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1. Introduction

The negative symptoms of psychosis have been defined by the National Institute of Mental Health (NIMH) Consensus according to the dimensions of anhedonia and apathy, avolition and asociality, poverty of speech and blunted affect (Kirkpatrick, Fenton, Carpenter, & Marder, 2006). Negative symptoms appear to play a significant role in outcomes for people with psychosis, as they are associated with poorer social functioning, work/school functioning and activities of daily living (Marchesi et al., 2015; Menendez-Miranda et al., 2015; Robertson et al., 2014). Service users have also identified apathy and low motivation as a priority for recovery (Sterk, Winter van Rossum, Muis, & de Haan, 2013). Despite the wealth of evidence highlighting the impact of negative symptoms on recovery, a recent meta-analysis confirmed that available treatments show modest effectiveness at best, with many having no effect at all (Fusar-Poli et al., 2015). This study therefore aimed to investigate the feasibility of a novel, brief psychological intervention for negative symptoms.

Many factor analyses conducted show that negative symptoms are best characterized in two broad categories; 'experiential' negative symptoms such as apathy, anhedonia and asociality and 'expressive' negative symptoms including poverty of speech and blunted affect (Messinger et al., 2011). Experiential negative symptoms have been shown to account for between 7 and 19% of functional outcomes over an 18-month period in people with a diagnosis of schizophrenia, far beyond any other symptomatology assessed (Fervaha, Foussias, Agid, & Remington, 2014). One cognitive model that has been proposed for experiential negative symptoms, specifically reduced approach motivation, is the Temporal Experience of Pleasure Model (Kring & Barch, 2014; Kring & Caponigro, 2010)(see Figure 1).

Figure 1: The Temporal Experience of Pleasure model. Triangles represent pleasure-related processes, ovals represent autobiographical episodic memory and working memory components and rectangles represent motivation and activity (Kring & Caponigro, 2010).

The Temporal Experience of Pleasure (TEP) model proposes an important role for memory in the generation of anticipatory pleasure and subsequent motivation and engagement in activity, particularly episodic memory, which is defined as the memory for specific autobiographical events. These memories for past personal experiences allow the person to figuratively travel back in time to an event that took place at that particular time and place (Tulving, 1972). The TEP model proposes that during an activity the pleasure being experienced is held online in working memory whilst it is encoded into episodic memory. When the opportunity to repeat this, or a similar activity, is presented the individual retrieves relevant episodic memories and holds these representations online in working memory (Kring & Caponigro, 2010). If there is a failure to retrieve the details of a memory or the associated emotion, then this may lead to failure to anticipate pleasure and

motivation to repeat the activity. A recent meta-analysis highlights the following areas where episodic memory retrieval deficits are consistently reported in people with a diagnosis of schizophrenia; memory specificity for past events, richness of memory detail, and conscious recollection (Berna et al., 2016). The findings are mixed, possibly due to the wide range of measures used, but some studies have found a relationship between autobiographical memory deficits and negative and depressive symptomatology in psychosis (Berna et al., 2016; C. L. Harrison & Fowler, 2004).

To date, two intervention studies have investigated episodic memory and negative symptoms. The first primarily targeted the specificity of episodic memory and hypothesised a subsequent reduction in depressive symptoms in people with persistent psychosis. The intervention was conducted in a group format, with an active control condition of occupational therapy and social skills sessions. Participants ($n = 24$), who had low levels of psychosis symptoms at baseline, were initially encouraged to keep diaries with specific daily memories and their associated emotions, which was then extended to memories from childhood, adolescence and adulthood. The intervention improved memory specificity and depression symptoms but there was no subsequent improvement in negative symptoms. However, these were not a primary target of the intervention and were assessed using measures which do not distinguish between expressive and experiential negative symptoms (Ricarte, Hernandez-Viadel, Latorre, & Ros, 2012) which limits the conclusions that can be drawn. Another study targeted the potential causal link between over-general memory and low anticipatory pleasure for future events, one aspect of experiential negative symptoms. The study included 32 participants with schizophrenia-spectrum diagnoses. The results showed that recalling a memory in response to positively valenced event-related cues such as “birthday” or “beach” before completing a prospective task enhances anticipatory pleasure for the future activity (Painter & Kring, 2016). In summary, these studies suggest that memory interventions can improve aspects of memory and mood in people with psychosis. A recent review therefore highlighted the potential for interventions targeting autobiographical memory in psychosis (Ricarte, Ros, Latorre, &

