Psychotherapy was found to be an acceptable therapy with all of the participants completing the intervention. Some improvements were noted within the daily recording of subjective wellbeing, yet the effect of the intervention was not replicated throughout participants. However, there were differences in relation to how people with higher and lower levels of distress experience Positive Psychotherapy. The findings on the standardized wellbeing measures indicate that people recovering from psychosis can attain subjective wellbeing and to the same level as that recorded within the general population. There was clearly a greater drop in participants' level of distress than an increase in wellbeing on the standardized measures. It may therefore be that distress and wellbeing are distinctive constructs. Reliable change occurred within more people on the clinical measure of distress than on the wellbeing measures, with clinically significant change occurring within most participants. All of the participants' level of functioning also increased following the intervention. It is recommended for future interventions to align people presenting with similar levels of: distress, wellbeing and features of psychosis. It is also suggested to investigate the links or otherwise between the constructs and the mechanisms underpinning the therapy.

Conclusion: There is initial evidence that Positive Psychotherapy is beneficial to the mental health of people recovering from psychosis. This is particularly evident on the standardized clinical measure of distress and in terms of increasing people's levels of functioning. However, further refined research is clearly warranted.

Keywords: Positive Psychotherapy; Subjective Wellbeing; Distress; Functioning; Recovery

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Introduction

Mental health services are placing a greater emphasis on cultivating wellbeing and recovery [29,30]. The majority of evidenced based interventions within services focus on dysfunction and on reducing peoples' levels of distress [37]. It is therefore necessary to create a broader suite of interventions, centring on wellbeing and recovery in order to attain the changes in policy and to add to the interventions that are currently delivered. It is recognized that mental health difficulties and mental health are related, yet separate entities [50]. Thus, the absence of a mental health difficulty does not equate with the presence of the optimal levels of mental health [52]. It also follows that people with severe mental health difficulties or physical health difficulties can work towards and gain wellbeing [5,68]. Attaining this level of wellbeing may indirectly assist with the management of difficulties. Moreover, in line with recovery principles, living well is more than just the alleviation of distress [53] and people too are more than a difficulty experienced. It is also possible for people to psychologically grow from trauma [23] or difficulties and to gain greater insight (into self and other people) as well as higher levels of functioning [10].

Positive Psychology is the scientific study of positive: subjective experiences, individual traits and institutions [60]. This paradigm includes the scientific investigation of wellbeing, and it sets out the theoretical construct and empirically tested Positive Psychology Interventions (PPIs). The seminal positive psychology intervention [59] was underpinned by the authentic happiness theory [64], which has since broadened to the PERMA model [62]. This theory stipulates that subjective wellbeing can be attained through five processes: positive emotions, engagement, relationships, meaning and accomplishment. The original intervention [59] investigated the use of PPIs with the general population, which was found to increase subjective wellbeing and to reduce levels of depression. However, the 'identifying strengths' and 'you at your best' PPIs did not result in significant changes in wellbeing or depression with time. The subjective wellbeing results were largely replicated, however there were some differences noted in relation to the depression findings [26,44]. A consensus has since emerged that subjective wellbeing consists of a cognitive evaluation of life satisfaction in conjunction with high levels of positive affect and low levels of negative affect [20]. There are also advancements with the emergence of the PERMA profiler [9] which maps onto the PERMA model and the associated PPIs.

Positive Psychotherapy is the application of PPIs with clinical populations. In contrast to the majority of therapies which directly centre on what is wrong with people/disorder, dysfunction and reducing distress. Positive Psychotherapy attends primarily to what is right with people and: to the positives within people, to the building of resources and to increasing subjective wellbeing [63]. It therefore directly targets peoples' mental health as opposed to the difficulty. Positive Psychotherapy is also defined by attending positively to the person's personality or sense of self by activating character strengths [51] or enduring traits. Thus, in line with recovery principles people are facilitated to reclaim one's authentic sense of self. Positive Psychotherapy was initially delivered with people with depression and was found to increase wellbeing whilst reducing depression. However, there was no impact on life satisfaction [65]. Reviews with clinical populations indicate that PPIs increase indices of wellbeing whilst reducing depression [11,55,56,70]. However, issues were noted in: detailing theories, delivering a standard intervention and in relation to the measures utilized [41]. Adapting wellbeing measures to clinical populations was also questioned [41].

In considering people with psychosis, the Health Service Executive (HSE) [29] is prioritising improving the wellbeing and recovery of people with a First Episode of Psychosis (FEP) as well as devising and delivering therapies to prevent relapse. It is recognized that timely intervention is critical to improving outcomes [48]. Psychosis is defined by a loss of touch with reality. It encompasses distressing positive and negative symptoms, which negatively effects peoples' functioning [35]. The cause of psychosis remains unknown [54], which impacts on the creation of comprehensive formulations. One perspective postulates that psychosis stems from trauma, whereas another viewpoint stipulates that psychosis is biological. Nevertheless, there is agreement that psychosis can be drug induced and it can also present with dementia [12,13]. There is also agreement that psychosis within mental health services can be effectively managed by offering a combination of: therapies, medications, and assessment within the multi-disciplinary team [47]. The main evidenced based individual psychotherapy for psychosis, is CBT, which is symptom based [47]. The benefit of CBT for psychosis is moderate, with effect sizes of 0.4 or less [72]. Psychologists working with people with psychosis have broadened CBT models to include peoples' strengths [25,31,36,40]. An approach which aligns with the assertions of Beck, Himelstein and Grant (2019) to activate the positive schema of people with psychosis. However, there remains scope to incorporate Peterson's personality assessment [51] into the interventions. It is also intuitive to positively work on peoples' sense of self, considering the reduction of ego strength that is inherent in psychosis. Additionally, when people present with psychological vulnerability, which usually occurs with psychosis, Therapy commences with the installation of resources prior to the processing of major trauma or difficulties. This is also reflective of the increasing emphasis of attending to the functional and social recovery of people with psychosis [2]. Positive Psychologists therefore do not focus on the difficulty unless it is raised by the person attending for therapy. However, it is noteworthy that many people can experience difficulty in consciously accessing and recalling traumatic events [69].

