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Awareness and Coping with Emotion in Schizophrenia: Acceptability, Feasibility and Case Illustrations

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Abstract

Although current treatments help to alleviate some of the symptoms of schizophrenia, people with schizophrenia often continue to experience residual symptoms. An emotion-focused treatment approach may help to improve well-being in this population by increasing positive experiences and resources. In this article, we discuss the feasibility and acceptability of a skills-based group treatment for people schizophrenia or schizoaffective disorder. As part of the Awareness and Coping with Emotion in Schizophrenia (ACES) intervention, group members learned eight empirically supported cognitive and behavioural skills covering emotional awareness and coping. Group member feedback and three case illustrations illuminate participants' experiences with the group, as well as the potential benefits and challenges of this treatment approach. These data suggest that ACES is a feasible and acceptable group intervention. Future research is needed to examine whether ACES has a selective impact on well-being, but these initial findings point to the promise of this intervention to improve quality of life for individuals with schizophrenia and schizoaffective disorder, thus filling a void in existing treatments options.

Keywords

Schizophrenia; Emotion; Group Treatment; Well-being; Case-Illustration

Schizophrenia is a chronic mental illness characterized by positive symptoms (i.e., unusual experiences or beliefs not rooted in reality), disorganization (i.e., unusual behaviours or incoherent speech) and negative symptoms (i.e., dampening of motivation, emotion expression and social closeness). Along with these symptoms, schizophrenia is associated with poor functional outcomes (Jobe & Harrow, 2010), including difficulties in social functioning (Hooley, 2010), comorbid psychological disorders (Buckley, Miller, Lehrer, & Castle, 2009) and medical conditions (Lambert, Velakoulis, & Pantelis, 2003), and reports of lower quality of life (Eack & Newhill, 2007).

Current treatments for schizophrenia include a mix of medications and psychosocial interventions. Whereas antipsychotic medications help to alleviate some of the acute positive and disorganization symptoms, they do less well with negative symptoms.

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Psychosocial treatments, in particular cognitive behavioural therapy (CBT), offer additional promise as an effective treatment for persistent or medication resistant positive symptoms (Turkington, Dudley, Warman, & Beck, 2006). Although the efficacy of CBT in reducing negative symptoms is less clear (Elis, Caponigro, & Kring, 2013; Wykes, Steel, Everitt, & Tarrier, 2008), more recent studies of CBT have reported improvements in motivation and functional outcomes (Grant, Huh, Perivoliotis, Stolar, & Beck, 2011; Klingberg et al., 2011).

Though advancements have been made in the treatment of some symptoms of schizophrenia, functional difficulties often persist (Hegarty, Baldessarini, Tohen, Waternaux, & Oepen, 1994), suggesting that treatments targeting symptoms alone are not sufficient. More recently, the field has begun to focus on more proximal correlates of functioning, with approaches such as cognitive remediation (McGurk, Twamley, Sitzer, McHugo, & Mueser, 2007), social skills training (Kurtz & Mueser, 2008), social cognition training (Combs et al., 2007; Horan et al., 2009), metacognitive-oriented therapy (Lysaker et al., 2011; Salvatore et al., 2012) and metacognitive training (Moritz, Vitzthum, Randjbar, Veckenstedt, & Woodward, 2010). Although these training programs show promise, it remains unclear whether improvements on these proximal constructs translate to improvements in quality of life or well-being (e.g., self-confidence or connectedness to others).

Emotion and Well-being

Well-being, or the way a person thinks and feels about the quality of his or her life (Diener, 2000), is a multifaceted construct. For example, well-being can refer to how one evaluates the quality of his or her physical (e.g., health), psychological (e.g., happiness), social (e.g., interpersonal relationships), economic (e.g., financial security) or environmental (e.g., safe living conditions) resources. Research over the last decade has highlighted the influential role of positive emotions in enhancing well-being and life satisfaction, opening the door for potential interventions (Fredrickson, 2000). For example, positive emotions have been linked to resilience (Tugade & Fredrickson, 2004), the formation of new relationships (Waugh & Fredrickson, 2006), health-related benefits (Moskowitz, Epel, & Acree, 2008) and coping (Moskowitz, 2010).

Given the association between emotion and well-being, researchers have begun to develop targeted interventions to increase positive emotions and coping. For example, healthy individuals who participated in a 6-week loving-kindness meditation group showed an increase in daily experiences of positive emotions as well as improvements in well-being as indexed by increases in life satisfaction, self-acceptance, social support and better physical health at a 3-month follow-up compared to a waitlist control condition (Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008). Similar improvements were observed in a study of positive psychotherapy for depression, a treatment focused on increasing positive emotions and pleasurable experiences (Seligman, Rashid, & Parks, 2006). After the intervention, depression symptoms decreased and overall functioning and happiness increased more than in a treatment as usual group (Seligman et al., 2006). In another study, people with acute and severe medical illness who participated in a five-session, one-on-one treatment to promote positive emotions and coping reported increased positive affect and decreased negative affect (Moskowitz et al., 2011). These findings highlight a potential avenue for intervention

in schizophrenia. However, little is known regarding the feasibility and potential benefits of an intervention with a primary focus on improving well-being in schizophrenia.

Emotion in Schizophrenia

Research over the last two decades sheds light on the emotional experience of people with schizophrenia or schizoaffective disorder. It is now known that a deficit in the outward display of emotion (i.e., blunted affect) does not necessarily correspond with a lack of emotional experience. Indeed, research has repeatedly demonstrated that people with schizophrenia experience just as much positive emotion as people without schizophrenia when presented with emotionally evocative stimuli (see Kring & Moran, 2008, for review). However, more recent research suggests that people with schizophrenia are less able to maintain their emotional experience in the absence of external stimuli (e.g., a pleasant picture; Gard et al., 2011; Kring, Germans Gard, & Gard, 2011; Ursu et al., 2011), which may in turn be associated with deficits in the initiation of goal-directed behaviour (Kring & Caponigro, 2010). Additional research suggests that people with schizophrenia may experience more negative emotion compared to people without schizophrenia, both in response to evocative stimuli (Cohen & Minor, 2010; Kring & Moran, 2008) and on trait measures of negative affect (Horan, Blanchard, Clark, & Green, 2008).