Watkins, 2017). This study is the first to investigate the feasibility of a memory specificity intervention for improving motivation to engage in personally meaningful activities.

There is a growing evidence base for memory specificity training in depression (Dalglish et al., 2014; Hitchcock et al., 2018; Köhler et al., 2015; Neshat-Doost et al., 2012), it has been shown to be effective in reducing depressive symptoms during acute and remission periods. The effectiveness of these interventions in depression, together with the well-established link between these depressive and negative symptoms, suggests investigating memory specificity training in psychosis is warranted. The intervention used in this study will incorporate ideas from the 'MemFlex' therapy protocol, which targets both impaired memory specificity for negative events and memory generalisation for positive events (Hitchcock, Werner-Seidler, Blackwell, & Dalglish, 2017).

This study was conducted as an initial step in the development of this novel approach, and followed a pilot study methodology (Leon, Davis, & Kraemer, 2011; Moore, Carter, Nietert, & Stewart, 2011). The primary aims of this feasibility randomised controlled trial therefore were to establish the clinical feasibility of the intervention, in terms of participant recruitment, completion rates and adherence to the protocol. A secondary aim was to assess acceptability of the intervention and control conditions through participant feedback. The final aim was to provide preliminary estimates of efficacy effects on key outcomes including momentary measures of mood, motivation, and self-efficacy with the potential to inform the design of a future randomised controlled trial.

2. Methods

2.1 Study Design and Procedure

The study had an experimental design with the aim of assessing feasibility, acceptability and deriving preliminary estimates of effects, to potentially inform a larger RCT. The participants were randomized to either the intervention or control condition with a randomisation ratio of 2:1. All research procedures received ethical approval from the London – Camberwell St Giles Research

Ethics Committee (REF: 17/LO/0009) and Health Research Authority (HRA) Approval to be conducted in the NHS. The protocol was registered on clinicaltrials.gov (REF:214063).

The participants completed the clinical assessments in one or two sessions which lasted a total of approximately 60 minutes. Participants were then randomised (2:1 ratio) using the secure online program www.sealedenvelope.com. The intervention (guided recall) and control (basic recall) session took place separately and lasted approximately 45 minutes. In both recall conditions, participants recalled two activities, and completed pre- and post-recall measures for each recollection. The recall sessions were led by the first author (CE).

2.2 Sample

Participants were recruited from inpatient and community services. Clinicians were asked to refer people with psychosis who had relevant difficulties with low motivation. Rehabilitation and recovery teams were particularly targeted due to the likely presence of people with these difficulties.

Participants were included if they had a diagnosis of non-affective psychosis (as determined by medical records), were aged 18-65 years old and had sufficient English language ability to participate in the research. People with a diagnosis of an affective disorder (Bipolar Disorder or Major Depressive Disorder) were excluded as low mood is known to adversely affect autobiographical memory. Participants were excluded if they lacked capacity to provide informed consent or had a primary diagnosis of one of the following; intellectual disability, head injury, substance misuse or known organic cause of psychosis.

2.2.1 Recruitment Procedure

The participant was first approached by a member of their care team to introduce the study. If they gave verbal consent for the researcher to contact them they were provided with the information sheet.