There is a lack of research regarding the subjective wellbeing of people with psychosis and debate in relation to levels of wellbeing that can be experienced. There is evidence that the subjective wellbeing of people with psychosis is reduced in comparison to people not attending services [8]. Alternative research finds that people with psychosis can attain similar levels of subjective wellbeing to that within the general population [39]. There is added complexity to this topic considering that positive cognition and an increase in positive affect occurs within certain presentations, for example when people are presenting with grandiose delusions [27] or during a manic episode [28]. People can also experience comforting spiritual visions and voices [14] including during palliative care [4]. Nevertheless, subjective wellbeing is a distinctive construct and the initial evidence indicates that Positive Psychotherapy with people with psychosis improves wellbeing whilst simultaneously decreasing the distress of psychosis as well as depression [7,43,57,66]. However, Schrank et al. (2016) did not find significant improvements throughout the wellbeing measures [57]. It is noteworthy that the research interventions to date are small in scale and differ from each other in terms of: detailing the theoretical underpinning, the interventions delivered, the for-

mat of the sessions and participants' level of distress. There is also emerging evidence that the use of PPIs is associated with positive self-cognition [40] which is currently unaccounted for within the research interventions. This research therefore specifically investigated the PERMA theory and the associated PPIs as applied to: subjective wellbeing, positive self-cognitions, psychosis and depression. A single case experimental design was utilized, which can evidence the effect or otherwise of the intervention within a small sample. The therapy was delivered on an individual basis with people with a FEP attending a secondary care mental health service. This paper reports on the primary findings. It was hypothesized that:

1. There would be changes and improvement in: positive emotion, life satisfaction and positive self-cognitions following the introduction of the PPIs.

2. There would be an increase in the levels of subjective wellbeing and a decrease in the level of distress on standardized measures.

Method

Design

A single-case experimental design was utilised [3,33]. This examines the effect of the intervention at different baselines and at different points in time [3,33]. This enables change to be attributed to the intervention rather than to time or to chance. It is noteworthy that the research intervention was undertaken during the Covid 19 pandemic which reduced the external events occurring within participants' contexts. The research intervention consisted of: baseline (A), intervention (B), and follow up (C) phases. The baseline phase was at least two weeks in length so as to ensure that there was sufficient data to increase the likelihood of observing stability prior to the intervention.

Participants

Participants were recruited within the North Dublin Mental Health Services. The inclusion criteria included for: (1) people to have experienced a FEP (2) people to have the capacity to consent to and engage with the intervention and (3) for there to be scope to improve subjective wellbeing. The exclusion criteria included: (1) engaging in another psychological therapy or (2) being reliant on illegal substances, which would require management prior to completing therapy. Seven people were screened, five of whom consented to participate in the intervention.

Participant Details

Participants differed in terms of levels of distress and recovery. The Psychotic Symptom Rating Scales [76] was utilized during the assessment in order to elicit the core features of psychosis in conjunction with the: frequency, intensity and level of distress.

Participant 1: Matt (25) experienced delusions which were linked with substance misuse as well as to exposure to traumatic information whilst working within a legal context. The content of the delusions reflected information from this context. Matt gained improvements with his mental health with the medications Olanzapine (10-15mg), Aripiprazole (5-15mg) as well as supportive Psychology sessions. At the time of the intervention Matt: was not experiencing psychosis, was not prescribed medications and was in recovery. Matt was mainly presenting with a fear of reoccurrence, which was negatively impacting on functioning. Matt also presented with a history of early life trauma, some of which Matt was working to fully process.

Participant 2: Tom (31) experienced an episode of psychosis that was precipitated by workplace bullying. This resulted in Tom taking leave from work for several weeks and changing departments. Tom's interpersonal sensitivity could be viewed as a predisposing factor to the psychosis and it is also noteworthy that one of Tom's siblings experiences psychosis. Tom was prescribed Aripiprazole (20mg) throughout the intervention. At the time of the intervention Tom was experiencing negative self-cognitions and paranoid ideation, which were negatively impacting on functioning. Tom was within the clinical range of distress and there was a fluctuation within Tom's mental health during interactions.

Participant 3: Celine (47) experienced domestic abuse for twenty years and decided to end the marriage. This could be viewed from a spiritual perspective of becoming conscious and making life changing decisions. Celine also experienced workplace bullying, which was under investigation. Celine was prescribed Olanzapine (20mg) and Aripiprazole (5mg). The latter of which was added following the midway point of the intervention. At the time of the intervention Celine was presenting with ideas of persecution in conjunction with clinical level of distress. It is noteworthy that Celine linked with the Social Work department during the intervention in order to set out a plan in relation to her son receiving additional support from CAMHS.

Participant 4: Iris (20) previously experienced severe bullying within the school context. Iris was under review and did not complete any other MDT intervention prior to or during the intervention. At the time of the intervention Iris was hearing voices and was within the clinical levels of distress. Iris was also managing continuous academic stressors at college.

Participant 5: Mary (23) experienced a traumatic event within the workplace whereby there was the repeated breaking of Mary's psychological and physical boundaries. This resulted in Mary hearing voices which were linked with this event. Mary was prescribed Olanzapine (5 mg) throughout the intervention. At the time of the intervention, Mary was experiencing residual features of psychosis, with auditory hallucinations occurring at night. Mary was also experiencing negative cognitions in relation to other people and presented with clinical levels of distress.

Individual Daily Measures

Participants recorded responses to the intervention on a daily measure. Prior to the intervention participants set out individualized positive self-cognitions which were recorded throughout the intervention. Participants selected cognitions that were based on the context of their lives and which were reflective of attaining personal recovery. The daily measure also monitored participants' mental health in terms of:

1. Positive emotion and life satisfaction, which was rated on a ten point scale from 0 (low) to 10 (high).

2. Positive self-beliefs, which was rated on a ten point scale from 0 (not at all) to 10 (totally)

3. Global measures of life satisfaction and self-belief which were rated on a scale from 0 (disagree) to 10 (strongly) agree.

Participants also recorded noteworthy events that occurred within the day. Measures of distress were purposely not includ-

ed within the measures so as not to have a negative effect on the cultivation of positive cognition.

Standardized Measures

Brief Symptom Inventory (BSI). [17] This is a fifty-three item measure of the distress associated with: somatization, obsessive compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism and there is also an overall measure of distress. The distress pertaining to each item is rated on a five point scale ranging from 0 (not at all) to 4 (extremely). The inventory has acceptable psychometric properties with a Cronbach alpha of .96 [73].

Brief Core Schema Scales (BCSS) [21]. This is a twenty-four item self-report measure of: negative self-beliefs (e.g. I am unloved), positive self-beliefs (e.g. I am valuable), negative beliefs about other people (e.g. other people are hostile) and positive beliefs about other people (e.g. other people are good). Endorsed items are rated on a four-point Likert scale ranging from (1) believe it slightly to (4) believe it totally. The measure has good internal consistency with Cronbach alphas of .86, .78, .88 and .88 for each subscale respectfully [21].

