specifically to measure areas of executive function will be utilized, as well as role-playing tasks thought to have good ecological validity. Symptoms of psychosis will also be assessed. GMT will be administered in 9 (twice weekly) x 2 hour sessions in accordance with the GMT research protocol. A general linear model with repeated measures analysis of variance (RM ANOVA) will be used to examine differential group treatment effects. A 2 x 3 mixed-design will be applied, with Group (GMT, WL) as between-subjects factor, and Session (baseline [T1], post-intervention [T2], and 6 months follow-up [T3]) as within-subjects factor. Interpretation of the strength of experimental effects will be provided with effect size statistics.

Results: Baseline characteristics and preliminary results from the first participants will be presented.

Discussion: Based on findings from previous GMT-studies, we hypothesize that post-intervention changes will be reflected in improved scores on self-reported and/or objective measures of executive functions (particularly in the areas of planning and attentional control) compared to patients in WL. We also expect that GMT participants will improve their goal attainment in everyday life and social functioning after the intervention. Additionally, we expect post-intervention changes to be reflected in improved scores on measures of emotional health.

S83. THE IMPACT OF COENZYME Q10 ON THE COGNITIVE DEFICITS AND SYMPTOMS OF SCHIZOPHRENIA: PROTOCOL AND BASELINE DATA OF A RANDOMISED, PLACEBO-CONTROLLED STUDY

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Background: CoQ10 is a vital component of mitochondrial function and metabolism, and its deficiency creates greater vulnerability to disease due to impaired mitochondrial energy generation and cellular antioxidant capacity. CoQ10 functions as an electron carrier within the mitochondrial electron transport chain during cellular respiration. Schizophrenia is a disorder with documented CoQ10 deficiency and mitochondrial dysfunction, and cellular respiration and mitochondrial network dynamics can be impaired due to altered complex 1 activity in the disorder. Key features of schizophrenia such as depression, fatigue and cognitive impairment have been independently associated with mitochondrial dysfunction and increased oxidative stress. In bipolar disorder, fibromyalgia, chronic fatigue syndrome and multiple sclerosis these symptoms have been effectively reduced through CoQ10 supplementation. We assess the impact of CoQ10 supplementation in individuals with a diagnosis of schizophrenia through a double-blind, randomised, placebo-controlled study.

Methods: Approximately 300 participants with a DSM-IV diagnosis of schizophrenia or schizoaffective disorder, with no neurological or psychiatric co-morbidity will be recruited to this study. Participants will be randomised to take 100 mg dose capsules of CoQ10 or placebo three times daily for six months, and undergo neuropsychological and cognitive testing at three time points (baseline, midpoint, six months post-randomisation). Changes in participants’ global cognitive function, sustained attention, working memory, processing speed, negative symptoms, levels of depression and anxiety, fatigue, blood pressure, quality of life and functional status following CoQ10 supplementation will be assessed. Blood samples are also taken at each assessment session to assess baseline and changes in levels of plasma CoQ10 and mitochondrial function via lactate analysis.

Results: Currently baseline data is available for 42 participants (mean age = 50.2, SD=10.7). All participants either have a clinical diagnosis of schizophrenia (n=34) or schizoaffective disorder (n=8). The mean estimated IQ of the group is 92.4 (SD=20.5), and participants have a median of 13 years in education. Thirty-nine percent of participants reported mild to severe levels of depression and twenty-three percent reported moderate or severe levels of anxiety. Seventy-three percent of participants reported good to very good quality of life. FACT-fatigue scores were negatively correlated with both depression and anxiety scores, such that greater fatigue levels were associated with higher levels of depression (r=-.484, p<0.01) and anxiety (r=-.539, p<0.01).

Discussion: CoQ10 is a mitochondrial agent that plays a fundamental role in energy production and mitochondrial function. The available baseline data suggest a relationship between fatigue and depression and anxiety levels in individuals with a diagnosis of schizophrenia. CoQ10 supplementation has the potential to affect these symptoms, through CoQ10’s ability to restore electron flow in the electron transfer chain and increase mitochondrial antioxidant capacity. The study commenced in November 2016 and patient enrolment and assessment is ongoing. Updated baseline information will be presented including further cognitive assessments. To minimise risk of bias while recruitment and assessments are ongoing, unblinding and outcome analysis will not be conducted at time of presentation.