2.3 Interventions

2.3.1 Intervention Condition: Guided Recall

The basis for the intervention was a psychoeducation video of three vignettes illustrating how memory impacts on motivation to engage in certain activities, which the researcher and participant

discussed. The participant then identified two activities they would like to do in the future, that they had positive memories of doing in the past. The participant then recalled a memory of a time when they did the activity and the researcher supported this recall with prompts taken from previous autobiographical memory studies (Ricarte et al., 2012) which were then extended to include those from the MemFlex intervention for autobiographical memory (Hitchcock et al., 2017). These prompts covered the following areas:

- Details – who/what/where/when
- Five senses – smell/taste/hear/see/touch
- Identity – what does this tell us about you as a person?
- Positive themes – what was good about this event for you?
- Generalisation of positive themes – does this link to other activities you have done? How?
- Future planning – what steps could you take to repeat this activity?

2.3.2 Control Condition: Basic Recall

In the control condition participants were not shown the psychoeducation video and did not receive additional prompts during the memory recall. Participants in this condition began by choosing two activities they have done previously, that they would like to do again in the future. They then recalled a memory of doing each activity with no prompts.

Figure 2: Flow Chart of Intervention and Control Conditions

2.4 Assessments

2.4.1 Acceptability and Feasibility

Eligibility of referrals to the study, consent rates and adherence rates (number of participants able to successfully complete the intervention) were assessed as a measure of feasibility. The categories of activities selected by participants were recorded to provide an idea of the feasibility and focus of the sessions. To ensure the validity of the protocol as a memory enriching process, the experience of generating the memories, specifically the “pleasantness” and “realness” will be reported for both groups. To fully assess the acceptability of this intervention each item on the feedback questionnaire completed by participants was considered.

2.4.2 Efficacy Estimates

In order to derive estimates of effects, A measure was developed based on “in the moment” assessments of mood, motivation, anticipatory pleasure and self-efficacy that have been used in previous experience sampling studies (Edwards, Cella, Tarrier, & Wykes, 2016; Oorschot et al., 2013). These areas were included as they were hypothesised to be the areas where change may be seen as a result of the intervention based on previous studies (Ricarte et al., 2012). A measure of self-efficacy was added as a novel outcome measure as this had recently been highlighted as a potential causal mechanism in negative symptoms and poor functioning (Campellone, Sanchez, & Kring, 2016; Staring, Ter Huurne, & van der Gaag, 2013). Visual analogue scales were used with anchor points at 0, 50 and 100 and participants were asked to place a cross on the line to mark their response.

2.4.3 Clinical characteristics of the sample

To establish sample characteristics, clinical and functional variables were assessed. Participants completed the Beck Depression Inventory (BDI) (Beck, Steer, & Brown, 1996) to assess depression severity (21 items, range: 0-63, higher score indicates greater severity of depression). The Clinical Assessment Interview for Negative Symptoms (Kring, Gur, Blanchard, Horan, & Reise, 2013) was used to enable the assessment of both experiential and expressive negative symptoms. This takes the form of an interview schedule which is used alongside observations to complete the assessment (13 items, range: 0-52, higher score indicates greater severity of negative symptoms). Functioning

was assessed using the Time Use Survey (Fowler et al., 2009) It produces two scores in hours per week: one for Constructive Economic Activity (CEA) and one for Structured Activity (SA) (36 items overall, higher value indicates more hours spent in that area of activity). The Scale for the Assessment of Positive Symptoms (Andreasen, 1984) was used as a measure of positive symptom severity (20 items, range: 0-100, higher score indicates greater severity of positive symptoms).

The FAS and categories subtests from the Verbal Fluency Task (Lezak, Howieson, Bigler, & Tranel, 2012) were included as a brief assessment of verbal fluency which may be an important moderator in specificity of autobiographical memory recall. A normative score on this test ranges from 97.9 – 110.4 (SD: 23.3-28.2) and varies significantly with age and education (Tombaugh, Kozak, & Rees, 1999). Letter-Number Sequencing (Wechsler, 2011) is included as a brief assessment of working memory, which again is an area where people with psychosis have been shown to have difficulty (Lee & Park, 2005) which may impact on autobiographical memory recall. A normative score is estimated at 8-11.2 (SD: 2.2-2.6) (Clark et al., 2004; A. G. Harrison, Armstrong, Harrison, Lange, & Iverson, 2014).