The Schizophrenia Change Scale (SCS). This is a twelve-item subscale of the Comprehensive Psychopathological Rating Scale [45], which measures features of psychosis including delusions, commenting voices and perplexity.

Positive and Negative Affect Schedule (PANAS) [71]. This is a twenty-item measure of positive and negative affect. Each item is scored on a five point scale ranging from (1) not at all/very slightly to (5) extremely. Cronbach alphas of .89 and .85 are recorded for each subscale respectively [15].

Satisfaction With Life Scale (SWLS) [19]. This is a five item self-report measure of life satisfaction. Each cognition (e.g. I am satisfied with my life) is rated on a seven point Likert scale ranging from (1) strongly disagree to (7) strongly agree. Previous research records a Cronbach alpha of 0.87 [77].

The PERMA profiler questionnaire [9]. This is a twenty-three item measure of subjective wellbeing within five domains: positive emotion, engagement, relationships, meaning and accomplishment. An overall wellbeing score is also calculated which includes an item for happiness. Additional subscales measure: negative emotion, health and loneliness. The questionnaire is researched within an international context and demonstrates acceptable reliability with a Cronbach alpha of 0.94 [9].

Qualitative Data

Participants completed a semi-structured interview following the intervention. This involved an in-depth evaluation of the intervention, including the benefits and the adverse effects of the therapy. The findings of which are detailed elsewhere.

Level of Functioning

Participants' level of functioning was monitored and recorded by the team throughout the intervention.

Intervention

The intervention was based on the original positive psychology intervention [59]. The WELLFOCUS intervention [58] was also reviewed which is specifically designed for people with psychosis. Table 1 details the intervention which was delivered weekly on an individual basis by a Clinical Psychologist with more than twelve years of experience of working with people with psychosis. A person presenting with a second episode of psychosis, reviewed and reflected on the intervention prior to its delivery. Following each onsite session participants signed a clinical note confirming the delivery of the intervention. Four of the participants completed the intervention from June 2021 until October 2021. One participant requested for the intervention to be delivered online as attending onsite was retriggering previous experiences. This online intervention was facilitated from June 2021 until January 2022, with the delivery of sessions eight and nine within the same week.

Table 1: An overview of sessions.

Session	Practice
1. An overview of Positive Psychotherapy. Reviewed Seligman's theories and Peterson's research. Completed the VIA personality assessment.	Acknowledge chosen strengths each day.
2. Reviewed the ethos of Positive Psychotherapy. Feedback the results of the personality assessment. Reviewed top three strengths within Peterson's framework. Practiced acknowledging strengths in session.	Acknowledge strengths each day.
3. Practiced acknowledging strengths within session Set out a plan to use one strength in a new way.	Use a strength in a new way once between sessions.
4. Reflected on the use of the strength. Practiced acknowledging strengths within session. Set out a plan to use another strength in a new way.	Use a strength in a new way once between sessions.
5. Recall a positive memory of you at your best. Linked strengths to the memory. Wrote out the memory and strengths in session.	Remind self of the memory each day between sessions.
6. Reflected on recalling the memory Repeat of session 5	Repeat of session 5.
7. Practiced three good things (metaphor 'Pan for gold') in session. Identify three good experiences. Reflect on why they are meaningful and note experiences.	Practice three good things (Panning for gold) each day between sessions.

8. Repeat of session 7	Repeat of session 7
9. Prepared to deliver a gratitude letter to someone who was particularly kind to you and whom you never properly thanked. Note: the person must be alive and it must be a safe and healthy relationship. Reflected on a specific event that one was thankful for. Choice to: write a letter or a card. Choice to: write only or to write and deliver the letter. Practiced reflecting on and structuring the letter in session.	Write and deliver the letter once between sessions.
10. Reflected on delivering the letter. Practiced gratitude in session. Reviewed Positive Psychotherapy. Set out a plan to continue with practices.	Continue with practices.

Procedure

The research intervention was approved by the Beaumont Hospital Ethics committee. Participants were subsequently recruited from the North Dublin Mental Health Services. Following the referrals a Psychologist: contacted potential participants, screened potential participants, facilitated the consent process and then completed the: baseline, intervention and follow up stages. It is noteworthy that due to annual leave there was a three week break during the collection of the follow up data for Iris. All of the data obtained was deidentified. The research process is detailed in Figure 1.

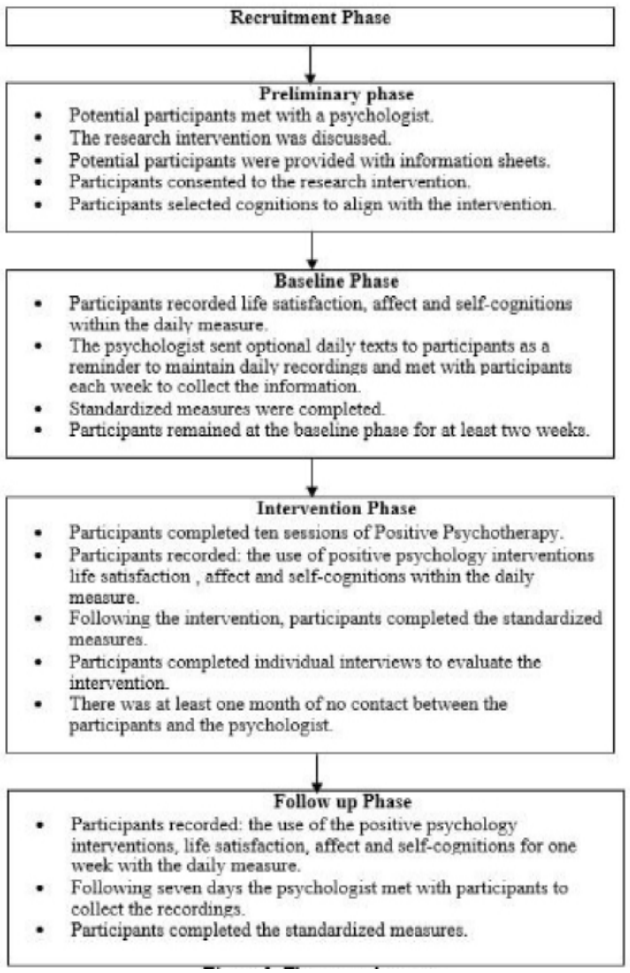

Figure 1: The research process.

Data Analytic Strategy

Visual analysis: Visual analysis is the main method of analysis for single case designs. This enables observation of data variability, trend, direction and change within variables [75]. There was limited missing data within the dataset, which was retained so as not to distort the findings. It is noteworthy that Mary completed a daily measure until week five. The graphs were adapted so that each x axis includes the greatest data point recorded by a participant. The y axis sets out indicators of subjective well-being and individualized positive self-cognitions.