S84. NEUROPSYCHOLOGICAL FUNCTIONING AS A PREDICTOR OF PSYCHOLOGICAL RESILIENCE: PRELIMINARY RESULTS FROM THE PRONIA STUDY

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Background: Resilience provides a new understanding of the highly variable trajectories of mental illness, and has consistently been linked with improved mental health outcomes. Resilience is largely defined as the presence of additional factors which overcome a specific risk for mental illness, leading to ultimately more positive outcomes than expected given said risk. Previous research in the area has focused on identifying psychological factors which may be associated with resilience. Moving forwards, it is essential that researchers investigate how resilience may function in different domains. The aim for the present research was to conduct a preliminary investigation into the possible role of neuropsychological performance in resilience using data from the PRONIA study.

Methods: Participants were individuals aged 15-40 who were recruited into the PRONIA study. Total scores for the Resilience Scale for Adults (RSA), assessing self-report psychological resilience, were available for 587 participants. The sample included individuals with first-episode psychosis (N=113), first-episode depression (N=118), individuals at ultra-high risk for psychosis (N=109), and healthy controls (N=247). Participants also completed a comprehensive neuropsychological test battery which assessed performance in the following domains: IQ, executive functioning (EF), processing speed (PS), sustained attention, working memory, visual memory, social cognition, motivational salience, and verbal learning and memory.

Results: A stepwise multiple linear regression was used to identify which of the neuropsychological domains would best predict RSA total score. The final model significantly predicted RSA total score, explaining 4% of the variance in these scores, F(2, 512) = 12.37, p < 0.001. The model indicated that higher RSA total was associated with PS (β=3.35, p=0.032) and EF (β=4.15, p=0.046). EF provided the highest relative contribution in the model, with every 1 point increase resulting in 4.15 standard deviation increase in RSA total.

Discussion: The present results suggest that neuropsychological performance has a small, but significant relationship with psychological resilience. The two neuropsychological domains which best predicted this outcome were PS and EF. Resilience has been argued to be a highly dynamic process, by which individuals must utilise assets and resources to their benefit. Furthermore, the effectiveness of such factors will vary across time and circumstance, adding to the flexibility required to navigate this process. These results support this conceptualisation of resilience, as EF is thought to involve the organisation and execution of complex thoughts and behaviour. Processing speed has also been found to affect other cognitive functions.
such as reasoning. These neuropsychological processes may aid an individual’s ability to utilise protective factors to their benefit during a period of adversity or risk. These results are preliminary, and future research should look to replicate and extend this research to form a multi-modal model of resilience. A deeper understanding of the mechanisms underlying this process can then inform future intervention strategies.

S85. THE EFFECT OF LONG-TERM SOCIAL DEPRIVATION ON EFFORT ALLOCATION PATTERN IN PATIENTS WITH SCHIZOPHRENIA

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Background: Motivational deficit is a common feature of negative symptoms in patients with schizophrenia. Patients with schizophrenia are impaired in goal-directed behaviour and effort allocation decision-making to pursue a potential reward. On the other hand, limited work has suggested that schizophrenia patients who experienced long-term social deprivation showed more severe negative symptoms. However, it is not yet fully clear the long-lasting impact of long-term social deprivation on motivation in these patients. The current study aimed to investigate the effect of long-term social deprivation on effort allocation pattern in patients with schizophrenia.

Methods: We recruited 21 patients with schizophrenia institutionalized for more than 15 years and 20 patients with schizophrenia dwelling in the community and 24 healthy controls for this study. We administered the Effort-Expenditure for Rewards Task (EEfRT) to capture reward-based motivational salience, which requires participants make decisions to choose a hard or easy task based on reward probability and magnitude. Moreover, a set of self-reported checklists including the Chapman Psychosis Proneness Scales, the Temporal Experience of Pleasure Scale, the Anticipatory and Consummatory Interpersonal Pleasure Scale and the Emotional Expressivity Scale were also administered to all the participants. For patients with schizophrenia, they also received rating score on the Positive and Negative Syndrome Scale (PANSS) and the Scale for the Assessment of Negative Symptoms (SANS).

