Early Psychosis and Trauma-Related Disorders:
Clinical Practice Guidelines and Future Directions

by

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Submitted in partial fulfillment for the degree of
Doctor of Psychology in the Department of Clinical Psychology
at Antioch University New England, 2017

Keene, New Hampshire
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EARLY PSYCHOSIS AND TRAUMA-RELATED DISORDERS: CLINICAL PRACTICE GUIDELINES AND FUTURE DIRECTIONS

presented on February 10, 2017

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Acknowledgements

Thank you to Antioch University New England and University of California Davis faculty, staff, and students for all you have taught me, the culmination of which this project represents. Especially, to my dissertation committee—Martha Straus, PhD, Tara Niendam, PhD, and William Slammon, PhD—for everything you have done along the way to help this project and me shine. Also to Gina Pasquale, PsyD for D.L.S. and cloth monkeys, and to Brian Denietolis, PsyD, for footballs and seashells.

Thank you also to those who helped to improve the outcome of this project despite having no obligation to do so. To Dawn Blacker, PhD and Laura Tully, PhD for contributions to the conception of this project and assistance with editing. To Satinder Gill, PsyD, Rachel Loewy, PhD, and Laura Tully, PhD for assistance with survey development. To Divya Kumar for assistance with managing data collection. To Brandi Hawk, PhD, for assistance with data analysis.

Finally, thank you to my family and friends for continued interest in this project—and me—despite intermittently being met with overwhelming enthusiasm and irritability throughout. To Ed, Tracey, Dottie, and Kait for cuddling our little guy during the home stretch. To Beth for full-friendship and half-cupcakes. Most of all, to my husband, Dylan, for endless love and support. I likely would not have started this journey, or completed it, without your encouragement.
To the courageous young people who have inspired this work
Abstract

Despite very high rates of trauma-related disorders among individuals with early psychosis, no clinical practice guidelines for the treatment of comorbid early psychosis and trauma-related disorders exist to date. Indeed, the routine exclusion of individuals with past and current psychosis from participation in trauma research and practice has limited the accumulation of research evidence that could inform such clinical practice guidelines. While preliminary research evidence suggests that traditional, empirically supported treatments for trauma-related disorders can be safely and effectively employed to reduce symptoms of posttraumatic stress and chronic psychosis, it remains unclear whether such treatments are appropriate for individuals in the early stages of psychotic illness. Clinical experts (N = 118) representing 121 early psychosis programs across 28 states were surveyed using the expert consensus method.

Forty-nine clinical experts responded, and reached consensus on 46 of 49 expert consensus items related to the treatment of comorbid early psychosis and trauma-related disorders. Conjoint or family therapy and individual therapy were rated as treatment approaches of choice. Anxiety or stress management and psychoeducation were rated as interventions of choice for addressing both trauma symptoms and psychotic symptoms. In addition, case management was rated as an intervention of choice for addressing psychotic symptoms. No consensus was reached on expert consensus items regarding the appropriateness of a parallel treatment approach for the treatment of comorbid early psychosis and trauma-related disorders, sensorimotor or movement interventions for addressing trauma symptoms, or exposure interventions for addressing psychotic symptoms. In areas where expert consensus exists, clinical practice guidelines for the treatment of comorbid early psychosis and trauma-related disorders are offered in accordance with the expert consensus method. In areas where expert consensus does not exist,
recommendations for future research are proposed. The results of this study are intended to serve as a launching point for scientists and practitioners interested in advancing appropriate treatment for high-risk and underserved individuals with comorbid early psychosis and trauma-related disorders.

*Keywords*: early psychosis; trauma; posttraumatic stress disorder;
clinical practice guidelines; expert consensus
Psychosis and Trauma-Related Disorders: Clinical Practice Guidelines and Future Directions

Rates of trauma-related disorders are higher among individuals with early psychosis (i.e., less than five years since the onset of threshold psychotic symptoms) than would be expected based on general population estimates (Achim et al., 2011; Strakowski, Keck, McElroy, Lonczak, & West, 1995), yet no clinical practice guidelines exist for treating comorbid early psychosis and trauma-related disorders. The collection of research evidence that could inform such clinical practice guidelines has been limited historically by the routine exclusion of individuals with past and present psychosis from participation in trauma research and practice (Becker, Zayfert, & Anderson, 2004; Litz, Blake, Gerardi, & Keane, 1990; Ronconi, Shiner, & Watts, 2014). Preliminary research evidence suggests that traditional, evidence-based treatments for trauma-related disorders can be safely and effectively employed to reduce symptoms of posttraumatic stress and chronic psychosis (de Bont, van Minnen, & de Jongh, 2013; Frueh et al., 2009; Mueser et al., 2008; van den Berg & van der Gaag, 2012); however, it remains unclear whether such treatments are appropriate for individuals with early psychosis.

Review of Relevant Literature

Here, the relevant literature on trauma, psychosis, and related disorders is briefly reviewed before describing the significance, conceptual framework, and objectives and rationale of the current study.

Trauma and related disorders. A traumatic event is defined as a situation in which an individual is exposed to “actual or threatened death, serious injury, or sexual violence” (American Psychiatric Association, 2013, p. 217). Exposure includes directly experiencing the traumatic event, witnessing the traumatic event occur to another person, learning about the traumatic event occurring to a close family member or friend, or directly experiencing repeated
or extreme aversive details of traumatic events as in the course of performing one’s occupational duties (American Psychiatric Association, 2013). Common traumatic events include (a) child abuse (e.g., physical, sexual, emotional, or psychological) and neglect; (b) domestic, school, and community violence; (c) natural disasters (e.g., fire, tornado, flood, or hurricane); (d) vehicular or other serious accidents; (e) war, terrorism, or refugeeism; (f) medical trauma; and (g) traumatic grief (i.e., sudden and/or violent death of a loved one).

About 40% of children and adolescents are exposed to a traumatic event annually in the United States, and approximately 70% of Americans have been exposed to a traumatic event by age 18 (Finkelhor, Turner, Shattuck, & Hamby, 2013). Exposure to a traumatic event or other adverse childhood event (e.g., living with a person who abuses substances, has a mental illness or a history of suicidality, or has been imprisoned) significantly increases the risk of future exposure to traumatic events (Finkelhor et al., 2013), as well as future manifestation of health risk factors and disease conditions (Felitti et al., 1998). This increase in negative mental and physical health outcomes are believed to be the result of engagement in maladaptive behaviors (e.g., smoking, alcohol or drug use, overeating, problematic sexual behavior) in an effort to cope with the negative cognitive, emotional, and behavioral effects of exposure to traumatic or adverse childhood events (Felitti et al., 1998).