Statistical Analysis

Tau-U [49] calculates non-overlapping data throughout phases, and supplemented the visual analysis. A higher level of non-overlapping data, indicates greater difference in relation to the data within each phase. This statistical method enables a correction of baseline trend, which was applied when significant trend values were higher than 0.3 [49].

Reliable and clinically significant change.

Reliable and clinically significant change [32] regarding the scores on the primary clinical measure (BSI) was calculated via the Leeds reliable index change calculator [46]. Normative data [17] enabled the calculation of both reliable and clinical change. The clinical cut off score, in accordance with Bauer et al (2004) was .61. Reliable change regarding the scores of the PANAS, SWLS and PERMA measure was calculated utilizing normative data from the general population, two of which were student samples. [9,72,74].

Results

Retention Rate

All of the participants completed the therapy. One participant decided not to complete the follow up process. Mary communicated that the therapy was complete and this decision reflected Mary re-establishing boundaries.

Table 2: Summary of TAU analysis for positive emotion baseline v intervention.

Participant	Tau	SD Tau	*p-value*	85% CI
Matt	-0.2656	0.1517	0.0800	-0.484, -0.047
Tom	-0.1713+	0.1533	0.2638	-0.392, 0.049
Celine	0.9325	0.1534	0.0000*	0.712, 1
Iris	-0.0943+	0.1424	0.5080	-0.299, 0.111
Mary	0.5655	0.2017	0.0050*	0.275, 0.856

+ Baseline correction *Significant change.

The baselines for Tom and Iris demonstrated significant trend, which was corrected via the Tau-U statistic. As detailed in (Figure 2), for most participants there was no immediate change in level of positive emotion, following the introduction of the intervention. There was evidence of an increasing trend in most cases with time. The change within the dataset was significant for two participants, Celine and Mary.

Table 3: Summary of TAU analysis for life satisfaction baseline v intervention.

	Current life satisfaction				Global life satisfaction			
Participant	**Tau**	**SDTau**	***p-value***	**85% CI**	**Tau**	**SD Tau**	**p-value**	**85% CI**
Matt	0.0429	0.1515	0.7769	-0.175, 0.261	0.1757	0.1515	0.2460	-0.042, 0.394
Tom	-0.2149+	0.1529	0.1600	-0.435, 0.005	0.1035+	0.1529	0.4985	-0.117, 0.324
Celine	0.9863	0.1504	0.0000*	0.770, 1	0.9497	0.1504	0.0000*	0.733, 1
Iris	-0.207+	0.1432	0.1484	-0.413, -0.001	-0.0561+	0.1424	0.6933	-0.261, 0.149
Mary	0.2833	0.1952	0.1466	0.002, 0.564	-0.0988	0.2029	0.6264	-0.391, 0.193

+ Baseline correction *Significant change.

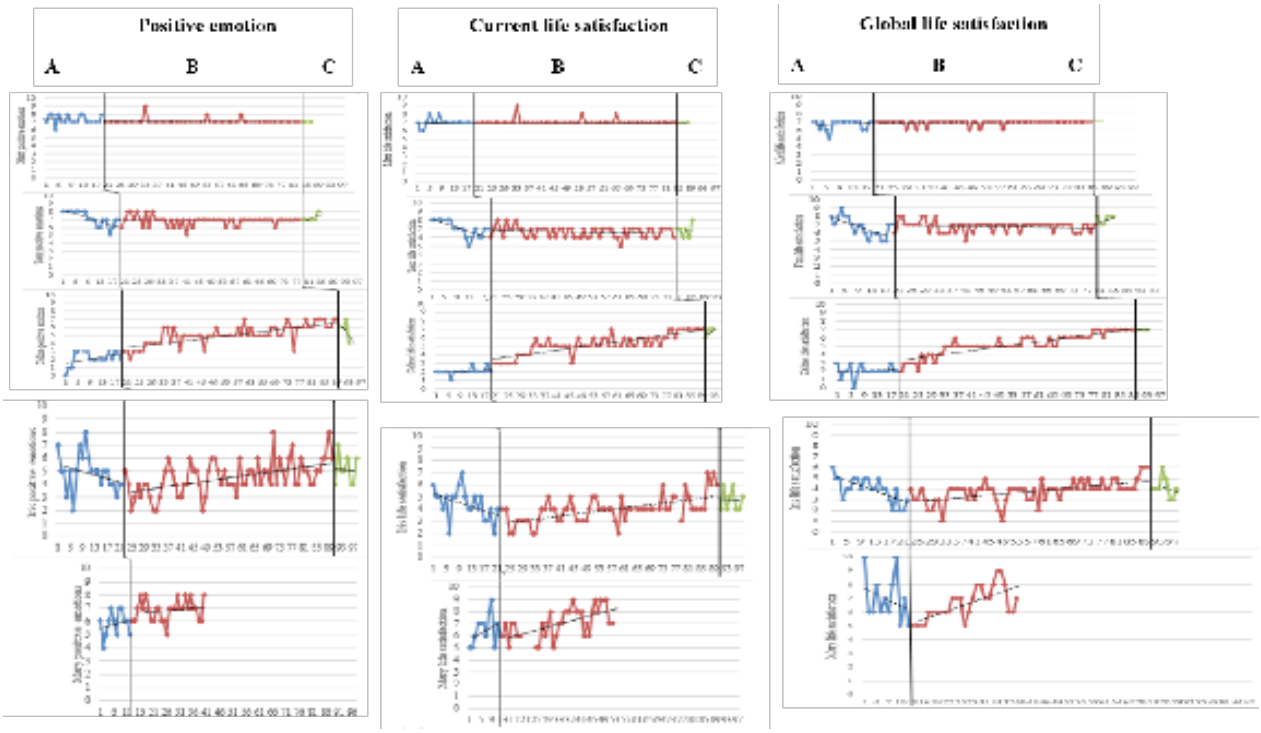

Figure 2: Daily measures of positive emotion, current life satisfaction and global life satisfaction.