Interventions with a primary focus on emotion and well-being have received limited focus in the schizophrenia treatment literature; however, recent studies have demonstrated potential benefits. In a pilot open trial of compassion-focused therapy, which emphasizes strategies to enhance self-compassion, participants reported significant improvements in self-esteem, and decreases in depression and schizophrenia symptoms at the end of treatment (Laithwaite et al., 2009). Results from two randomized control trials of acceptance and commitment therapy, a therapy focused on accepting symptoms without trying to actively change or modify these experiences, indicated greater symptom awareness, but reduced distress compared with a treatment as usual control group (Bach & Hayes, 2002; Gaudiano & Herbert, 2006). An open trial of a loving-kindness meditation intervention found that participants reported an increase in positive emotions, self-acceptance and satisfaction with life, and a decrease in negative symptoms after participating in six meditation sessions, and these benefits remained at a 3-month follow-up (Johnson et al., 2011). Finally, in an open trial of a positive psychology group intervention, Meyer, Johnson, Parks, Iwanski, and Penn (2012) reported increases in subjective well-being and savouring in people with schizophrenia at postintervention and 3-month follow-up.

Taken together, these findings suggest that people with schizophrenia (1) experience positive emotions in much the same way as people who do not have schizophrenia; (2) have difficulty maintaining emotional experiences; (3) report elevated trait levels of negative emotions; and (4) seem to benefit from interventions designed to broadly target emotion experience and well-being. Thus, people with schizophrenia may benefit from an intervention that teaches skills to prolong the experience of positive emotions and cope with negative experiences, thereby enhancing well-being.

The purpose of this study was to determine the feasibility and acceptability of an emotion-focused skills-based treatment approach for people with schizophrenia or schizoaffective disorder. We were specifically interested in addressing the following questions using an open trial of the Awareness and Coping with Emotion in Schizophrenia (ACES) group intervention: (1) Would people with schizophrenia or schizoaffective disorder be motivated to attend and interested in an emotion-focused skills group? (2) Would they engage in using the skills and which skills would they use most frequently? (3) Would they be interested in engaging in similar interventions in the future?

AWARENESS AND COPING WITH EMOTION IN SCHIZOPHRENIA GROUP

Awareness and Coping with Emotion in Schizophrenia (ACES), adapted from an existing positive emotion intervention (Moskowitz et al., 2011), combines a skills-based approach within a cognitive behavioural framework to directly target improvements in well-being. Group members participated in six-weekly 90-min sessions during which they learned eight empirically supported cognitive and behavioural skills (described below) that have been shown to increase well-being in people without mental illness and may prove beneficial for those with schizophrenia or schizoaffective disorder (see Moskowitz, 2010 for review of empirical support). This multiskill approach is ideal for a preliminary study because it provides the opportunity for the assessment of which skills are most accessible and beneficial, allows group members to take advantage of the specific skill(s) that work best for them and is more effective than interventions that focus on a single skill alone (Sin & Lyubomirsky, 2009).

ACES Content and Skills

Group 1: Noticing Daily Positives and Savouring—In group one, participants were introduced to the structure of the group. Group members practised identifying small daily positives that occurred throughout the previous week (e.g., eating a tasty meal, seeing a hummingbird, enjoying the warm weather) and discussed ways to savour or maintain the benefits of these positive experiences (e.g., telling a friend, writing in a journal, remembering the experience later that week). They were provided with a list of positive and negative emotion words and were instructed to document one positive emotion or event each day and practise savouring the positive experience, paying close attention to their emotional response.

Group 2: Gratitude and Altruism—Group two incorporated both gratitude and altruism (i.e., small acts of kindness). Group members wrote about what they were grateful for and shared their gratitude with the group. They were instructed to think about both larger sentiments of gratitude (e.g., having a job) and smaller appreciations as well (e.g., catching the bus on time). They also brainstormed ways to practise altruism, including thanking a bus driver or offering food to a homeless person. For home practice, group members were asked to write in a gratitude journal each day and to engage in small acts of kindness when the opportunity presented itself. Again, they were asked to pay close attention to any emotions they experienced while practicing these skills.

Group 3: Mindfulness—The goal of group three was to gain a greater awareness of daily experiences. Mindfulness was defined as 'the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally' (Kabat-Zinn, 2006). Group members learned and practised mindfulness relaxation (e.g., deep breathing and progressive muscle relaxation) and more informal 'everyday' awareness (i.e., being aware of and appreciating the present moment). They were provided with a mindfulness CD and were instructed to practise mindfulness each day.

Group 4: Positive Reappraisal—Positive reappraisal was offered as a coping strategy for dealing with negative or stressful life events. It was presented as a balanced appreciation of both the good and the bad that goes hand-in-hand with stress and a conscious attempt to focus on the positive (e.g., event: I lost five dollars; reappraisal: 'someone who needed it may have found my money'). Group members were encouraged to begin with reappraising smaller everyday hassles before attempting to reappraise major stressful events. They shared current stressors and discussed different positive reappraisals as a group, helping each other cope with and reappraise the negative situations. Home practice consisted of practicing positive reappraisal each day, or whenever a negative emotion or event occurred.

Group 5: Identifying Personal Strengths—Group members identified personal strengths, skills and talents and were encouraged to discuss ways in which they could utilize these strengths throughout the week. They worked as a group to develop a list of personal strengths and were encouraged to add to this list at home. They were also asked to use their personal strengths throughout the week and document the emotions that they experienced while taking advantage of these skills.