2.5 Analyses

2.5.1 Feasibility and Acceptability

The recruitment and adherence feasibility parameters are reported descriptively. The acceptability parameters from the questionnaire are assessed descriptively across both groups. A correlation matrix of the primary variables in the study (mood, pleasure and realness ratings) alongside clinical variables will be presented to assess the utility of the measures employed in this study with the aim of informing future similar research.

2.5.2 Efficacy Estimates

This pilot study was designed to enable exploratory analyses regarding whether state assessments of mood, motivation, anticipatory pleasure and self-efficacy were improved by the guided recall condition compared with the basic recall condition. These ratings were combined into pre- and post across the two activities. A between-group standardised effect size (Cohen's *d*) was calculated for

each of these variables using the post-means for each group and the pooled, baseline standard deviation. The 95% confidence intervals for the effect sizes are reported. Tests of statistical significance (in both these analyses and the correlation matrix) are not reported since the study was exploratory, and the determination of sample size was not powered for this.

3. Results

3.1 Sample

A total of 31 people with a diagnosis of non-affective psychosis participated between May 2017-Feb 2018. Of these, 19 were inpatients, including 5 in a rehabilitation ward and 14 in an acute ward setting. Twenty-nine participants (94%) were currently prescribed antipsychotic medication. The demographic and clinical characteristics of the sample are described in Table 1 below. A consort diagram in Figure 2 summarises the flow of participants through the study.

Table 1: Characteristics of Guided Recall and Basic Recall Conditions

	Guided Recall Condition %/Mean, SD (n = 21)	Basic Recall Condition %/Mean, SD (n = 10)
Age	38.62 (10.98)	41.10 (9.09)
Gender	76.2	80
Highest Education Level	Primary: 0 Secondary: 42.9 Further: 38.1 Higher: 19	Primary: 0 Secondary: 20 Further: 40 Higher: 40
Ethnicity	White British: 9.5 Black British: 61.9 Black African: 19 Hispanic: 0 Black Caribbean: 9.5 White European: 0	White British: 30 Black British: 40 Black African: 0 Hispanic: 10 Black Caribbean: 10 White European: 10
Primary Diagnosis	Non-Organic Psychosis: 14.3 Schizoaffective Disorder: 14.3 Schizophrenia: 61.9 Delusional Disorder: 4.8 Organic Catatonic Disorder: 4.8	Non-Organic Psychosis: 20 Schizoaffective Disorder: 20.0 Schizophrenia: 60.0 Delusional Disorder: 0 Organic Catatonic Disorder: 0
BDI Total	13.19 (11.73) (Range: 0-38)	16.90 (17.18) (Range: 1-52)
Verbal Fluency Total	53.05 (15.07)	61.80 (28.81)
Letter-Number Sequencing Total	5.10 (2.81)	6.44 (2.55)
Clinical Assessment Interview for Negative Symptoms (CAINS) Total	24.1 (6.37) (Range: 14-38)	17.1 (6.82) (Range: 5-27)
Schedule for the Assessment of Positive Symptoms (SAPS) Total	6.95 (10.20) (Range: 0-41)	9.60 (10.21) (Range: 0-27)

Time Use Structured Activity	23.52 (25.40)	31.81 (24.98)
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Figure 3: CONSORT Flow Diagram

Table 2 contains a correlation matrix of the primary study variables, this does not include statistical significance testing as the sample is not powered for these analyses, nor is it appropriate in a pilot study. The findings below indicate that the BDI and CAINS may have utility in future studies as they demonstrate relationships with variables in the intervention. The brief cognitive measures employed (Verbal Fluency and Letter Number Sequencing) do not seem to have strong relationships with the variables in the intervention, although they did with the clinical measures of functioning, low mood and negative symptoms as expected.