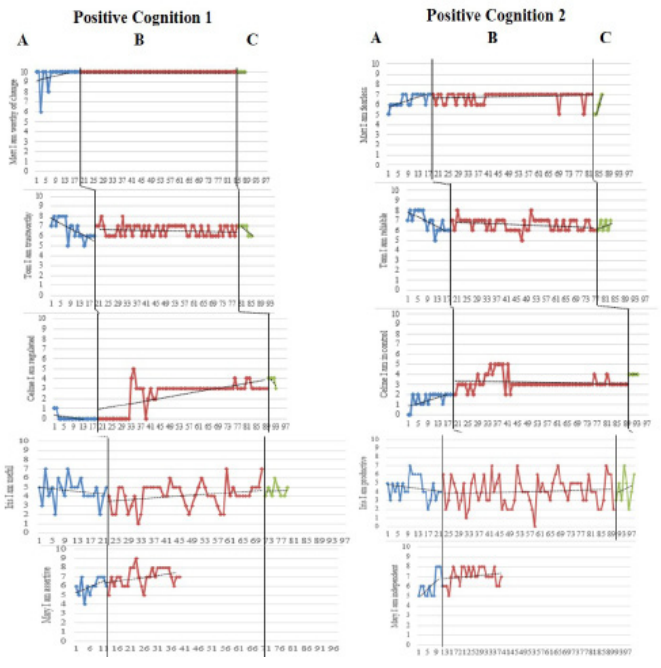

Figure 3: Daily measures of positive cognitions.

The baselines for Tom and Iris demonstrated significant trend, which was corrected via the Tau-U statistic. There was no immediate change in level following the introduction of the intervention for either current or global life satisfaction. In most cases there was evidence of an increase in trend with time. The change within the dataset was significant for Celine.

The baselines for Tom for the first cognition demonstrated significant trend, which was corrected via the Tau-U statistic. There was no immediate change in level following the introduction of the intervention. In most cases there was an increase in trend in time. The change within the dataset was significant for two participants, Celine and Mary. In considering the second cognition, the baselines for Matt, Tom, and Celine demonstrated significant trend which was corrected via the Tau-U statistic. There was no immediate change in level of cognition following the introduction of the intervention. It was clear that there was a combination of changes in trend within the participants. The change within the dataset was significant for Celine and Mary, both of whom demonstrated upwards trends within the data.

Table 4: Summary of TAU analysis for cognition baseline v intervention.

	Cognition 1				Cognition 2			
Participant	**Tau**	**SDTau**	***p-value***	**85% CI**	**Tau**	**SDTau**	**p-value**	**85% CI**
Matt	0.1053	0.1515	0.4871	-0.113, 0.323	0.2491+	0.1550	0.1079	0.026, 0.472
Tom	0.0149+	0.1529	0.9223	-0.205, 0.235	-0.0998+	0.1565	0.5235	-0.325, 0.126
Celine	0.7789	0.1502	0.0000*	0.563, 0.995	0.9083+	0.1502	0.0000*	0.692, 1
Iris	-0.1855	0.1492	0.2137	-0.400, 0.029	-0.1410	0.1424	0.3219	-0.346, 0.064
Mary	0.5123	0.2029	0.0115*	0.220, 0.804	0.4815	0.2029	0.0176*	0.189, 0.774

+ Baseline correction *Significant change.

Table 5: Raw scores for the standardized measures.

	Matt			Tom			Celine			Iris			Mary		
	Phase			**Phase**			Phase			Phase			Phase		
Measure	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
BSI	31	5+	2	44	6+*	0	78	18+*	15	111	65+	54	70	28+*	-
NBS	1	3	2	1	0	0	3	0	0	6	5	0	3	2	-
PBS	14	17	20	12	14	14	9	19	23	1	7	6	16	16	-
NBOP	3	6	6	2	0	0	10	12	3	15	11	7	6	7	-
PBOP	15	18	17	7	12	12	7	17	18	6	11	15	16	12	-
SCS	1	1	0	15	2	0	-	-	-	20	13	8	-	-	-
PA	38	37	38	26	37+	40	18	32+	37	28	29	26	42	42	-
PN	10	11	10	22	21	10	35	17+	11	28	18+	21	15	19	-
SWLS	20	26	24	18	25+	25	10	24+	22	13	20+	18	26	32	-
PERMA	121	128	134	90	110+	118	56	107+	112	77	92	95	118	118	-

Note: BSI: Brief Symptom Inventory; NSB: Negative self-beliefs; PSB: Positive self-beliefs; NBOP: Negative beliefs about other people; PBOP: Positive beliefs about other people; SCS: The Schizophrenia Change Scale; PA: Positive affect; NA: Negative affect; SWLS: Satisfaction with Life Scale; PERMA: Total PERMA score.
+Reliable change
*Clinically significant change

As detailed in Table 5, reliable change in distress occurred throughout participants with clinically significant change occurring within three participants. It is noteworthy that Matt was not within the clinical range prior to the intervention and so it was not possible to observe clinical change. The majority of the post intervention positive affect scores were in line with the mean score of thirty-one reported within the general population [15]. The life satisfaction scores were within the average to extremely satisfied range [18]. These scores are higher than and on par with the scores previously recorded within people with a first episode of psychosis [1,38]. The majority of the PERMA scores are close to the mean of seven that was previously recorded within the general population [9]. As detailed above, in relation to the wellbeing measures, reliable change occurred for more people on the SWLS.

Levels of Functioning

All of the participants' level of functioning increased following the completion of the intervention. For Matt this involved beginning new employment which aligned with his third level education. Tom assumed a role with greater levels of responsibly within the workplace and also reactivated an interest in a water sport. Celine gained improvements in terms of being capable of returning to work. Iris continued to manage her mental health and achieved progress in the management of college stressors. It was agreed for Iris to complete additional Psychology sessions in order to continue to work on improvements. Mary began a new relationship, travelled, and gained new employment, teaching within the community. Three of the participants attained a higher level of functioning than before the episode of psychosis. At the follow up phase, four of the five participants were discharged from Psychology. Matt and Mary were preparing for an immediate discharge from service. Tom was completing a planned discharge from service with a Psychiatric review occurring every two to three months. Iris and Celine continued to attend the Community Mental Health Team.

Discussion

This research intervention was a preliminary investigation of the use of Positive Psychotherapy for people who have experienced a FEP. Positive Psychotherapy was found to be an acceptable therapy, with all of the participants completing the intervention. The daily measures noted some improvements within the indicators of subjective wellbeing, with significant change occurring for more participants within positive emotions and positive self cognitions, than life satisfaction. However, the effect of the intervention was not replicated throughout participants. Nevertheless, there were clearly differences in relation to how people with differing levels of distress experience Positive Psychotherapy. The findings on the standardized wellbeing measures indicate that people recovering from psychosis can attain subjective wellbeing and within the range recorded within the general population. This finding corresponds with the work of Mankiewicz, Gresswell & Turner, 2013, Agid et al., 2012 and Ludwig et al., 2020. There was some evidence of reliable change within the standardized wellbeing measures, with this occurring for more people on the satisfaction with life scale. However, there was greater evidence of reliable change on the standardized measure of distress, which was observed throughout participants. Clinical change also emerged within

the majority of participants. The fact that all of the participants level of functioning increased following the intervention, adds to the evidence base that social recovery is attainable following an episode of psychosis [22], with three people achieving higher levels than before the episode of psychosis. This could be viewed in terms of learned helplessness [61], with people becoming activated through the use of positive cognition.