Group 6: Setting Attainable Goals—Building off of the previous session, group members developed a list of small and attainable goals that they would like to work towards throughout the next week. Attainable goals were defined as goals that were (1) realistic; (2) clear; (3) not too easy and not too hard; and (4) had a clear end point. Group members worked together to create a list of attainable goals that met these criteria and practised breaking down larger goals into small, achievable components. For home practice, they were asked to accomplish one small, attainable goal each day and document their emotions after completing each task.

ACES Format

Group sessions incorporated three main components: (1) didactic skill discussion; (2) skill training and practice; and (3) home practice. At the beginning of each session, group members were encouraged to share their experiences with practicing the learned skills, challenges they faced with home practice and any noticeable benefits from practicing the skills. Sessions then moved into a didactic discussion of a new skill. Group members were provided with the rationale for incorporating the skill into their daily lives, a summary of the empirical support highlighting the benefits of the skill and real-world examples of how to use the skill at home. Group sessions concluded with an interactive skills practice component, which focused on mastering the concept and generalizing the skill to opportunities outside of group (i.e., home practice). This final component was essential in

ensuring that group members understood the skill and were able to use the skill in everyday life. Group members were then asked to practise the new skill along with the previously learned skills between group sessions. They were also provided with a review sheet that outlined the session content, forms for tracking their home practice and ratings of skill helpfulness, and any materials necessary to promote home practice (e.g., gratitude journal, mindfulness CD).

METHODS

Participants and Procedures

Eleven people diagnosed with DSM-IV-TR (American Psychiatric Association, 2000) schizophrenia (n = 6) or schizoaffective disorder (n = 5) between the ages of 18–60 years provided informed consent to participate in this study. Trained clinical research staff confirmed diagnoses using the Structured Clinical Interview for DSM-IV (First, Spitzer, Gibbon, & Williams, 1994). Assessments of psychiatric symptoms and psychological well-being were conducted at baseline, post-treatment and 3-month follow-up. Weekly assessments of experienced emotion, frequency of home practice and helpfulness of skills were assessed at the beginning of each group. Group members were compensated for their time during assessment interviews but were not compensated for the group sessions. ACES sessions were conducted by two of the authors (JMC and EKM), advanced clinical graduate students with training in individual and group CBT techniques.

Measures

Acceptability and Feasibility of ACES Group—The Credibility/Expectancy Questionnaire (CEQ; Devilly & Borkovec, 2000) measures treatment expectancy and rationale credibility and has established psychometric properties. Items were rated on a scale from ‘1’ (not at all) to ‘9’ (very) or a percentage ranging from 0% to 100%. The measure was completed pretreatment and post-treatment, with additional questions added to the post-treatment questionnaire to assess interest and motivation to participate in the group sessions and satisfaction with the learned skills and therapists.

Engagement and Helpfulness of ACES Skills—To address level of engagement and helpfulness, participants turned in a weekly home practice log where they were asked to indicate the number of times they practised each of the ACES skills and how helpful they found each skill on a scale from ‘1’ (not at all helpful) to ‘5’ (extremely helpful). Attendance was documented at the beginning of each group.

Qualitative Post-treatment Outcomes—A structured qualitative interview was created to measure participants’ experiences 3 months following their participation in the ACES intervention. The interview consisted of questions measuring how often they used the ACES skills and their helpfulness, barriers that prevented them from using the skills, observed changes in specific areas of well-being (e.g., mood, social support, self-esteem, etc.) and the likelihood of recommending this intervention to a friend and participating in future treatment groups.

RESULTS

Acceptability and Feasibility

As shown in Table 1, ACES was rated as acceptable with scores on the pre-CEQ and post-CEQ questionnaires consistently in the high range. Furthermore, group members reported high levels of motivation (M = 7.82; standard deviation (SD) = 0.87) and interest in the group (M = 7.64; SD = 1.36).

Engagement and Helpfulness

Group members attended the majority of group sessions (90.91% attendance rate), with 8 out of 11 individuals attending all six sessions. Home practice rates were also high (Table 2); however, the amount of practice varied across group members and skill. On average, group members used any combination of the eight ACES skills 14.98 (SD = 8.50) times per week. They practised positive reappraisal, identifying daily positives and mindfulness most frequently, and gratitude and altruism least often. Furthermore, they found the skills helpful with mean ratings for the eight ACES skills ranging from 3.27 (SD = 0.83) to 4.05 (SD = 0.59), with mindfulness rated as the most helpful skill. Finally, all group members reported that they would recommend the ACES group to a friend and 10 out of 11 reported that they would be interested in participating in future groups.

Case Illustrations and Qualitative Post-treatment Outcomes

The following three cases describe the experiences, benefits and challenges faced by three ACES group members. These particular cases were selected for their different approaches to participating in the group components, unique factors that contributed to treatment challenges and commonalities in treatment barriers.

Case 1: Joshua—Joshua is a single, middle-aged Caucasian man diagnosed with schizophrenia. He lives alone and is employed part-time. Although he reported no history of victimization, he experienced frequent fears regarding the safety of his community and felt suspicious when walking around his neighbourhood. As a result, he spent very little time around others or engaging in social interactions. Joshua also experienced daily visual hallucinations and occasionally felt that he was under the control of a higher power that changed his behaviours (e.g., how he talked). He reported an awareness of these residual symptoms and minimal emotional distress related to these experiences. Joshua was interested in the ACES group intervention because he wanted to ‘learn new skills and be around other people’.