Results: Institutionalized patients had exhibited significantly more prominent negative symptoms, especially in alogia subscale, attention subscale, and a trend of statistical significance in anhedonia subscale of SANS. The two clinical groups did not differ in positive symptoms subscale and general psychopathology symptoms subscale of PANSS. Findings from one-way ANOVA analysis showed that both institutionalized patients and community-dwelling patients with schizophrenia did not differ from healthy controls in experiential pleasure and emotion expression. For performance in the EEfRT, amotivation was only observed in institutionalized patients with schizophrenia, they were significantly less likely to expend effort to pursue a potential reward than healthy controls in both medium (50%) probability and high (80%) probability level. Hence, as the reward probability increased, unlike healthy controls, institutionalized patients could not increase their hard task choices.

Discussion: Institutionalized patients with schizophrenia exhibited significantly more motivational deficits than healthy controls, and such impairment was not observed in community-dwelling patients. However, both institutionalized patients and community-dwelling patients with schizophrenia showed no deficits in self-reported scales measuring pleasure experience and expression. These findings further revealed that long-term social deprivation may be a vital contributor to severe motivation deficits of patients with schizophrenia.

S86. EXAMINING REASONING BIASES IN SCHIZOPHRENIA USING A MODIFIED “JUMPING TO CONCLUSIONS” TASK

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Background: The Jumping To Conclusion (JTC) bias has been extensively studied in relation to schizophrenia and persecutory delusions. It is suggested that performance on the traditional JTC task relates to a pervasive bias to make decisions quickly, contributing to delusion formation. However, the mechanisms underlying performance on this task, as well as the relationship between the JTC bias and other reasoning biases implicated in delusional ideation, is not fully understood. We examined the relationship between several biases believed to be involved in delusion formation and maintenance to further clarify potential co-occurrences of these biases and their relation to delusional ideation.

Methods: In order to assess the co-occurrence of reasoning biases in decision making, we modified the traditional JTC task in order to assess a number of previously identified biases that may be implicated in delusion formation and maintenance. 46 participants with schizophrenia and 46 healthy controls completed two versions of the modified task utilizing neutral (blue and red beads in a jar) and salient (negative and positive comments in a list) stimuli, both with 60:40 ratios.

Results: 2 x 2 mixed ANOVAs were performed on each of the modified variables using group [patients vs. controls] as a between subjects variable and task type [neutral vs. salient] as a within subject variable. We replicated previous findings of main effects of a JTC bias for group, F(1, 90) = 4.149, p = .045, η2p = .044, and task type, F(1, 90) = 4.724, p = .032, η2p = .050 such that patients showed a greater JTC bias, and in both groups, the JTC bias was more pronounced for the salient task. However, a main effect of group was also evident for number of illogical judgments, F(1, 90) = 11.596, p = .001, η2p = .114, indicating that patients showed greater difficulty in probabilistic reasoning. When controlling for probabilistic reasoning ability, the group main effect for the JTC bias disappeared, F(1, 89) = 0.169, p = .682, η2p = 0.002. None of our modified variables significantly correlated with symptom severity within our patient population.

Discussion: While we were not able to correlate our modified variables with symptoms of schizophrenia, we were able to observe a pattern of group differences that may help further understand decision-making processes in individuals with schizophrenia. Our findings that faulty probability assessment accounts for the JTC bias indicates that the traditional JTC bias task may not represent an inherent hasty decision making bias, but rather an inability to fully understand and execute the stated goals of the task. These results call into question the current understanding of the JTC bias and the independence of this bias apart from the cognitive demands of the task.

S87. THE INITIAL CHANGE IN THE SERUM LEVEL OF C-REACTIVE PROTEIN IN ACUTE PSYCHOSIS IS ASSOCIATED WITH COGNITIVE PERFORMANCE IN LATER PHASES

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Background: Inflammatory processes have been implicated in the pathophysiology of schizophrenia and related psychosis and could be particularly relevant to the associated cognitive deficits. The C-reactive protein (CRP) serves as a general marker of inflammation, and inverse relationships between CRP levels and cognitive performance in acute psychosis...