One manifestation of these negative effects associated with trauma exposure is posttraumatic stress symptoms. Posttraumatic stress symptoms include (a) re-experiencing or intrusion symptoms (e.g., recurrent, involuntary, or distressing thoughts or images of the traumatic event); (b) avoidance symptoms (e.g., avoidance of thoughts of, feelings about, and reminders associated with the traumatic event); (c) negative cognitions or mood (e.g., persistent, distorted, or exaggerated negative beliefs about the self, others, world, or cause or consequences
of the traumatic event accompanied by negative emotions or inability to experience positive emotions); (d) and hyperarousal symptoms (e.g., impaired cognitive, emotional, or behavioral regulation; American Psychiatric Association, 2013).

Posttraumatic stress symptoms are commonly experienced in the month following exposure to a traumatic event (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995); however, if posttraumatic stress symptoms are associated with clinically significant distress or impairment in the 3-30 days following trauma exposure, a diagnosis of Acute Stress Disorder is warranted (American Psychiatric Association, 2013). For approximately 30% of individuals exposed to a traumatic event, posttraumatic stress symptoms continue to occur with clinically significant distress or impairment beyond the month following trauma exposure (Kessler et al., 1995). In such cases, a diagnosis of Posttraumatic Stress Disorder (PTSD) is warranted. PTSD is described as acute if posttraumatic stress symptoms are present for 1-3 months following exposure to the traumatic event and as chronic if present for more than 3 months following exposure to the traumatic event (American Psychiatric Association, 2013).

About 80% of individuals with PTSD have at least one comorbid psychiatric disorder, while individuals presenting for PTSD treatment meet diagnostic criteria for three psychiatric disorders on average (Foa, Keane, Friedman, & Cohen, 2005; Kessler et al., 1995). Common comorbid psychiatric disorders among individuals with PTSD include substance use disorders, mood disorders, anxiety disorders, and personality disorders (Keane & Kaloupek, 1997). It is unclear if these individuals are best conceptualized as presenting with a chronic course of PTSD, a traumagenic psychiatric disorder distinct from PTSD, or a comorbid psychiatric disorder in addition to PTSD (Cohen & Work Group on Quality Issues, 2010).
Empirically supported treatments for PTSD predominantly include trauma-focused treatments, which address trauma exposure directly in order to combat the role of avoidance in the maintenance of PTSD (Cohen & Work Group on Quality Issues, 2010; Foa & Davidson, 1999). For children and adolescents, participation of a non-offending support person, as well as attention to the impact of trauma exposure and adaptation on individual and family development, are important aspects of trauma-focused treatment (Cohen & Work Group on Quality Issues, 2010). The active participation of a non-offending support person is crucial to the generalization of personal and relational skills and safety created in the therapeutic context. In addition, when the non-offending support person is a caregiver, this person can help to influence the resumption of normal developmental expectations and tasks.

**Psychosis.** The lifetime prevalence of psychotic disorders is approximately 3% (Perala et al., 2007). The median age of initial presentation for psychotic disorders is 22 with an interquartile range of 19-25 (Kessler et al., 2007); about 100,000 adolescents and young adults experience first-episode psychosis (FEP) annually in the United States (Heinssen, Goldstein, & Azrin, 2014). Symptoms of a psychotic disorder include (a) delusions (e.g., ideas or beliefs that are firmly held despite contrary evidence); (b) hallucinations (e.g., sensory perceptions in the absence of corresponding external stimuli), and (c) disorganized communication (e.g., losing track of or jumping around in conversation, or behaving in ways that do not fit the situation).

Psychotic symptoms are often associated with schizophrenia spectrum disorders like schizophrenia and schizoaffective disorder; however, schizophrenia spectrum disorders only account for about two-thirds of psychotic disorders (Kessler et al., 2007). Psychotic symptoms can also occur in the context of mood disorders, such as major depressive disorder or bipolar disorder. Of note, the presence of a comorbid mood disorder (e.g., major depressive disorder) is
associated with the occurrence of psychotic symptoms in PTSD (David, Kutcher, Jackson, & Mellman, 1999).

Some individuals experience psychotic symptoms of insufficient intensity or duration to meet criteria for a psychotic disorder. Miller et al. (2003) describes three syndromes that represent this subclinical group: (a) the genetic risk and deterioration syndrome (GRD), (b) the attenuated positive syndrome (APS), and (c) the brief intermittent psychotic symptom syndrome (BIPS). GRD includes individuals with genetic risk, defined as having a first-degree relative who meets diagnostic criteria for a psychotic disorder or personally meeting diagnostic criteria for schizotypal personality disorder, in addition to a recent significant deterioration in overall functioning. APS includes individuals with recent onset or worsening of attenuated (i.e., subthreshold) psychotic symptoms, such as unusual thought content, perceptual abnormalities, and disorganized speech. BIPS includes individuals with recent onset of threshold psychotic symptoms that are brief and infrequent, and that remit without treatment. These three syndromes represent the ultra-high risk (UHR) phase of early psychosis. Taken together, the UHR phase and the FEP phase reflect the full range of individuals with early psychosis.

Psychiatric comorbidity is also high among individuals with early psychosis: 69% of individuals with FEP have at least one comorbid psychiatric disorder; 49% have two or more comorbid psychiatric disorders (Strakowski et al., 1995). Common comorbid psychiatric disorders among individuals with early psychosis include substance use disorders, mood disorders, anxiety disorders, personality disorders, and PTSD (McGorry, Killackey, & Yung, 2008; Strakowski et al., 1995).

Clinical practice guidelines for early psychosis have traditionally recommended the use of atypical or second-generation antipsychotic medications for individuals in the FEP stage;
however, they caution against the use of antipsychotic medication for individuals in the UHR stage (International Early Psychosis Association Writing Group, 2005; McGorry et al., 2008). Research evidence demonstrates antipsychotic medication is not the only effective treatment for early psychosis.

Psychosocial treatments, especially cognitive therapies, are also beneficial (McGorry et al., 2008). Psychosocial treatments are particularly beneficial in the context of the coordinated specialty care model, which uses a team-based approach to combine the most effective interventions for early psychosis (Kane et al., 2016). These interventions include a combination of psychotherapy, medication management, case management, family support and education, and education and employment support (Dixon et al., 2015). As a result, current clinical practice guidelines for early psychosis recommend psychosocial interventions across all stages of psychotic illness (International Early Psychosis Association Writing Group, 2005; McGorry et al., 2008). There is no guidance, however, on how comorbid psychiatric conditions should be addressed in early psychosis treatment.