Course of treatment: Joshua had very little experience with group treatment settings or didactic seminars. He experienced difficulty completing the pregroup assessments because he did not understand some of the group concepts (e.g., mindfulness). Thus, it was unclear whether the didactic nature of the ACES intervention would be conducive for his learning and generalizing the skills outside of the group setting. During the baseline assessment, he expressed some discomfort regarding the group format related to his uneasiness in social settings. However, he appeared motivated and engaged throughout treatment, attending all six ACES sessions and frequently participating in the group by providing examples during

discussions and engaging in skills practice. Although home practice was introduced as a key component to the ACES intervention, Joshua only practised the skills sporadically outside of group. When home practice was discussed as a group, however, he often remembered using a skill throughout the week and shared his experience. Joshua gravitated more towards the first few skills that he learned, describing experiences with noticing daily positives (e.g., seeing a humming bird fly by the window), altruism (e.g., helping an older woman carry her briefcase) and mindfulness (e.g., watering the plants and having an awareness of the warm sun). He reported that mindfulness helped him to feel 'calm' and he enjoyed engaging in altruistic acts because he liked 'being helpful' and it made him feel 'good'.

Post-treatment outcomes: Joshua reported using the ACES skills approximately once a week during the months between the end of treatment and his 3-month follow-up visit. He found it difficult to practise the skills more often because he reported that he had forgotten about them. However, he also noted that he would occasionally read through the group notes and this helped him to remember the skills. He reported that he most enjoyed talking to people, sharing his thoughts and being around other people during the group sessions. He described the ACES skills as helpful because he learned that there were 'kind people' and he could 'practise self-help' by thinking about pleasant things and focusing on his appreciation. Since participating in the ACES group, he reported greater self-confidence, having more confidence around others, being more conversational and feeling more willing to talk about his problems. He also reported that he planned to continue to use the ACES skills (in particular, savouring, altruism, gratitude and mindfulness) because he liked the skills and found them helpful.

Case 2: Neil—Neil is a divorced, middle-aged African American man diagnosed with schizophrenia. He lives with and provides for his young daughter and works part-time. Although his positive symptoms were well managed through the help of medications, he experienced chronic depressed mood, low energy, difficulty concentrating and blunted affect. While he did not meet diagnostic criteria for a depressive episode, these symptoms made it difficult for Neil to engage in tasks that lasted for an extended period of time (e.g., research interviews, paperwork, reading). Neil also experienced frequent social anxiety, which often presented as suspiciousness of others' behaviours or beliefs that he had offended someone. He was highly aware of his anxiety and, as a result, became very self-conscious of his actions around others. He was interested in joining the ACES group because it 'sounded intellectually interesting' and he hoped it would improve his quality of life.

Course of treatment: Neil attended all six ACES sessions but remained quiet and occasionally appeared disengaged. This did not seem to reflect a lack of interest in the group, as he consistently practised the ACES skills several times a day and provided detailed written accounts of his experiences with home practice. Instead, his depressed mood, decreased energy and blunted affect made it difficult for him to remain engaged in the discussion and exhibit nonverbal signs of interest. When he was asked to share his thoughts, however, he appeared comfortable sharing his experiences and often offered insightful and novel methods for practicing the ACES skills (e.g., watching the clock and being mindful of

how the second hand moves and tics with each second). He reported that positive reappraisal was the most helpful skill for him, and he used this skill to help him cope with several life stressors. For example, when he realized he made a mistake on a form, his reappraisal was: 'I'm glad I caught the mistake before I sent it in.' When he worried about whether he could afford to get to work, his reappraisal was: 'I'm fortunate I have a job.' When he was discouraged to discover he had not lost weight, he reappraised this event as: 'my cholesterol is lower.' Although he did not practise identifying personal strengths at home as much as the other skills, he reported that this skill helped to improve his self-confidence.

Post-treatment outcomes: Neil reported continued control of positive symptoms at the 3-month follow-up, though he continued to experience some depressed mood and social anxiety. He reported using the ACES skills several times a week, including identifying daily positives, savouring, gratitude, altruism, mindfulness and positive reappraisal. He used identifying personal strengths the least because he reported that it was difficult for him to recognize his positive attributes. While Neil found the skills helpful and used them frequently, he expressed some difficulty remembering to use the skills more often. However, he also noted that keeping the group mindfulness CD on his shelf reminded him to practise the skills. He enjoyed hearing about others' experiences and felt that the ACES skills had a 'calming effect' on his emotions. He also reported feeling less negative and angry, more positive and more likely to engage in conversations with others. Neil expressed feeling 'empowered' knowing that he has skills that can help to increase his sense of well-being and reported plans to continue using these skills because they help him to 'cope'. Overall, Neil reported general improvements in his emotional responses to situations, increased sociality and an increased sense of empowerment regarding his ability to cope with daily stressors.

Case 3: Kayla—Kayla is a single, young Hispanic woman diagnosed with schizoaffective disorder. At baseline, she took no medication, held a part-time job and lived alone. She experienced paranoid beliefs about others' intentions, which occasionally made her feel uncomfortable in public. She also experienced daily auditory hallucinations. Her interest in social relationships and interactions was labile, at times she described very little desire to maintain friendships and at other times she presented as very interested in social interactions. Kayla described a previous history of mood episodes, including several bouts of depression and two hospitalizations for mania. She was interested in joining the ACES group because she wanted to learn more about her symptoms and how her experiences related to others.

Course of treatment: Kayla attended all six ACES sessions. During the group sessions, she was engaged and pleasant. She presented with an eagerness to gain a better understanding of her symptoms and often related her experiences to those shared by other group members. Halfway through the group session, she began to experience an exacerbation of mania symptoms, including extreme emotional lability, heightened interest in pleasurable activities and grandiose thinking. She developed a strong rapport with the cotherapists and group members and often shared her impulsive decisions (e.g., excessive spending and missed days at work) and new ambitions (e.g., opening a new business). Given the intensity of

Kayla's symptoms, the cotherapists regularly checked in with her after and between group sessions with the goal of encouraging her to share her experiences with her treatment team.