Table 2: Correlation Matrix of Clinical Characteristics and Memory 1 Variables

	Time Use SA	BDI	SAPS	CAINS	VF	L-N-S	M1 Pre- Neg Mood	M1 Post- Neg Mood	M1 Pre- Pos Mood	M1 Post- Pos Mood	M1 Post- Pleasant
BDI	.22										
SAPS	-.04	.33									
CAINS	-.42	.13	-.02								
VF	.60	.29	-.05	-.46							
L-N-S	.32	.20	.01	-.40	.46						
M1 Pre- Neg Mood	.11	.26	.11	.28	-.11	.02					
M1 Post- Neg Mood	-.15	.04	-.08	.32	-.15	.05	.48				
M1 Pre- Pos Mood	-.40	-.72	-.21	-.12	-.21	-.17	-.29	-.18			
M1 Post- Pos Mood	-.22	-.32	-.31	-.10	-.21	-.35	-.11	-.25	.53		
M1 Post- Pleasant	.08	-.20	-.63	-.20	.32	-.12	-.09	-.04	.25	.52	
M1 Post- Real	.15	-.11	-.28	-.11	.15	-.14	-.08	.01	.28	.57	.52

*SA = Structured Activity, BDI = Beck Depression Inventory, SAPS = Schedule for the Assessment of Positive Symptoms, CAINS = Clinical Assessment Interview for Negative Symptoms, VF = Verbal Fluency, , VF = verbal fluency, L-N-S = letter number sequencing, M1 = Memory 1, all questionnaire totals were included in the correlation matrix

3.2 Acceptability and Feasibility

3.2.1 Referrals

Forty-one people were referred to the study, three people were not eligible as they had a diagnosis of Bipolar Affective Disorder. Of the remaining group, four did not consent to take part when approached and three people opted to complete the clinical measures only and declined the intervention session. Therefore, 76% of the referrals completed the intervention.

3.2.2 Were participants adherent to the guided recall intervention?

All participants except for two took part in the complete session which lasted 40 minutes to one hour. The exceptions were one participant in the guided recall condition who declined to watch the video, and another person who felt unable to concentrate long enough to complete two memory exercises so only completed one. Participants in both conditions selected a wide range of activities, summarised in Table 2 below. Examples of hobbies identified more than once include; listening to music, reading, going to the cinema, visiting art galleries, travelling or eating out.

Table 3: Activity Selection in Both Conditions

Activity Type	Activity 1 n (%)	Activity 2 n (%)
Creative	1 (3.3)	2 (6.9)
Employment	4 (13.3)	0
Education	1 (3.3)	3 (10.3)
Exercise	8 (26.7)	8 (27.6)
Social	6 (20.0)	1 (3.4)
Hobbies	10 (33.3)	15 (51.7)

3.2.3 Were participants able to generate positive memories linked to those activities?

Participants were able to generate valid, vivid positive autobiographical memories and link these to activities, as shown by the “pleasantness” ratings in Table Three. Participants rated memories in both conditions highly on a scale which asked them how “real” they felt during the recall. There were no significant differences in the ratings of either pleasantness or “realness” in the two conditions, although pleasantness was elevated in the guided recall condition.

Table 4: Pleasantness and Vividness Ratings After Memory 1 and Memory 2 in Both Groups

	Guided Recall Condition	Basic Recall Condition	Comparison (t)
Memory 1 Post-Pleasant (-10 - 10)	6.70 (4.15)	6 (4.44)	.42
Memory 1 Post-Real (0-100)	78.97 (23.74)	80.27 (25.24)	-.14
Memory 2 Post- Pleasant (-10 - 10)	6.95 (3.98)	5.81 (4.32)	.71
Memory 2 Post- Real (0-100)	82.51 (20.48)	81.79 (19.30)	.09

3.2.4 Did participants find the interventions acceptable?

Participants across both conditions rated the interventions as highly acceptable (>80%) and the range of scores for all items in both groups was 50-100.