**Trauma and psychosis.** The neural diathesis-stress model has historically been an influential etiological framework in the study of schizophrenia. The neural diathesis-stress model attributes diathesis for schizophrenia to a constitutional hyperresponsivity of glucocorticoid receptors to stressors caused by dysfunction in the hypothalamic-pituitary-adrenal (HPA) axis (Walker & Diforio, 1997). In short, individuals who develop psychosis do so because they are biologically predisposed to be sensitive to environmental stressors that activate neuroendocrine and autonomic nervous system reactions designed to respond to physical threats; however, not all stressors pose an imminent threat to an individual’s physical or psychological safety.
In recent years, the neural diathesis-stress model has been criticized for conceptualizing all stressors as equivalent. For example, Jones and Fernyhough (2007) argue stressors that are perceived as uncontrollable or related to social evaluation are associated with the highest cortisol release and, therefore, may be responsible for worsening or even causing psychotic symptoms in vulnerable individuals. The neural diathesis-stress model has also been criticized for making an artificial distinction between diathesis and stress and failing to take into consideration substantial evidence that early, chronic, or severe trauma exposure can contribute to biological and structural changes in the brain that are similar to those the neural diathesis-stress model attributes to the biological or genetic diathesis for schizophrenia (Read, Perry, Moskowitz, & Connolly, 2001; Read, Fosse, Moskowitz, & Perry, 2014).

Morrison and colleagues (Morrison, 2001; Morrison, Frame, & Larkin, 2003) describe how psychological and sociocultural factors influence in the relationship between trauma and psychosis in the context of the cognitive model. According to the cognitive model of PTSD, individuals who go on to develop PTSD misinterpret re-experiencing or intrusion symptoms of posttraumatic stress as evidence of current or future threats to their physical or psychological safety, or as evidence of permanent, negative changes resulting from trauma exposure (Ehlers & Clark, 2000). As a result, re-experiencing or intrusion symptoms of posttraumatic stress, which are normative in the immediate aftermath of trauma exposure, are experienced with marked emotional distress that contributes to both the maintenance of re-experiencing or intrusion symptoms and the onset of avoidance symptoms (Ehlers & Clark, 2000).

When some individuals with PTSD experience normal perceptual anomalies (e.g., hearing one’s name being called when no one is there), their interpretation of re-experiencing or intrusion symptoms is generalized to perceptual anomalies. These perceptual anomalies come to
be experienced with the same marked distress as re-experiencing or intrusion symptoms, and may contribute to the maintenance of perceptual anomalies, development of hallucinations, and the onset of social withdrawal (Morrison et al., 2003).

Morrison (2001) also argues that psychotic disorders and trauma-related disorders may represent a continuum of responses to trauma exposure. According to Morrison, the primary determinant of whether a given individual is diagnosed with a psychotic disorder or a trauma-related disorder is the cultural acceptability of their interpretation of and communication about their experiences. While it is possible for an individual to be diagnosed with both a psychotic disorder and a trauma-related disorder, Morrison suggests that if an individual reports, for example, hearing a critical voice without connecting this experience to past sexual abuse, he or she is more likely to be diagnosed with a psychotic disorder; however, if an individual reports the same experience related to past sexual abuse, he or she is more likely to be diagnosed with a trauma-related disorder (Morrison, 2001).

**Significance**

Rates of PTSD are significantly higher among individuals with psychosis than would be expected based on the 6.8% estimated lifetime prevalence of PTSD in the general population of the United States (Kessler et al., 2005). According to a meta-analysis conducted by Achim et al. (2011), the estimated lifetime prevalence of PTSD among individuals with psychosis is 12.4%. The rates of PTSD among individuals with FEP are higher still: in a study of the chronology of comorbid psychiatric disorders among 71 individuals presenting with FEP in Cincinnati emergency departments, inpatient units, and outpatient clinics, nearly 23% of individuals with FEP presented with comorbid PTSD (Strakowski et al., 1995).
Despite these very high rates of trauma-related disorders among individuals with psychosis, no clinical practice guidelines for comorbid early psychosis and comorbid trauma-related disorders exist to date. In fact, the routine exclusion of individuals with past and present psychosis from participation in trauma research and practice has historically limited the collection of research evidence that could inform such clinical practice guidelines. Psychosis is listed as an exclusion criterion in over 90% of randomized control trials for PTSD treatments, making psychosis the most common exclusion criterion in trauma research (Ronconi et al., 2014). Over 50% of randomized control trials for PTSD treatments excluded individuals with current psychosis, while another 40% excluded individuals with past psychosis (Ronconi et al., 2014).

In addition, there is little consensus regarding the best treatment approach for individuals with PTSD and comorbid psychiatric disorders. For example, the American Academy of Child & Adolescent Psychiatry (Cohen & Work Group on Quality Issues, 2010) recommends an integrated treatment approach for comorbid psychiatric disorders. In contrast, the International Society for Traumatic Stress Studies (Cloitre, Courtois, Charuvastra, Carapezza, Stolbach, & Green, 2011) recommends a sequenced treatment approach, including stabilization and skills strengthening, review and reappraisal of trauma memories, and consolidation of gains, for individuals with complex PTSD.

This lack of consensus, coupled with the common assumption that a treatment is contraindicated (i.e., should not be used because it may cause harm to the individual) for populations that have not been included in outcome research, contributes to the majority of licensed psychologists excluding individuals with psychosis from trauma treatment (Ronconi et al., 2014). Eighty-five percent and 91% of licensed psychologists identify comorbid psychosis as
a contraindication for imaginal exposure (Becker et al., 2004) and in vivo exposure (Litz et al., 1990), respectively, in individuals with PTSD. Preliminary evidence from the small but growing outcome literature on the treatment of chronic psychosis and PTSD, however, indicates that this assumption is incorrect.

**Non-exposure interventions.** Mueser et al. (2008) conducted a randomized control trial study of the effect of cognitive behavioral therapy (CBT) integrated with treatment as usual (TAU) versus TAU alone on PTSD symptoms in 108 adults with PTSD and either a comorbid mood disorder (85%), or schizophrenia or schizoaffective disorder (15%), and/or borderline personality disorder (25%). Participants in the CBT group received 12-16 sessions of individual CBT in the context of treatment as usual in a local community health center. Compared to TAU alone, TAU plus CBT significantly decreased PTSD, mood, and anxiety symptoms, negative trauma-related cognitions, other psychiatric symptoms, and health-related concerns. Additionally, participants endorsed increased knowledge of PTSD and client-case manager working alliance. These observed effects were significantly more robust for individuals with severe PTSD compared to those with mild or moderate PTSD. Interestingly, although Mueser et al. (2008) did not include exposure in their intervention, they ultimately recommended future research explore the effectiveness of the addition of exposure to their intervention protocol because their intervention protocol did not significantly reduce PTSD diagnosis.