Kayla frequently practised the ACES skills; however, home practice decreased as the severity of her symptoms increased. She practised identifying daily positives and savouring, reporting that practicing these skills made her feel 'happy, excited, and proud'. While she reported that most of the skills were helpful, she rarely practised gratitude or mindfulness. Although she frequently practised positive reappraisal, her reappraisals further supported her grandiose thinking (e.g., event: did not get a loan for her business; reappraisal: 'they told me to apply for more credit cards'). Fortunately, this pattern of ineffective skill use did not appear to interfere with practicing other ACES skills. For example, she was very logical and realistic when using skills from the last two groups, identifying personal strengths (e.g., 'I have support and friends') and setting attainable goals (e.g., 'email a friend, pay electric bill').

Post-treatment outcomes: Shortly after completing the ACES intervention, Kayla received more intensive psychiatric care, started medication treatment and began living with a family member. Although she expressed reluctance about taking medications, she displayed an awareness of her symptoms and recognized the need to stay on medications to remain stable. Kayla continued to use savouring, mindfulness and setting small attainable goals. She described the ACES skills as 'extremely helpful' and reported that the skills taught her ways to 'problem-solve' with her family. While she expressed very little interest in spending time with others, she reported that she would like to find a job and go back to work. Kayla reported plans to continue using the ACES skills, reporting that she only sees her therapist once a month and 'these skills help in between visits.'

DISCUSSION

We were first interested in exploring whether group members would be motivated and interested in participating in a didactic skills group, given that reduced motivation and interest in social interactions are hallmark features of schizophrenia (Kirkpatrick, Fenton, Carpenter, & Marder, 2006). As illustrated through group member participation and feedback, we found that group members attended group regularly and were generally engaged throughout treatment, whether they tended to be more interested in the group component or home practice. We were also interested in assessing whether group participants would engage in the skills and find them helpful. We found that participants did practise the skills often and reported that the skills were 'moderately' to 'highly helpful'. Furthermore, they rated the group as acceptable, logical and useful and expressed high levels of interest and motivation. Importantly, all but one of the group members expressed that they would be interested in engaging in a similar intervention in the future.

We obtained a better sense of the feasibility, acceptability and utility of ACES by taking a closer look at individual case experiences. Indeed, we observed that the utility of the ACES skills differed depending upon a person's participation in the group components, their personal goals and their symptom severity. Joshua was engaged and motivated to participate in the group component of treatment but reported few experiences with home practice.

Although home practice is an important component for incorporating these skills into a person's everyday repertoire of behaviours (Kazantzis, Deane, & Ronan, 2000), Joshua still appeared to benefit from the treatment. He reported that the ACES skills helped him to 'focus on the positives' and improved his self-confidence, which may have contributed to his reported increase in social interactions. Furthermore, it may be the case that weekly exposure to the skills during group was influential enough to impact his well-being; however, since he did not routinely practise the skills outside of group, they did not become habitual (like in Neil's case), and therefore, he did not remember to use these skills as frequently once group ended.

Conversely, Neil's lack of energy and blunted affect seemed to make it difficult for him to actively participate in the group discussions, but he frequently practised the ACES skills at home. Although he was not as engaged during group, he still seemed to benefit from the social aspects of the group format, as he reported that he was more likely to start conversations with others. Neil's dedication to learning and practicing the ACES skills appeared to contribute to his continued use of these skills once the group ended. Although he reported that identifying personal strengths was beneficial during group because it helped to improve his confidence, he did not continue to practise this skill once the group ended because it was difficult for him to recognize his strengths. It is possible that the group format helped him to engage in and benefit from this more challenging skill because he felt encouraged and supported, thus providing further support for the benefits of a group intervention for this population.

Kayla's experiences highlight the episodic nature of schizoaffective disorder and the importance of medications for stabilization (both Joshua and Neil were taking medications). Her history of mood episodes and emotional liability, medication-free status and an emotion-focused intervention like ACES, all could have contributed to her symptom exacerbation. However, it is important to note that she was not the only group member with a schizoaffective disorder diagnosis, and her symptom exacerbation may have been avoided if she were taking medications during the group. As each week progressed and her symptoms worsened, it became evident that she was unable to fully engage in the treatment or utilize the ACES skills as intended. As a result, the intervention required more of a symptom management component for this group member.

Group members were repeatedly reminded about creating a balance when practicing ACES skills; however, balance becomes more difficult when a person is experiencing psychological symptoms. Thus, certain symptom exacerbations (e.g., mania) in combination with certain ACES skills may further intensify the symptoms if practice is taken to an extreme (e.g., intense focus on positive emotions and experience, Johnson, Gruber, & Eisner, 2007; or increased engagement in goal attainment; Johnson, 2005). However, as highlighted in Kayla's case, group interventions like ACES are still feasible for someone who is currently experiencing acute and intense manic symptoms as long as the usage of these skills is monitored closely.

As demonstrated by the three case illustrations, group members varied in the frequency and diversity of the skills they practised during treatment and at follow-up. Some group

members identified their favourite skills at the beginning of group and continued to use these skills consistently (e.g., Joshua). Others took a more holistic approach, practicing all of the skills and then selectively using the skills that were most helpful and appropriate given a particular situation (e.g., Neil). We also found that some group members tended to use a certain set of skills while participating in the group treatment, and yet another set of core skills when group sessions ended (e.g., Kayla). Allowing the group members to gravitate towards the skills that work best for them was made possible by our decision to implement a multicomponent intervention, offering a 'toolkit' of skills that can be pulled from, as needed, by group members depending upon the situation.