In considering the daily measures, an immediate increase in levels of subjective wellbeing was not observed within participants following the introduction of the therapy. This can occur within single case intervention with people changing with time. Significant change within the daily recordings of positive emotion and positive cognition occurred within two participants. Significant change regarding life satisfaction emerged within one participant. Ideally, replication occurs within single case methods when significant change is observed throughout three participants. However, there were clearly differences in relation to how people presenting with differing levels of distress experience Positive Psychotherapy. Participants presenting with greater levels of distress, demonstrated more significant increases both in the daily and the standardized measures. This cohort also presented with more scope for improvement prior to the intervention. Conversely, for the participants presenting with less intense levels of distress, the benefit was less evidenced by an increase in level or trend and rather by maintaining stability at a certain level. It is noteworthy that the observation of stability is a key indicator when accessing the mental health of people presenting with psychosis [42].

In considering the overall results, notable change occurred for more people on the standardized measures than on the daily measures. This differs somewhat from a previous CBT single case research intervention which found change on the daily measures of distress but no reliable or clinically significant change on the standardized measures [67]. It is possible that the daily measures and the use of positive cognitions may have been therapeutic as an intervention within itself. Participants completed a fifty-minute Psychology session each week during the baseline phase. Participants were thus involved in a complex interpersonal process that interweaved completing the standardized measures, collecting the daily diaries within the context of a therapeutic relationship. Participants were also motivated to change and were active in setting positive cognitions that aligned with attaining personal recovery. There was clearly a greater drop in distress than an increase in wellbeing on the standardized measures. This is an unexpected finding considering that Positive Psychology postulates that the PPIs increase wellbeing whilst indirectly reducing distress. It may be that distress and wellbeing are entirely separate constructs. Similarly, it was surprising to observe reliable change occurring for more people on the measure of distress than on the measure of wellbeing.

It is noteworthy that the findings of this pilot research intervention must be interpreted within the context of the research limitations. As the first Positive Psychotherapy intervention within the service, it was offered by the team to all people with a FEP attending the service. It is therefore representative of the population. However, the variability within the participants negatively impacts on the undertaking of realistic between participant comparisons. All of the participants presented with positive symptoms, and so the results are not generalizable to people with negative symptoms. In considering complications within the design, there may or may not be issues with contact during the completion of the diaries and measures at the baseline phase. A single case experimental design may also require adapting for people presenting with less levels of distress. This is considering that observing a change in level is a key criteria for this method in observing significant change. Additionally, it is of note that there is a lack of research regarding subjective wellbeing within clinical populations. This contrasts with the robust evidence base pertaining to the clinical measure of distress. Questions remain in relation to the use of general wellbeing measures within clinical populations and to the setting of a cut off score for subjective wellbeing. Clinical change was therefore not investigated on the wellbeing measures. It is noteworthy that this is the first known research invention to utilize the PERMA measure with a clinical population. Whilst this information is informative, it presents issues in terms of interpreting the data in relation to people attending similar services.

In considering future research, it is recommended for researchers to align people with similar levels of wellbeing, distress as well as features of psychosis. There remains a lack of clarity in relation to the linking between wellbeing and distress, and the mechanism of change that is underpinning the therapy. This could be further explored by future research. In light of the early stage of the research field it may be beneficial for researchers to remain exploratory in relation to how the process of therapy may be impacting on people. It is clear that the general measures do detect wellbeing within the population, the use and language of which may facilitate recovery. Such measures may also be therapeutic as an intervention within itself in orientating people to attend to resources and to look beyond the difficulty. This too links with neuroscience and activating global styles of cognition when peoples' cognition is narrowly problem focused [24]. However extensive research is clearly required in order to justify the use of wellbeing measures in practice. In light of the results in relation to the changes in distress, it is suggested for future research to consider adding an item of distress to the daily measures. Similarly, in response to the changes in the levels of functioning it is suggested for future research to include an item of functioning within the daily measures and for a standardized measure to be incorporated into the research.

To conclude this preliminary research intervention evidences that Positive Psychotherapy is an acceptable therapy for people recovering from psychosis. Whilst some improvements were noted within the daily measures, the effect of the intervention was not replicated throughout participants. However, it was evident that there were differences in relation to how people with differing levels of distress experience Positive Psychotherapy. The results indicate that people recovering from psychosis can experience subjective wellbeing and within the range that is recorded within the general population. There was clearly a greater decrease and change in distress than an increase in wellbeing on the standardized measures. It maybe that distress and wellbeing are separate entities. It was also apparent that each participant's levels of functioning increased following the intervention. It is recommended for future research to align people with the similar levels of wellbeing, distress as well as features of psychosis. It is also suggested to continue to investigate the processes that are underpinning Positive Psychotherapy. Further research is clearly warranted, which aligns with the health service objective of improving the mental health, wellbeing and recovery of people attending our services.