More recently, Steel et al. (2017) conducted a randomized control trial study of the effect of CBT plus TAU versus TAU alone on PTSD symptoms in 61 adults with PTSD and schizophrenia, schizoaffective disorder, or schizophreniform disorder. Participants in the CBT group received up to 16 sessions of CBT over a 6-month period in large National Health Service trusts. The addition of CBT to TAU did not result in a significant difference on any of the
outcomes, including trauma-related cognitions, severity of PTSD symptoms, positive symptoms of psychosis, severity of hallucinations and delusions, frequency of trauma-related cognitions, depression, anxiety, functioning, or quality of life. Steel et al. concluded that interventions aimed at processing emotions related to traumatic memories may be needed in order for CBT to be effective in individuals with comorbid PTSD and psychotic disorders.

Exposure interventions. Frueh et al. (2009) conducted an open trial study of the effect of CBT, including imaginal exposure interventions, on the PTSD symptoms in 20 adults with PTSD and either schizophrenia or schizoaffective disorder. Participants received 22 individual and group CBT sessions over the course of 11 weeks in the context of TAU in a public-sector community health center. At the end of the trial, participants endorsed decreased posttraumatic stress symptoms and anger, as well as increased general mental health.

Other approaches appear to have similarly promising results. For example, van den Berg and van der Gaag (2012) conducted an open-pilot trial study of the effect of eye movement desensitization and reprocessing (EMDR) on the posttraumatic stress and psychotic symptoms of 27 adults with PTSD and a comorbid schizophrenia spectrum disorder. Participants received a maximum of 6 sessions of individual EMDR in the context of TAU in an outpatient mental health center. Participants reported a decrease in posttraumatic stress symptoms, psychotic symptoms (i.e., auditory verbal hallucinations and delusions), and other psychiatric symptoms (i.e., depression and anxiety), as well as increased self-esteem after treatment. Further, the authors noted that treatment did not lead to symptom exacerbations or adverse events.

De Bont et al. (2013) conducted a within-group controlled study of the effect of PE or EMDR on the posttraumatic stress symptoms in 10 adults with PTSD and a comorbid psychotic disorder. Five participants received 12 sessions of PE, and 5 participants received 12 sessions of
EMDR. Both PE and EMDR decreased posttraumatic stress symptom severity and PTSD diagnosis of participants. Notably, PE and EMDR were found to be equally safe and effective. This finding is consistent with dismantling studies of EMDR, which have demonstrated exposure is the essential ingredient in EMDR (Renfrey & Spates, 1994).

Subsequently, van den Berg et al. (2015) conducted a randomized control trial study of the effect of PE or EMDR versus waiting list (WL) on PTSD symptoms in 13 adults with a lifetime diagnosis of a psychotic disorder or a mood disorder with psychotic features and a current diagnosis of chronic PTSD. Participants received 8 weekly 90-minute sessions of PE (n = 53), EMDR (n = 55), or WL (n = 47). Compared to WL, both PE and EMDR significantly decreased PTSD symptoms and diagnosis; however, PE, but not EMDR, resulted in full remission of PTSD compared to WL.

Collectively, these studies demonstrate that CBT, PE, and EMDR can be employed safely and effectively to reduce both posttraumatic stress symptoms and psychotic symptoms in adults with comorbid chronic psychosis and PTSD (de Bont et al., 2013; Frueh et al., 2009; Mueser et al., 2008; van den Berg & van der Gaag, 2012); however, the addition of exposure interventions may result in more robust effects compared to non-exposure interventions in this population. In addition, there is no outcome literature on the treatment of comorbid early psychosis and trauma-related disorders to date. As a result, additional research is needed to clarify which treatments are appropriate for individuals in the early stages of psychotic illness. The accumulation of consensus evidence based on expert opinion may serve as a launching point for such research by guiding the selection or design of treatments to be rigorously tested in future randomized control trials.
Conceptual Framework

The conceptual framework for this study is the biopsychosocial model. First described by Engel (1977), the biopsychosocial model arose in response to pressure for psychiatry to either conform more stringently to the biomedical model or to leave the broader field of medicine. Engel argues that it is not the field of psychiatry that does not fit the biomedical model, but rather the biomedical model that fits neither the field of psychiatry nor the field of medicine. Instead, he proposes the rejection of the biomedical model in favor of what he calls the biopsychosocial model: a scientifically based integration of biological, psychological, and sociocultural influences to provide a more complete, albeit more complex, understanding of human health and illness.

The biopsychosocial model offers a single, scientifically based framework within which psychotherapeutic interventions from various theoretical orientations can be judged on the basis of scientific merit rather than compatibility with one’s world view (Melchert, 2015). The biopsychosocial model is a particularly helpful conceptual framework for the study of early psychosis and trauma-related disorders given the complexity of the relationship between these two phenomena. The biopsychosocial model assumes, while research evidence will provide clear guidance on the safest and most effective treatment interventions in some cases, the complexity of some phenomena will result a lack of clarity. In such cases, the biopsychosocial model advocates the integration of research evidence with clinical experience and judgment and patient preferences and values to develop the safest and most effective treatments possible (Melchert, 2015).
Objectives and Rationale

The Institute of Medicine defines clinical practice guidelines as “systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances” (Field & Lohr, 1990, p. 8). While well-constructed clinical practice guidelines offer a wide range of potential benefits to patients, practitioners, and health care systems, poorly constructed clinical practice guidelines pose an equally wide range of potential harms (Woolf, Grol, Hutchinson, Eccles, & Grimshaw, 1999).

According to Woolf et al. (1999), clinical practice guidelines have the potential to improve the consistency, efficiency, value, and outcome of health care. They offer information that can empower patients and practitioners to make more informed health care decisions, protecting both parties from the negative influences of uncertainty and antiquity. Finally, clinical practice guidelines can influence public policy by highlighting gaps in health care knowledge and coverage. Clinical practice guidelines also have the potential to reduce the quality, efficiency, availability, and flexibility of health care. They can confuse, frustrate, and mislead patients and practitioners. Finally, clinical practice guidelines can divert and waste needed resourced by escalating unnecessary utilization of health care.

The expert consensus method was designed to allow researchers to collect consensus evidence to inform clinical practice guidelines in cases where the outcome literature is unclear, incomplete, or absent and must be supplemented with expert opinion (Kahn, Docherty, Carpenter, & Frances, 1997). The expert consensus method has been used to develop clinical practice guidelines for dementia (Alexopoulous et al., 2005), obsessive-compulsive disorder (Frances, Docherty, & Kahn, 1997), bipolar disorder (Sachs, Printz, Kahn, Carpenter, &
Docherty, 2000), and schizophrenia (McEvoy, Scheifler, & Frances, 1999), PTSD (Foa & Davidson, 1999), and complex PTSD (Cloitre et al., 2011).