Future Directions

Although group members consistently practised ACES skills during the group sessions, they reported that their memory was a barrier to using the skills more consistently after the group sessions ended. In fact, when they were reminded of the ACES skills during the 3-month follow-up visit, most group members expressed disappointment that they had forgotten to use some of the skills and reported interest in beginning to practise these skills again. While remembering and utilizing learned skills is a hurdle for most healthy people, this might be even more difficult for people living with schizophrenia or schizoaffective disorder who may also experience cognitive difficulties (Gold, 2004). Anticipating that memory would impact the likelihood of skills practice, we provided group members with session review sheets, which highlighted key content and examples of skill practice, and materials to help encourage skills practice (e.g., gratitude journal, mindfulness CD). However, we did not focus on methods for improving memory to practise skills (e.g., setting reminder alarms, making reminder phone calls, making reminder cards for a refrigerator or nightstand, booster sessions after the group sessions ended). Our experience with this open trial of ACES suggests that future skills-based treatments should include methods for increasing participants' ability to recall and practise treatment components and skills once the treatment has ended.

Our experience with ACES also suggests that people with schizophrenia or schizoaffective disorder are willing to participate in a social, group treatment even when experiencing symptoms that may otherwise hinder social involvement (e.g., negative symptoms or social anxiety). Group members reported enjoying the benefits of being around others and learning about their experiences in a group setting. These observations point to the important potential of group interventions for people with schizophrenia and a limitation of this open trial. That is, it may very well be the case that simply being around others with similar experiences or feeling supported by others contributed to the positive experiences with the treatment demonstrated in the case illustrations. Thus, to determine whether engaging in the ACES intervention is related to improved outcomes, it is necessary to (1) compare ACES to a control group condition and (2) assess outcomes more systematically.

Conclusions

As demonstrated by group member feedback and the brief reports of these three cases, the ACES intervention appears to be a feasible and acceptable treatment. Participants showed high motivation to attend group sessions and expressed positive feedback both during group

and at a 3-month follow-up. Participants also expressed interest in participating in similar interventions in the future. While the current cases provide a first step in demonstrating the feasibility and acceptance of the ACES group intervention in increasing well-being in those with schizophrenia or schizoaffective disorder, future studies should extend this work by systematically evaluating the efficacy of this treatment approach at increasing positive emotions, well-being and coping.

REFERENCES

American Psychiatric Association. Diagnostic and statistical manual of mental disorders. American Psychiatric Association; Washington, DC: 2000. Text Revision

Bach P, Hayes SC. The use of acceptance and commitment therapy to prevent the rehospitalization of psychotic patients: A randomized controlled trial. Journal of Consulting and Clinical Psychology. 2002; 70(5):1129–1139. doi: 10.1037//0022-006x.70.5.1129. [PubMed: 12362963]

Buckley PF, Miller BJ, Lehrer DS, Castle DJ. Psychiatric comorbidities and schizophrenia. Schizophrenia Bulletin. 2009; 35(2):383–402. doi: 10.1093/schbul/sbn135. [PubMed: 19011234]

Cohen AS, Minor KS. Emotional experience in patients with schizophrenia revisited: Meta-analysis of laboratory studies. Schizophrenia Bulletin. 2010; 36(1):143–150. doi: 10.1093/schbul/sbn061. [PubMed: 18562345]

Combs DR, Adams SD, Penn DL, Roberts D, Tiegreen J, Stem P. Social cognition and interaction training (SCIT) for inpatients with schizophrenia spectrum disorders: Preliminary findings. Schizophrenia Research. 2007; 91(1–3):112–116. doi: 10.1016/j.schres.2006.12.010. [PubMed: 17293083]

Devilly GJ, Borkovec TD. Psychometric properties of the credibility/expectancy questionnaire. Journal of Behavior Therapy and Experimental Psychiatry. 2000; 31:73–86. [PubMed: 11132119]

Diener E. Subjective well-being: The science of happiness and a proposal for a national index. American Psychologist. 2000; 55(1):34–43. doi: 10.1037//0003-066x.55.1.34. [PubMed: 11392863]

Eack SM, Newhill CE. Psychiatric symptoms and quality of life in schizophrenia: A meta-analysis. Schizophrenia Bulletin. 2007; 33(5):1225–1237. doi: 10.1093/schbul/sbl071. [PubMed: 17204532]

Elis O, Caponigro JM, Kring AM. Psychosocial treatments for negative symptoms in schizophrenia: Current practices and future directions. 2013 Manuscript submitted for publication.

First, M.; Spitzer, R.; Gibbon, M.; Williams, J. Structured clinical interview for axis I DSM-IV disorders—Patient edition (SCID-I/P, version 2.0). Biometrics Research Department; New York: 1994.

Fredrickson, BL. [Retrieved August 7, 2011] Cultivating positive emotions to optimize health and well-being. Prevention and Treatment. 2000. from the World Wide Web: http://www.wisebrain.org/papers/CultPosEmot.pdf

Fredrickson BL, Cohn MA, Coffey KA, Pek J, Finkel SM. Open hearts build lives: Positive emotions, induced through loving-kindness meditation, build consequential personal resources. Journal of Personality and Social Psychology. 2008; 95(5):1045–1062. doi: 10.1037/a0013262. [PubMed: 18954193]

Gard DE, Cooper S, Fisher M, Genevsky A, Mikels JA, Vinogradov S. Evidence for an emotion maintenance deficit in schizophrenia. Psychiatry Research. 2011; 187(1–2):24–29. doi: 10.1016/j.psychres.2010.12.018. [PubMed: 21237516]

Gaudiano BA, Herbert JD. Believability of hallucinations as a potential mediator of their frequency and associated distress in psychotic inpatients. Behavioural and Cognitive Psychotherapy. 2006; 34(04):497. doi: 10.1017/s1352465806003080.