Table 5: Summary of Items on Feedback Questionnaire in Both Groups

Acceptability Item	Guided Recall Condition	Basic Recall Condition
Helpful (0-100)	82.80 (17.37)	83.78 (20.46)
Easy (0-100)	83.84 (19.42)	86.16 (17.12)
Learned Something (0-100)	86.13 (16.05)	87.28 (16.67)
Relevant (0-100)	77.45 (18.92)	82.16 (19.64)
Recommend to Others (0-100)	79.56 (20.64)	83.90 (20.49)
Take Part in Something Similar (0-100)	83.31 (17.73)	86.04 (17.12)

3.3 Preliminary Estimates of the Efficacy of Pilot Intervention

As the intervention was repeated for two activities during the session the pre- and post-ratings (negative mood, positive mood, motivation, self-efficacy and anticipatory pleasure) were combined across the two memories. The mean values and between-group effect sizes for each variable at the pre- and post- time points in each group are reported in Table 5 below. The mean value for the basic recall group was subtracted from the guided recall group and therefore a positive value indicates greater improvement in the condition with more prompts. The exception is negative mood where a negative value would indicate the negative mood had been reduced further in the guided recall group. These standardised effect sizes indicate effects in the expected directions for motivation, self-efficacy and negative mood – although these are in the small to moderate range with wide confidence intervals. The effect size for anticipatory pleasure did not signal a clear direction and

whilst the descriptive data indicate increased and stable positive mood in the guided and basic groups respectively, the effect size is in the opposite direction than anticipated as the guided group positive mood rating was substantially lower at baseline.

Table 6: Pre- and Post-Means for Both Groups

Measure	Group	Time	Mean	Std. Error	95% Confidence Interval		Cohen's d (95% CIs)
					Lower Bound	Upper Bound	
Motivation (0-100)	Guided	Pre	77.53	4.16	69.21	85.86	0.32 (-.21, .86)
		Post	81.01	4.15	72.80	89.40	
	Basic	Pre	76.75	5.81	65.12	88.38	
		Post	72.89	5.79	61.30	84.49	
Anticipatory Pleasure (0-100)	Guided	Pre	85.94	3.29	79.34	92.54	-.05 (-.59, .48)
		Post	84.35	3.05	78.23	90.47	
	Basic	Pre	82.40	5.14	72.09	92.70	
		Post	86.58	4.76	77.03	96.13	
Self-Efficacy (0-100)	Guided	Pre	73.06	4.20	64.64	81.49	.19 (-.34, .73)
		Post	74.07	4.27	65.50	82.64	
	Basic	Pre	73.50	6.56	60.34	86.65	
		Post	70.85	6.67	57.47	84.23	
Positive Mood (0-300)	Guided	Pre	161.26	9.04	143.04	179.49	-.34 (-.91, .24)
		Post	178.95	8.50	161.80	196.10	
	Basic	Pre	202.12	16.33	167.32	236.93	
		Post	198.11	15.46	165.15	231.07	
Negative Mood (0-400)	Guided	Pre	131.89	12.18	107.33	156.45	.20 (-.36, .76)
		Post	116.62	11.76	92.90	140.34	
	Basic	Pre	123.58	23.26	74.00	173.16	
		Post	105.66	26.05	50.14	161.18	

4. Discussion

This study examined for the first time the feasibility of autobiographical memory training for enhancing motivation to engage in personally meaningful activities, in order to inform the development of targeted psychological therapy for enhancing engagement in activities for people with negative symptoms of psychosis.

Participants were able to complete the intervention sessions as planned and identified appropriate activities to discuss, with hobbies and exercise the most common categories.