The use of the expert consensus method by Cloitre et al. (2011) is particularly relevant to the current study. Cloitre et al. used the expert consensus method to expand upon the previously reported findings of Foa and Davidson (1999) to address the needs of individuals with complex PTSD (i.e., PTSD with marked regulatory and interpersonal impairments). The current study similarly seeks to expand upon previous work (Cloitre et al., 2011; Foa & Davidson, 1999) by using the expert consensus method to develop clinical practice guidelines that adequately address the needs of individuals with comorbid early psychosis and trauma-related disorders.

The current study addresses a gap in the psychological literature through a national survey of clinical experts inquiring about their clinical decision-making and intervention practices in the course of treating individuals with comorbid early psychosis and trauma-related disorders, supplementing the existing outcome literature with consensus evidence. In areas where expert consensus exists, clinical practice guidelines for the treatment of comorbid early psychosis and trauma-related disorders are offered in accordance with the expert consensus method. In areas where expert consensus does not exist, recommendations for future research are offered. The results of this study are intended to serve as a launching point for scientists and practitioners interested in advancing appropriate treatment for high-risk and underserved individuals with early psychosis and trauma-related disorders.

**Summary and Research Questions**

To date, no studies have explored how to effectively sequence or integrate treatment for individuals with comorbid chronic psychosis and PTSD, and there is no research evidence on single-diagnosis, sequenced, or integrated approaches to the treatment of early psychosis and
trauma-related disorders. The complexity of the trauma-psychosis connection has undoubtedly contributed to the slow growth of knowledge related to treatment in this area; however, the development of clinical practice guidelines represents a viable strategy for disseminating information to aid decision-making regarding appropriate treatment (Woolf et al., 1999).

Given the potential harms associated with the absence of well-constructed clinical practice guidelines (Woolf et al., 1999), it is important to use empirical methods to promote guideline development. The expert consensus method, which is designed to allow researchers to collect consensus evidence in cases where the outcome literature is unclear, incomplete, or absent and must be supplemented with expert opinion, is one such method (Kahn et al., 1997).

The current study expands upon previous work (Cloitre et al., 2011; Foa & Davidson, 1999) by using the expert consensus method to develop clinical practice guidelines for the treatment of individuals with comorbid early psychosis and trauma-related disorders, addressing the following research questions:

1. Which treatment modalities (e.g., individual therapy, conjoint or family therapy, consultation) are most appropriate?
2. Which treatment approaches (e.g., single-diagnosis, sequenced, parallel, or integrated) are most appropriate?
3. Which treatment interventions are most appropriate for addressing psychotic symptoms and for treating trauma symptoms?
4. Is trauma-focused treatment appropriate? If so, under what clinical and psychosocial conditions (e.g., stage of psychosis, current psychosocial context, past psychosocial context)?
5. Should treatment modalities, approaches, or interventions be modified based on developmental level (e.g., under age 18 or over age 25)? If so, how?

6. What are the barriers to treating comorbid early psychosis and trauma-related disorders in early psychosis programs?

7. How can the treatment of comorbid early psychosis and trauma-related disorders in early psychosis programs be improved?

Methodology

The methods of this study were modeled after the expert consensus method (Frances, Kahn, Carpenter, Ross, & Docherty, 1996). The expert consensus method is a quantitative method that allows researchers to collect consensus evidence through a single-round survey to inform clinical practice guidelines when the outcome literature is unclear, incomplete, or absent (Kahn et al., 1997).

The expert consensus method was, therefore, an appropriate method for the current study, which aimed to collect consensus evidence through a single-round survey to inform clinical practice guidelines for the treatment of comorbid early psychosis and trauma-related disorders given the incomplete literature on the treatment of comorbid chronic psychosis and PTSD, as well as the absent literature on the treatment of comorbid early psychosis and trauma-related disorders.

Participants

Prospective participants included clinical directors or persons in comparable positions, who are responsible for overseeing the clinical services of early psychosis programs in the United States. These individuals were presumed to have the knowledge and experience needed to
offer expert opinion about the treatment of individuals with comorbid early psychosis and trauma-related disorders in the United States. There were no *a priori* exclusion criteria for this study.

**Procedures**

**Identification and selection of early psychosis programs and prospective participants.** Early psychosis programs directories (Early Assessment & Support Alliance & Foundation for Excellence in Mental Health Care, 2016; Early Assessment & Support Alliance & Foundation for Excellence in Mental Health Care, 2015; National Psychosis Prevention Council, 2014; Schizophrenia.com, 2010), located through an internet search and consultation with experts in the field, were reviewed in order to identify early psychosis programs in the United States from which to recruit participants. This review resulted in the identification of 121 early psychosis programs across 28 states. See Appendix A for a list of early psychosis programs in the United States from which participants were recruited.

Clinical directors or persons in comparable positions were then identified for all 121 early psychosis programs in the United States. In some cases, more than one person fulfilled this role at a single early psychosis program. In other cases, a single person fulfilled this role at more than one early psychosis program. As a result, the total number of prospective participants (n = 118) was slightly lower than the total number of early psychosis programs (n = 121). No early psychosis programs or prospective participants were excluded from this study.

**Recruitment of participants.** Participants were recruited via email. Recruitment emails (Appendix B) included a brief description of the study and a link to the online survey. In an effort to increase response rates, reminder emails were sent to all prospective participants two weeks and four weeks after the initial recruitment email.
Optional participation incentives. Prospective participants were offered two optional participation incentives: (a) optional entry into a raffle for one of four $25 Amazon gift cards, and (b) optional receipt of study results. In order to ensure that survey responses remained anonymous, prospective participants were instructed to opt-in to one or both optional participation incentives by emailing the principle investigator with “RAFFLE” and/or “RESULTS” in the subject line. These instructions, including the principle investigator’s email address, were included in the informed consent text on the first page of the online survey.

Measure. Participants completed an online survey (Appendix C), which took approximately 15-20 minutes to complete. The online survey was administered and the data was collected via Qualtrics, a secure web-based platform. The online survey included informed consent text and 24-30 questions (i.e., depending on participant responses to six conditional questions). The online survey inquired about participant characteristics, program characteristics, as well as expert opinions related to the treatment of comorbid early psychosis and trauma-related disorders. No identifying information was collected or attached to survey responses to allow the participants to respond as honestly as possible.