Gold JM. Cognitive deficits as treatment targets in schizophrenia. Schizophrenia Research. 2004; 72(1):21–28. doi: 10.1016/j.schres.2004.09.008. [PubMed: 15531404]

Grant PM, Huh GA, Perivoliotis D, Stolar NM, Beck AT. Randomized trial to evaluate the efficacy of cognitive therapy for low-functioning patients with schizophrenia. Archives of General Psychiatry. 2011 *Advance online publication*. doi: 10.1001/archgenpsychiatry.2011.129.

Hegarty JD, Baldessarini RJ, Tohen M, Waternaux C, Oepen G. Open hundred years of schizophrenia: A meta-analysis of the outcome literature. The American Journal of Psychiatry. 1994; 151(10): 1409–1416. [PubMed: 8092334]

Hooley JM. Social factors in schizophrenia. Current Directions in Psychological Science. 2010; 19(4): 238–242. doi: 10.1177/0963721410377597.

Horan WP, Blanchard JJ, Clark LA, Green MF. Affective traits in schizophrenia and schizotypy. Schizophrenia Bulletin. 2008; 34(5):856–874. doi: 10.1093/schbul/sbn083. [PubMed: 18667393]

Horan WP, Kern RS, Shokat-Fadai K, Sergi MJ, Wynn JK, Green MF. Social cognitive skills training in schizophrenia: An initial efficacy study of stabilized outpatients. Schizophrenia Research. 2009; 107(1):47–54. doi: 10.1016/j.schres.2008.09.006. [PubMed: 18930378]

Jobe TH, Harrow M. Schizophrenia course, long-term outcome, recovery, and prognosis. Current Directions in Psychological Science. 2010; 19(4):220–225. doi: 10.1177/0963721410378034.

Johnson SL. Mania and dysregulation in goal pursuit: A review. Clinical Psychology Review. 2005; 25(2):241–262. doi: 10.1016/j.cpr.2004.11.002. [PubMed: 15642648]

Johnson, SL.; Gruber, JL.; Eisner, LR. Emotion and bipolar disorder. In: Rottenberg, JS., editor. Emotion and psychopathology. American Psychological Association; Washington, DC: 2007. p. 123-150.

Johnson DP, Penn DL, Fredrickson BL, Kring AM, Meyer PS, Catalino LI, Brantley M. A pilot study of loving-kindness meditation for the negative symptoms of schizophrenia. Schizophrenia Research. 2011; 129(2–3):137–140. doi: 10.1016/j.schres.2011.02.015. [PubMed: 21385664]

Kabat-Zinn J. Mindfulness-based interventions in context: Past, present, and future. Clinical Psychology: Science and Practice. 2006; 10(2):144–156. doi: 10.1093/clipsy.bpg016.

Kazantzis N, Deane FP, Ronan KR. Homework assignments in cognitive and behavioral therapy: A meta-analysis. Clinical Psychology: Science and Practice. 2000; 7(2):189–202.

Kirkpatrick B, Fenton WS, Carpenter WT Jr. Marder SR. The NIMH-MATRICS consensus statement on negative symptoms. Schizophrenia Bulletin. 2006; 32(2):214–219. doi: 10.1093/schbul/sbj053. [PubMed: 16481659]

Klingberg S, Wolwer W, Engel C, Wittorf A, Herrlich J, Meisner C, Buchkremer G, Wiedemann G. Negative symptoms of schizophrenia as primary target of cognitive behavioral therapy: Results of the randomized clinical TONES study. Schizophrenia Bulletin. 2011; 37(Suppl 2):S98–110. doi: 10.1093/schbul/sbr073. [PubMed: 21860053]

Kring AM, Caponigro JM. Emotion in schizophrenia: Where feeling meets thinking. Current Directions in Psychological Science. 2010; 19(4):255–259. doi: 10.1177/0963721410377599. [PubMed: 22557707]

Kring AM, Moran EK. Emotional response deficits in schizophrenia: Insights from affective science. Schizophrenia Bulletin. 2008; 34(5):819–834. doi: 10.1093/schbul/sbn071. [PubMed: 18579556]

Kring AM, Germans Gard M, Gard DE. Emotion deficits in schizophrenia: Timing matters. Journal of Abnormal Psychology. 2011; 120(1):79–87. doi: 10.1037/a0021402. [PubMed: 21058754]

Kurtz MM, Mueser KT. A meta-analysis of controlled research on social skills training for schizophrenia. Journal of Consulting and Clinical Psychology. 2008; 76(3):491–504. doi: 10.1037/0022-006X.76.3.491. [PubMed: 18540742]

Laithwaite H, O'Hanlon M, Collins P, Doyle P, Abraham L, Porter S, Gumley A. Recovery after psychosis (RAP): A compassion focused programme for individuals residing in high security settings. Behavioural and Cognitive Psychotherapy. 2009; 37(5):511–526. doi: 10.1017/S1352465809990233. [PubMed: 19765353]

Lambert T, Velakoulis D, Pantelis C. Medical comorbidity in schizophrenia. The Medical Journal of Australia. 2003; 178:S67–S70. [PubMed: 12720526]

Lysaker PH, Buck KD, Carcione A, Procacci M, Salvatore G, Nicolo G, Dimaggio G. Addressing metacognitive capacity for self reflection in the psychotherapy for schizophrenia: A conceptual model of the key tasks and processes. Psychology and Psychotherapy. 2011; 84(1):58–69. discussion 98–110. doi: 10.1348/147608310X520436. [PubMed: 22903831]

McGurk SR, Twamley EW, Sitzer DI, McHugo GJ, Mueser KT. A meta-analysis of cognitive remediation in schizophrenia. The American Journal of Psychiatry. 2007; 164:1791–1802. [PubMed: 18056233]

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(3): 239–248. doi: 10.1080/17439760.2012.677467.