References

1. Agid O, Mc Donald K, Siu C, Tsoutsoulas C, Wass C, et al. Happiness in first-episode schizophrenia. Schizophrenia research. 2012; 141: 98-103.
2. Alvarez-Jimenez M, Koval P, Schmaal L, Bendall S, O'Sullivan S, et al. The Horyzons project: a randomized controlled trial of a novel online social therapy to maintain treatment effects from specialist first-episode psychosis services. World Psychiatry. 2021; 20: 233-243.
3. Barlow D, Hersen M. Single case experimental designs: Strategies for studying behaviour for change. Oxford. Pergamon Press. 1984.
4. Barrett W. Death bed visions. London: Methuen & Company Limited. 1926.
5. Barskova T, Oesterreich R. Post traumatic growth in people living with a serious medical condition and its relations to physical and mental health: A systematic review. Disability and Rehabilitation. 2009; 31: 1709-1733.
6. Beck AT, Himelstein R, Grant PM. In and out of schizophrenia: Activation and deactivation of the negative and positive schemas. Schizophrenia Research. 2019; 203: 55-61.
7. Brownell T, Schrank B, Jakaite Z, Larkin C, Slade M. Mental health service user experience of positive psychotherapy. Journal of Clinical Psychology. 2015; 71: 85-92.
8. Broyd A, Jolley S, Johns L. Determinants of subjective well-being in people with psychosis referred for psychological therapy in South London. British Journal of Clinical Psychology. 2016; 55: 429-440.
9. Butler J, Kern ML. The PERMA-Profiler: A brief multidimensional measure of flourishing. International Journal of Wellbeing. 2016; 6.
10. Calhoun LG, Tedeschi RG. (Eds.). Handbook of posttraumatic growth: Research and practice. New York: Routledge. 2014.
11. Chakhssi F, Kraiss JT, Sommers-Spijkerman M, Bohlmeijer ET. The effect of positive psychology interventions on well-being and distress in clinical samples with psychiatric or somatic disorders: A systematic review and meta-analysis. BMC Psychiatry. 2018; 18: 1–17.
12. Collerton D. (Ed.). The neuroscience of visual hallucinations. Oxford: John Wiley & Sons. 2015.
13. Collerton D, Mosimann UP, Perry E. The treatment of visual hallucinations at present and in the future. In Collerton D; Mosimann UP; Perry E, ed. The Neuroscience of Visual Hallucinations. Chichester: Wiley Blackwell. 2015: 321-341.
14. Cook C. Hallucinations and Spiritual Experience: Voices, Visions and Revelation. Royal College of Psychiatrists. 2016. Retrieved from: rcpsych.ac.uk (Accessed 26/07/2022).
15. Crawford J, Henry J. The Positive and Negative Affect Schedule (PANAS): Construct validity, measurement properties and normative data in a large non-clinical sample. British Journal of Clinical Psychology. 2004; 43: 245-265.
16. Department of Health. Healthy Ireland: A framework for improved health and wellbeing 2013-2025. Dublin. Department of Health. 2019.
17. Derogatis LR & Melisaratos N. The brief symptom inventory: an introductory report. Psychological medicine. 1983; 13(3): 595-605.
18. Diener E. Understanding scores on the satisfaction with life scale. Retrieved from: labs. psychology. illinois.edu (Accessed 26/07/2022). 2006.
19. Diener E, Emmons R, Larsen R, Griffin S. The Satisfaction With Life Scale. Journal of Personality Assessment. 1985; 49: 71–75.
20. Diener E, Heintzelman SJ, Kushlev K, Tay L, Wirtz D, et al. Findings all psychologists should know from the new science on subjective wellbeing. Canadian Psychology. 2017; 58: 87.
21. Fowler D, Freeman D, Smith BEN, Kuipers E, Bebbington P, et al. The Brief Core Schema Scales (BCSS): psychometric properties and associations with paranoia and grandiosity in non-clinical and psychosis samples. Psychological Medicine. 2006; 36: 749-759.
22. Fowler D, Hodgekins J, French P. Social recovery therapy in improving activity and social outcomes in early psychosis: current evidence and longer term outcomes Schizophrenia Research. 2019; 203: 99-104.
23. Frankl VE. Man's search for meaning. London: Rider Books. 1946.
24. Fredrickson BL. The broaden and build theory of positive emotions. Philosophical transactions of the Royal Society of London. Series B: Biological Sciences. 2004; 359: 13671377.
25. Freeman D, Pugh K, Dunn G, Evans N, Sheaves B, et al. An early Phase II randomised controlled trial testing the effect on persecutory delusions of using CBT to reduce negative cognitions about the self: the potential benefits of enhancing self confidence. Schizophrenia Research. 2014; 160: 186-192.
26. Gander F, Proyer RT, Ruch W, Wyss T. Strength based positive interventions: Further evidence for their potential in enhancing wellbeing and alleviating depression. Journal of Happiness Studies. 2013; 14: 1241-1259.
27. Garety PA, Gittins M, Jolley S, Bebbington P, Dunn G, et al. Differences in cognitive and emotional processes between persecutory and grandiose delusions. Schizophrenia Bulletin. 2013; 39: 629-639.
28. Gruber J, Johnson SL, Oveis C, Keltner D. Risk for mania and positive emotional responding: too much of a good thing?. Emotion. 2008; 8: 23.
29. Health Service Executive. Mental Health Division. HSE National Clinical Programme for Early Intervention in Psychosis. Dublin. Health Service Executive. 2019.
30. Health Service Executive. Mental Health Division. A National Framework for Recovery in Mental Health. Dublin. Health Service Executive. 2017.
31. Hutton P. Positive clinical psychology and the promotion of happiness, compassion and autonomy in people with psychosis. In A. Wood, Johnson J (Ed.) The Wiley Handbook of Positive Clinical Psychology, (pp 245-260). Oxford: Wiley. 2016.
32. Jacobson, N.S. & Truax, P. (1991). Clinical significance: A statistical approach to defining meaningful change in psychotherapy research. Journal of Consulting and Clinical Psychology. 1991; 59: 12–19.
33. Kazdin A. Single case research designs. New York: Oxford University Press. 1982.
34. Kratochwill TR, Hitchcock J, Horner RH, Levin JR, Odom SL, et al. Single-case designs technical documentation. New York: What Works Clearing House. 2010.
35. Kuipers E, Jolley S, Onwumere J. The Oxford Handbook of Cognitive and Behavioral Therapies. Oxford. Oxford University Press. 2014.

36. Kuyken W, Padesky CA, Dudley R. Collaborative case conceptualization: Working effectively with clients in Cognitive Behavioural Therapy. London: Guilford Press. 2009.

37. Leamy M, Bird V, Le Boutillier C, Williams J, Slade M. Conceptual framework for personal recovery in mental health: systematic review and narrative synthesis. The British Journal of Psychiatry. 2011; 199: 445-452.

38. Ludwig KA, Browne JW, Nagendra A, Gleeson JF, D'Alfonso S, et al. Horyzons USA: A moderated online social intervention for first episode psychosis. Early Intervention in Psychiatry. 2020; 15.

39. Mankiewicz P, Gresswell D, Turner C. Happiness in severe mental illness: exploring subjective wellbeing of individuals with psychosis and encouraging socially inclusive multidisciplinary practice. Mental Health and Social Inclusion. 2013; 17: 27-34.

40. McTiernan K, Gullon-Scott F, Dudley R. An exploration of strength use and its relationship with life satisfaction, positive self-beliefs and paranoid ideation. International Journal of Wellbeing. 2020; 10: 53-70.

41. McTiernan K, Gullon-Scott F, Dudley R. Do positive psychology interventions impact on the subjective wellbeing and depression of clients? A systematic methodological review. Journal of Contemporary Psychotherapy. 2022: 1-13.