The expert consensus questions were modeled after those described in Frances et al. (1996), Foa and Davidson (1999), and Cloitre et al. (2011). Participants were instructed to use a 9-point rating scale, identical to that described in Frances et al. (1996), to rate the appropriateness of modalities, approaches, interventions, and treatments. The instructions and anchors described in Frances et al. (1996) were modified slightly to increase their relevance for the current study (Figure 1). Participants were provided with definitions of key terms (Appendix D), as well as definitions of interventions (Appendix E) that were modeled after Cloitre et al.
Given that the initial presentation for psychotic disorders typically occurs in late adolescence and early adulthood (Kessler et al., 2007), the expert consensus questions asked specifically about clients age 18-25. Participants that reported serving clients under age 18 or clients over age 25 were asked to describe any ways in which the appropriateness of modalities, approaches, interventions, or treatments differs for these other age groups. In addition, all participants were asked to describe any treatment barriers and any suggestions for treatment improvement related to the treatment of clients with comorbid early psychosis and trauma-related disorders.

**Data analysis.** Expert consensus data were analyzed using procedures identical to those described in Frances et al. (1996). First, the mean and confidence interval (95%) was calculated for each expert consensus item. The confidence interval for each expert consensus item was used to assign a categorical rating based on the range into which the lowest confidence limit (LCL) fell. A categorical rating of *first-line* was assigned to modalities, approaches, interventions, and treatments with a LCL that fell into the 6.50-9.00 range; a categorical rating of *second-line* was assigned to modalities, approaches, interventions, and treatments with a LCL that fell into the 3.50-6.49 range; and a categorical rating of *third-line* was assigned to modalities, approaches, interventions, and treatments with a LCL that fell into the 1.00-3.49 range. A first-line rating indicates a degree of appropriateness, a second-line rating indicates a degree of equivocal opinion, and a third-line rating indicates a degree of inappropriateness.

The distribution of responses for each expert consensus item was then analyzed for consensus. The categorical ratings for each expert consensus item were coded (i.e., *first-line* = 1, *second-line* = 2, and *third-line* = 3), and a nonparametric chi-square test was conducted for each expert consensus item in order to determine whether or not expert consensus existed. Consensus
was defined as when the response distribution of categorical ratings was statistically different from chance \((p \leq 0.05;\) Frances et al., 1996, p. 300). Finally, expert consensus items rated a 9 by 50% or more of participants were determined to represent a treatment of choice for modalities, approaches, interventions, and treatments.

Participant and program characteristics data were analyzed using descriptive statistics, including the calculation of totals, percentages, means, and standard deviations as appropriate. Qualitative data were analyzed using a general inductive approach (Thomas, 2006). First, the textural data was recorded in tables and read closely and repeatedly. The textural data was then labeled by theme, and the frequency of each theme was counted. Finally, salient quotes reflecting themes were selected as appropriate.

**Ethical Considerations**

The current study was conducted in accordance with the *Ethical Principles of Psychologists Code of Conduct* (American Psychological Association, 2010). In accordance with ethics code 8.01, the current study was reviewed and approved by the Institutional Review Board (IRB) of Antioch University New England (AUNE) prior to solicitation of participants (American Psychological Association, 2010). The IRB of AUNE granted the current study exemption from 45 CFR part 46 requirements under 45 CFR 46.101(b) (2). See Appendix F.

In addition, the current study adhered to ethics code 8.06a by ensuring that optional participation incentives were not excessive (American Psychological Association, 2010). Given the target participant population for this study, it was expected that participants would be of middle to upper class. As a result, it was not expected that participants would experience optional entry into a raffle for one of four $25 Amazon gift cards as coercive. It was also not expected that participants would experience optional receipt of study results, which have no
inherent monetary value, as coercive. Opt-in instructions for optional participation incentives were provided in the informed consent text in order to ensure that eligibility for optional participation incentives was not dependent upon completion of the online survey.

Results

Online survey responses were collected from June 27 to August 5, 2016. Of the 118 clinical experts invited to participate, 66 (56%) responded to the online survey. Seventeen (26%) of the 66 survey responses were omitted due to discontinuation of the survey prior to reaching the expert consensus items. Forty-nine (42%) survey responses were included and analyzed to yield the following results.

Quantitative Results

Participant characteristics. Twenty-six (53%) participants identified a master’s degree and 23 (47%) identified a doctorate or professional degree as their highest level of completed education. Forty-three (88%) participants reported providing treatment to individuals with early psychosis and 35 (71%) reported providing treatment to individuals with comorbid early psychosis and trauma-related disorders in the last 12 months. Forty-nine (100%) participants reported receiving formal training or supervised clinical experience in the treatment of early psychosis: 35 (73%) reported receiving both formal training and supervised clinical experience, while 13 (27%) reported receiving formal training only. Thirty-nine (80%) participants reported also receiving formal training or supervised clinical experience in the treatment of trauma-related disorders: 23 (62%) reported receiving both formal training and supervised clinical experience, while 11 (30%) reported receiving formal training only and 3 (8%) reported receiving supervised
clinical experience only. See Tables 1 and 2 for early psychosis treatments and trauma treatments in which participants reported receiving formal training and supervised clinical experience.

**Program characteristics.** Participants represented early psychosis programs from 18 states (Table 3). Twenty-eight (57%) programs were based in the community, 11 (22%) programs were based in a university, and 2 (4%) programs were based in a hospital. The remaining 8 (16%) programs were based in a combination of community, hospital, or university settings. Thirty-eight (95%) programs served clients under age 18, and 28 (70%) served clients over age 25. Forty-two (86%) programs offered Coordinated Specialty Care for Early Psychosis. See Table 4 for types of services offered.

Forty-eight (98%) programs provided staff members with formal training or supervised clinical experience in the treatment of early psychosis: 39 (85%) provided staff members with both formal training and supervised clinical experience, while 5 (11%) provided formal training only and 2 (4%) provided supervised clinical experience only. Twenty-three (47%) programs also provided staff members with formal training or supervised clinical experience in the treatment of trauma-related disorders: 33 (68%) provided staff members with both formal training and supervised clinical experience, while 7 (14%) provided formal training only and 9 (18%) provided supervised clinical experience only. See Tables 1 and 2 for early psychosis treatments and trauma treatments in which programs provided formal training and supervised clinical experience.