Moritz S, Vitzthum F, Randjbar S, Veckenstedt R, Woodward TS. Detecting and defusing cognitive traps: Metacognitive intervention in schizophrenia. Current Opinion in Psychiatry. 2010; 23(6): 561–569. doi: 10.1097/YCO.0b013e32833d16a8. [PubMed: 20683332]

Moskowitz, JT. Coping interventions and the regulation of positive affect. In: Folkman, S., editor. Handbook of stress, health and coping. Oxford; New York: 2010. p. 407-427.

Moskowitz JT, Epel ES, Acree M. Positive affect uniquely predicts lower risk of mortality in people with diabetes. Health Psychology. 2008; 27(1 Suppl):S73–82. doi: 10.1037/0278-6133.27.1.S73. [PubMed: 18248108]

Moskowitz JT, Hult JR, Duncan LG, Cohn MA, Maurer SA, Bussolari C, Acree M. A positive affect intervention for people experiencing health-related stress: Development and non-randomized pilot test. Journal of Health Psychology. 2011 doi: 10.1177/1359105311425275.

Salvatore G, Lysaker PH, Gumley A, Popolo R, Mari J, Dimaggio G. Out of illness experience: Metacognition-oriented therapy for promoting self-awareness in individuals with psychosis. American Journal of Psychotherapy. 2012; 66:85–106. [PubMed: 22523795]

Seligman MEP, Rashid T, Parks AC. Positive psychology. American Psychologist. 2006; 61(8):774–788. [PubMed: 17115810]

Sin NL, Lyubomirsky S. Enhancing well-being and alleviating depressive symptoms with positive psychology interventions: A practice-friendly meta-analysis. Journal of Clinical Psychology. 2009; 65(5):467–487. doi: 10.1002/jclp.20593. [PubMed: 19301241]

Tugade MM, Fredrickson BL. Resilient individuals use positive emotions to bounce back from negative emotional experiences. Journal of Personality and Social Psychology. 2004; 86(2):320–333. doi: 10.1037/0022-3514.86.2.320. [PubMed: 14769087]

Turkington D, Dudley R, Warman DM, Beck AT. Cognitive–behavioral therapy for schizophrenia: A review. Focus. 2006; 4(2):223–233.

Ursu S, Kring AM, Gard MG, Minzenberg MJ, Yoon JH, Ragland JD, Soloman M, Carter CS. Prefrontal cortical deficits and impaired cognition–emotion interactions in schizophrenia. The American Journal of Psychiatry. 2011; 168(3):276–285. doi: 10.1176/appi.ajp.2010.09081215. [PubMed: 21205806]

Waugh CE, Fredrickson BL. Nice to know you: Positive emotions, self-other overlap, and complex understanding in the formation of a new relationship. The Journal of Positive Psychology. 2006; 1(2):93–106. doi: 10.1080/17439760500510569. [PubMed: 21691460]

Wykes T, Steel C, Everitt B, Tarrier N. Cognitive behavior therapy for schizophrenia: Effect sizes, clinical models, and methodological rigor. Schizophrenia Bulletin. 2008; 34(3):523–537. doi: 10.1093/schbul/sbm114. [PubMed: 17962231]

Key Practitioner Message

- There is a void in existing treatments for schizophrenia with few interventions focusing on increasing well-being in this population.
- Awareness and Coping with Emotion in Schizophrenia (ACES) is a skills-based group intervention that teaches cognitive and behavioural interventions to promote awareness and coping with emotion.
- Preliminary evidence demonstrates the feasibility and acceptance of the ACES group intervention in increasing well-being in those with schizophrenia.
- Future studies should extend this work by systematically evaluating the efficacy of this treatment approach.

Table 1

The Credibility/Expectancy Questionnaire scores

	Pretreatment	Post-treatment
	M (SD)	**M (SD)**
1. Logic	7.64 (1.50)	7.64 (1.12)
2. Utility	6.73 (1.85)	6.45 (1.21)
3. Confidence in recommending	6.82 (1.54)	7.55 (1.37)
4. Feeling of improvement	7.60 (1.27)	8.00 (1.20)
5. Improvement *thought* to occur (%)	57.27 (29.70)	50.00 (22.80)
6. Improvement *felt* to occur (%)	61. 82 (26.01)	50.91 (25.48)
7. Satisfaction with group		7.27 (1.35)
8. Interest in skills/group experience		7.64 (1.36)
9. Helpfulness of skills learned		7.45 (1.37)
10. Satisfaction with therapists		8.10 (0.99)
11. Motivation to participate		7.82 (0.87)

Note. Items 7–11 were added to the CEQ-post-treatment questionnaire.

Table 2

Skills practice and helpfulness scores

		Weekly skill practice	Helpfulness	Total skill practice
Skill	***N***	**M (SD)**	**M (SD)**	**M (SD)**
Daily positives	8	6.25(1.39)	3.5(0.92)	21.36(14.27)
Savouring	7	5.71(1.89)	3.69(0.72)	18.54(12.32)
Gratitude	8	3.37(2.88)	3.27(0.83)	8.09(5.65)
Altruism	9	4.00(2.74)	3.73(0.42)	12.36(10.80)
Mindfulness	9	3.56(2.55)	4.05(0.59)	12.45(6.95)
Reappraisal	7	4.86(2.48)	3.87(0.80)	8.18(5.74)
Personal strengths	10	3.80(2.82)	3.77(0.96)	5.90(4.64)
Attainable goals	9	3.67(2.87)	3.75(1.04)	3.00(2.97)
Mean skills practised over 6-week group: 89.91(51.02)				

Note. *N* = number of group members who turned in the weekly practice log; weekly skill practice = mean number of times the skill was practised following the week the skill was discussed (max = 7); helpfulness = mean helpfulness score following the week the skill was discussed (1 = not at all helpful, 5 = very helpful); total skill practice = the total number of times the skill was practiced during the 6-week group.