42. Meyer A. Outlines of Examinations. New York: Bloomingdale Hospital Press. 1918.

43. Meyer PS, Johnson DP, Parks A, Iwanski C, Penn DL. Positive living: A pilot study of group positive psychotherapy for people with schizophrenia. The Journal of Positive Psychology. 2012; 7: 239-248.

44. Mongrain M, Anselmo-Matthews T. Do positive psychology exercises work? A replication of Seligman et al. 2005. Journal of Clinical Psychology. 2012; 68: 382–389.

45. Montgomery SA, Taylor P, Montgomery D. Development of a schizophrenia scale sensitive to change. Neuropharmacology. 1978; 17: 1061–1063.

46. Morley S, Dowzer CN. Manual for the Leeds Reliable Change Indicator: Simple Excel applications for the analysis of individual patient and group data. University of Leeds, Leeds, UK. 2014.

47. National Institute of Health and Clinical Excellence (NICE). Psychosis and Schizophrenia in Adults: Prevention and Management. London: National Institute of Health and Clinical Excellence. 2014.

48. O'Keeffe D, Kinsella A, Waddington JL, Clarke M. 20-year prospective, sequential follow-up study of heterogeneity in associations of duration of untreated psychosis with symptoms, functioning, and quality of life following first-episode psychosis. American Journal of Psychiatry. 2022; 179: 288-297.

49. Parker RI, Vannest KJ, Davis JL, Sauber SB. Combining nonoverlap and trend for single-case research: Tau-U. Behavior Therapy. 2011; 42: 284–299.

50. Payton A. Mental health, mental illness and psychological distress: same continuum or distinct phenomena? Journal of Health and Social Behaviour. 2009; 50: 213-227.

51. Peterson C, Seligman ME. Character strengths and virtues: A handbook and classification. New York: Oxford University Press. 2004.

52. Keyes C & Martin C. The complete state model of mental health. In M. Slade (Ed.) Wellbeing Recovery and Mental Health. Cambridge: Cambridge University Press. 2017: 86-99

53. Peterson C. A primer in positive psychology. New York: Oxford University Press. 2006.

54. Radua J, Ramella-Cravaro V, Ioannidis JP, Reichenberg A, Phiphopthatsanee N, et al. What causes psychosis? An umbrella review of risk and protective factors. World Psychiatry. 2018; 17: 49-66.

55. Santos V, Paes F, Pereira V, Carrion OA, Silva AC, et al. The role of positive emotion and contributions of positive psychology in depression treatment: Systematic Review. Clinical Practice and Epidemiology in Mental Health. 2013; 9: 221–237.

56. Schrank B, Bird V, Tylee A, Coggins T, Rashid T, Slade M. Conceptualising and measuring the wellbeing of people with psychosis: Systematic review and narrative synthesis. Social Science and Medicine. 2013; 92: 9–21.

57. Schrank B, Brownell T, Jakaite Z, Larkin C, Pesola F, et al. Evaluation of a positive psychotherapy group intervention for people with psychosis: pilot randomised controlled trial. Epidemiology and Psychiatric Sciences. 2016; 25: 235-246.

58. Schrank B, Riches S, Coggins T, Rashid T, Tylee A, Slade M. WELLFOCUS PPT–modified positive psychotherapy to improve wellbeing in psychosis: study protocol for a pilot randomised controlled trial. Trials. 2014; 15: 1-14.

59. Seligman ME, Steen T, Park N, Peterson C. Positive psychology progress: empirical validation of interventions. American Psychologist. 2005; 60: 410-421.

60. Seligman ME, Csikszentmihalyi M. Positive psychology: An introduction. American Psychologist. 2000; 55: 5-14.

61. Seligman ME. Learned helplessness. Annual review of medicine. 1972; 23: 407-412.

62. Seligman ME. Flourish: A visionary new understanding of happiness and wellbeing. New York: Simon to Schuster. 2012.

63. Seligman ME, Rashid T. Positive psychotherapy. In D. Wedding & R. J. Corsini (Eds.), Current psychotherapies (pp.461–449). Cengage Learning. 2014.

64. Seligman ME. Authentic happiness. New York: Simon & Schuster. 2002.

65. Seligman ME, Rashid T, Parks A. Positive psychotherapy. American Psychologist. 2006; 61: 774-778.

66. Sims A, Barker C, Price C, Fornells-Ambrojo M. Psychological impact of identifying character strengths in people with psychosis. Psychosis. 2015; 7: 179-182.

67. Thomson C, Wilson R, Collerton D, Freeston M, Dudley R. Cognitive behavioural therapy for visual hallucinations: an investigation using a single-case experimental design. The Cognitive Behaviour Therapist. 2017; 10.

68. Tse S, Tsoi EW, Hamilton B, O'Hagan M, Shepherd G, et al. Uses of strength based interventions for people with serious mental illness: A critical review. International Journal of Social Psychiatry. 2016; 62: 281-291.

69. Van der Kolk BA, Fisler R. Dissociation and the fragmentary nature of traumatic memories: Overview and exploratory study. Journal of Traumatic Stress. 1995; 8: 505525.

70. Walsh S, Cassidy M, Priebe S. The application of positive psychotherapy in mental health care: A systematic review. Journal of Clinical Psychology. 2017; 73: 638–651.

71. Watson D, Clark LA, Tellegen A. Development and validation

of brief measures of positive and negative affect: the PANAS scales. Journal of Personality and Social Psychology. 1988; 54: 1063-1070.

72. Wykes T, Steel C, Everitt B, Tarrier N. Cognitive behavior therapy for schizophrenia: effect sizes, clinical models, and methodological rigor. Schizophrenia Bulletin. 2008; 34: 523-537.

73. Loutsiou-Ladd A, Panayiotou G, & Kokkinos CM. A review of the factorial structure of the Brief Symptom Inventory (BSI): Greek evidence. International Journal of Testing. 2008; 8(1): 90-110.

74. Pavot W, & Diener E. The Satisfaction With Life Scale and the emerging construct of life satisfaction. The Journal of Positive Psychology. 2008; 3(2): 137–152.

75. Kratochwill TR, Hitchcock J, Horner RH, Levin JR, Odom SL, Rindskopf DM & Shadish WR. Single-case designs technical documentation. 2010. Retrieved from What Works Clearinghouse website: http://ies.ed.gov/ncee/wwc/pdf/wwc_scd.pdf

76. Haddock G, McCarron J, Tarrier N, Faragher EB. Scales to measure dimensions of hallucinations and delusions: the psychotic symptom rating scales (PSYRATS). Psychological Medicine. 1999; 29: 879–889.

77. Pavot W, & Diener E. Review of the satisfaction with life scale. Psychological assessment. 1993; 5(2): 164.