**Treatment modalities.** Participants were asked to rate the appropriateness of individual therapy (i.e., seeing client alone), consultation (i.e., seeing family members or support persons alone), and conjoint or family therapy (i.e., seeing client and family members or support persons together) for clients aged 18-25 with comorbid early psychosis and trauma-related disorders.
Table 1. Participant and Program Training and Experience in Early Psychosis Treatment

<table>
<thead>
<tr>
<th>Early Psychosis Treatment</th>
<th>Participants</th>
<th>Programs</th>
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<tbody>
<tr>
<td></td>
<td>Formal Training (N)</td>
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<td>4</td>
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<tr>
<td>Family Focused Therapy</td>
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<td>3</td>
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<tr>
<td>FIRST Model</td>
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<td>OnTrackNY</td>
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<tr>
<td>Open Dialogue</td>
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<td>PIER Model</td>
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</tr>
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<td>2</td>
</tr>
<tr>
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<td>Early Psychosis Treatment</td>
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<td>Programs</td>
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<td>--------------------------</td>
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<table>
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<tr>
<td>Cognitive Processing Therapy</td>
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<tr>
<td>Mindfulness Based Stress Reduction</td>
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Table 2 Continued. *Participant and Program Training and Experience in Trauma Treatment*

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<td>Prolonged Exposure Therapy</td>
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<td>Seeking Safety</td>
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<tr>
<td>Acceptance &amp; Commitment Therapy</td>
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<tr>
<td>Attachment, Self-Regulation, and Competency (ARC)</td>
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<td>Brief Therapy for Trauma-Related Disorders</td>
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<td>Child-Parent Psychotherapy (CPP)</td>
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<td>Cognitive Therapy</td>
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<td>Motivational Interviewing</td>
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<td>Sensorimotor Psychotherapy</td>
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<tr>
<td>Somatic Experiencing</td>
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<td>Trauma and Grief Component Therapy for Adolescents</td>
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<td>Trauma Recovery Empowerment Model</td>
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<td>Psychodynamic Psychotherapy</td>
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<tr>
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Table 3. States Represented

<table>
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<th>State</th>
<th>%</th>
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<td>24</td>
<td>12</td>
</tr>
<tr>
<td>New York</td>
<td>12</td>
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</tr>
<tr>
<td>Ohio</td>
<td>12</td>
<td>6</td>
</tr>
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<td>Oregon</td>
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<tr>
<td>Massachusetts</td>
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<tr>
<td>Connecticut</td>
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</tr>
<tr>
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<td>2</td>
</tr>
<tr>
<td>Pennsylvania</td>
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<td>Florida</td>
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<tr>
<td>Illinois</td>
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<td>1</td>
</tr>
<tr>
<td>Maine</td>
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<td>1</td>
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<tr>
<td>Maryland</td>
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<tr>
<td>Michigan</td>
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<td>1</td>
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<tr>
<td>Mississippi</td>
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<td>1</td>
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<tr>
<td>Missouri</td>
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<tr>
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<tr>
<td>Utah</td>
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<td>1</td>
</tr>
<tr>
<td>Virginia</td>
<td>2</td>
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</tr>
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</table>

Conjoint or family therapy (LCL = 7.98; TOC = 57.14%) and individual therapy (LCL = 7.73; TOC = 53.06%) were rated as treatment modalities of choice. In addition, consultation (LCL = 6.87) was rated as a first-line treatment modality. See Table 5 for expert consensus ratings of treatment modalities.
Table 4. *Types of Services Offered*

<table>
<thead>
<tr>
<th>Service Offered</th>
<th>%</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Psychoeducation and Support</td>
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<td>49</td>
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<tr>
<td>Comprehensive Assessment</td>
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<td>48</td>
</tr>
<tr>
<td>Individual Psychotherapy</td>
<td>94</td>
<td>46</td>
</tr>
<tr>
<td>Medication Management</td>
<td>94</td>
<td>46</td>
</tr>
<tr>
<td>Care Coordination</td>
<td>92</td>
<td>45</td>
</tr>
<tr>
<td>Supported Education and/or Employment Services</td>
<td>84</td>
<td>41</td>
</tr>
<tr>
<td>Case Management</td>
<td>82</td>
<td>40</td>
</tr>
<tr>
<td>Group Psychotherapy</td>
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<td>29</td>
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<tr>
<td>Other</td>
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<td>23</td>
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Table 5. *Expert Consensus Ratings of Treatment Modalities*

<table>
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<tr>
<th>Modality</th>
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<th>2nd Line</th>
<th>3rd Line</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LCL</td>
<td>M</td>
<td>SD</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Conjoint / Family Therapy</td>
<td>7.98</td>
<td>8.31</td>
<td>1.14</td>
<td>57.14*</td>
<td>28</td>
</tr>
<tr>
<td>Individual Therapy</td>
<td>7.73</td>
<td>8.12</td>
<td>1.36</td>
<td>53.06*</td>
<td>26</td>
</tr>
<tr>
<td>Consultation</td>
<td>6.87</td>
<td>7.39</td>
<td>1.81</td>
<td>30.61</td>
<td>15</td>
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</table>

* Treatment of Choice (TOC)
1 First-Line
Treatment approaches. Participants were asked to rate the appropriateness of single-diagnosis (i.e., treating either early psychosis or trauma-related disorder only), sequenced (i.e., treating early psychosis before treating trauma-related disorder or vice versa), parallel (i.e., different providers treating early psychosis and trauma-related disorder at the same time), and integrated (i.e., the same provider treating early psychosis and trauma-related disorder at the same time) treatment approaches for clients aged 18-25 with comorbid early psychosis and trauma-related disorders. Integrated treatment (LCL = 8.10) was rated as a first-line treatment approach. Sequenced treatments, beginning with either the treatment of early psychosis (LCL = 5.52) or with the treatment of the trauma-related disorder (LCL = 4.11), were rated as second-line treatment approaches. Single-diagnosis treatments, only treating early psychosis (LCL = 2.92) or the trauma-related disorder (LCL = 2.60), were rated as third-line treatment approaches. No consensus was reached on the appropriateness of parallel treatment. See Table 6 for expert consensus ratings of treatment approaches.

Treatment interventions. Participants were asked to rate the appropriateness of a series of treatment interventions for addressing either psychotic symptoms or trauma symptoms for clients aged 18-25 with comorbid early psychosis and trauma-related disorders. See Appendix E for definitions of interventions. See Table 7 for expert consensus ratings of treatment interventions for addressing psychotic symptoms and Table 8 for expert consensus ratings of treatment interventions for addressing trauma symptoms.