Participants in both groups were able to generate memories linked to these activities, that they rated as having high levels of positive emotion. Participants overwhelmingly rated both conditions as acceptable and useful with the feedback suggesting that participants found focusing on memory and its association with motivation relevant and helpful. There was no evidence of an anticipatory pleasure deficit, with both groups reporting high levels at the start of the session. The findings are encouraging for future interventions using guided autobiographical memory retrieval with effects in the expected direction for motivation, self-efficacy and a reduction in negative mood.

The people who were referred to the study met the eligibility criteria, however inclusion of people with Bipolar Disorder could be considered in future research. The high rates of people who completed the guided and basic recall conditions, suggests memory interventions are feasible to deliver in this population. Participants in both a basic and guided recall condition found this an acceptable intervention to take part in and provided positive feedback.

The positive small to medium effect signals for self-efficacy and motivation are encouraging for future interventions in the field of negative symptoms. This replicates findings from a study using additional prompts to support work on a cognitive task, participants in the guided condition endorsed fewer self-defeatist beliefs following the intervention (Grant, Perivoliotis, Luther, Bredemeier, & Beck, 2017). However, it is not clear whether the effects fostered by the intervention would translate to the real-world, and assessment of this should be incorporated into future studies.

To add to the current debate in the field, there was no evidence of an anticipatory pleasure deficit with both groups rating this highly at the start of the session. Anticipatory pleasure did not appear to be a useful outcome in this intervention with the signal showing no clear direction of effect. This is perhaps unsurprising in a field with very mixed outcomes regarding anticipatory pleasure (Edwards, Cella, Tarrier, & Wykes, 2015; Strauss & Cohen, 2018). We conclude that

motivation and self-efficacy may therefore be more useful outcomes to focus on in future clinical research.

It is important to note that positive mood did increase in the guided group, and both groups retrieved positive autobiographical memories as part of the intervention received, supporting further investigation of this technique in therapeutic work. Negative mood did also show an effect in the intended direction which suggests additional prompts may aid individuals to focus away from negative emotions they may be experiencing. Given the promising results, a larger and wider evaluation of this intervention is indicated and is required to establish whether these signals manifest as meaningful change.

4.1 Limitations

The wider conclusions that can be drawn are limited by the size of the sample. The scores in the intervention study, particularly for motivation, self-efficacy and anticipatory pleasure, were high for many participants at the pre-intervention stage. This ceiling effect left little room for change, particularly improvement, and perhaps could be differently operationalised to try to manage this. However, the consistency across participants suggests this may be a feature of responding in this group and additional scales may be needed to detect meaningful changes. There was no follow-up to assess the impact on functioning – this would be important to include in a future study of this intervention approach.

4.2 Conclusions

The study suggests that focusing on positive, autobiographical memories in therapy is feasible and acceptable – these can be generated by people with psychosis along with the expected emotional experiences. The participants found the link between their memories and their future goals a useful idea to consider in the intervention and were able to engage with these ideas successfully. Initial signs for using additional memory prompts are encouraging and clinicians, across disciplines, could consider incorporating this brief intervention into their approach when working towards goal-setting

and increasing activity. Indeed, there is potential for this brief intervention to be an additional module adjunct to existing interventions, or perhaps delivered remotely as digital interventions are developed. A strength of a protocolised, brief training-based intervention such as this is that it could also be delivered by colleagues from other disciplines in a range of settings. Interventions targeting negative symptoms and activity are in the early stages of development and this study has highlighted that guided recall of positive memories – linked to the individual's future goals – is a promising approach in this field. This study also adds important evidence to the existing body which demonstrates intact emotional experience in people with psychosis (Yan et al., 2012). This does not support the construct of “anhedonia” as described in depression existing in this group. Clinicians can rely on the emotional experience of people with psychosis and harness this for therapeutic benefit in psychosis services.

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