Psychotic symptoms. Anxiety or stress management (LCL = 8.10; TOC = 73.91%), psychoeducation (LCL = 7.97; TOC = 73.91%), cognitive restructuring (LCL = 7.48), case management (LCL = 7.43; TOC = 50.00%) were rated as treatment interventions of choice for addressing psychotic symptoms. In addition, cognitive restructuring, interpersonal effectiveness
Table 6. Expert Consensus Ratings of Treatment Approaches

<table>
<thead>
<tr>
<th>Approach</th>
<th>LCL</th>
<th>M</th>
<th>SD</th>
<th>%</th>
<th>N</th>
<th>%</th>
<th>N</th>
<th>%</th>
<th>N</th>
<th>%</th>
<th>N</th>
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<tbody>
<tr>
<td>Integrated</td>
<td>7.40</td>
<td>7.88</td>
<td>1.63</td>
<td>45.83</td>
<td>22</td>
<td>85.42</td>
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<td>10.41</td>
<td>5</td>
<td>4.16</td>
<td>2</td>
<td>48</td>
</tr>
<tr>
<td>Sequenced&lt;sup&gt;EP&lt;/sup&gt;</td>
<td>5.52</td>
<td>6.04</td>
<td>1.79</td>
<td>4.17</td>
<td>2</td>
<td>41.67</td>
<td>20</td>
<td>54.16</td>
<td>26</td>
<td>4.16</td>
<td>2</td>
<td>48</td>
</tr>
<tr>
<td>Sequenced&lt;sup&gt;TRD&lt;/sup&gt;</td>
<td>4.11</td>
<td>4.73</td>
<td>2.14</td>
<td>2.08</td>
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<td>20.83</td>
<td>10</td>
<td>50.00</td>
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<td>29.16</td>
<td>14</td>
<td>48</td>
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<tr>
<td>Single-Diagnosis&lt;sup&gt;EP&lt;/sup&gt;</td>
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<td>3.52</td>
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<td>2.08</td>
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<td>10.41</td>
<td>5</td>
<td>33.33</td>
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<td>2.60</td>
<td>3.19</td>
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<td>31.24</td>
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<td>15</td>
<td>41.67</td>
<td>20</td>
<td>27.09</td>
<td>13</td>
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</table>

* Treatment of Choice
1 First-Line
2 Second-Line
3 Third-Line
nc No Consensus
EP Early Psychosis
TRD Trauma-Related Disorder

(LCL = 7.16), meditation or mindfulness (LCL = 6.66), and emotion-focused (LCL = 6.52) interventions were rated as first-line treatment interventions. Sensorimotor or movement (LCL = 4.86) and bilateral stimulation (LCL = 4.00) interventions were rated as second-line treatment interventions. No consensus was reached on the appropriateness of exposure interventions for addressing psychotic symptoms.
<table>
<thead>
<tr>
<th>Psychotic Symptoms</th>
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<th>SD</th>
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<th>%</th>
<th>N</th>
<th>%</th>
<th>N</th>
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* Treatment of Choice (TOC)
1 First-Line
2 Second-Line
nc No Consensus
Table 8. *Expert Consensus Ratings of Interventions to Address Trauma Symptoms*

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<tr>
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<th>M</th>
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<th>%</th>
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<th>%</th>
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* Treatment of Choice (TOC)
1 First-Line
2 Second-Line
nc No Consensus
**Trauma symptoms.** Anxiety or stress management (LCL = 8.13; TOC = 68.89%) and psychoeducation (LCL = 7.78; TOC = 61.36%) were rated as treatment interventions of choice for addressing trauma symptoms. In addition, meditation or mindfulness (LCL = 7.45), cognitive restructuring (LCL = 7.42), interpersonal effectiveness (LCL = 6.99), emotion-focused (LCL = 6.98), and case management (LCL = 6.81) interventions were rated as first-line treatment interventions. Exposure (LCL = 6.00) and bilateral stimulation (LCL = 4.69) interventions were rated as second-line treatment interventions. No consensus was reached on the appropriateness of sensorimotor or movement interventions for addressing trauma symptoms.

**Trauma-focused treatment.** Participants were asked to rate the appropriateness of trauma-focused treatment (i.e., treatment that addresses exposure to traumatic events directly by asking clients to recall or encounter thoughts, images, feelings, or situations related to traumatic events) for clients aged 18-25 with comorbid early psychosis and trauma-related disorders overall, at each stage of psychosis, and under specific current and past clinical and psychosocial conditions. Stages of psychosis included (a) genetic risk and deterioration (i.e., family history of psychosis and decline in functioning without attenuated or threshold psychotic symptoms); (b) ultra-high or clinical high risk (i.e., attenuated psychotic symptoms); (c) first-episode psychosis (i.e., onset of threshold psychotic symptoms less than 5 years ago); and (d) established or chronic psychosis (i.e., onset of threshold psychotic symptoms more than 5 years ago). Overall, trauma-focused treatment (LCL = 6.97) was rated as a first-line treatment for clients aged 18-25 with early psychosis and comorbid trauma-related disorders. See Table 9 for expert consensus ratings of trauma-focused treatment overall, at each stage of psychosis, and under specific current and past clinical and psychosocial conditions.
### Table 9. Expert Consensus Ratings of Trauma-Focused Treatment

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<th>Expert Ratings</th>
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\textsuperscript{1} First-Line
\textsuperscript{2} Second-Line
Table 9 Continued. *Expert Consensus Ratings of Trauma-Focused Treatment*

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<th>%</th>
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<th>%</th>
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</tbody>
</table>

1 First-Line  
2 Second-Line

Stage of psychosis. Trauma-focused treatment (LCL = 6.97) was rated as a first-line treatment for clients at all stages of psychosis: FEP (LCL = 7.21), GRD (LCL = 7.19), chronic or established psychosis (LCL = 7.14), and UHR or clinical high risk (LCL = 7.07).

Current clinical and psychosocial conditions. Trauma-focused treatment was rated as a first-line treatment for clients with current attenuated or residual psychotic symptoms (LCL = 7.12). It was rated as a second-line treatment for clients with current comorbid personality disorders (LCL = 6.29), other comorbid psychiatric disorders (LCL = 6.35), low
involvement of family members or support persons (LCL = 6.09), and significant life stressors (LCL = 6.00).

*Past clinical and psychosocial conditions.* Trauma-focused treatment was rated as a first-line treatment for clients with a history of multiple traumas (LCL = 6.99), single trauma (LCL = 6.71), and long-duration psychotic symptoms (LCL = 6.69). It was rated as a second-line treatment for clients with a history of poor functioning (LCL = 6.49) and severe psychotic symptoms (LCL = 6.37), as well as a history of hospitalization (LCL = 5.95), substance use (LCL = 6.34), non-suicidal self-injury (LCL = 6.38), high suicide risk (LCL = 5.54), and high violence risk (LCL = 5.14).

**Qualitative Results**

**Developmental considerations.** Because the expert consensus items asked specifically about clients aged 18-25, participants who reported serving clients under age 18 or over age 25 were asked if and how the appropriateness of modalities, approaches, interventions, or treatments differ for these other age groups. Of those participants who reported serving clients under 18 and over age 25, respectively, 19 (50%) and 6 (21%) agreed that the appropriateness of modalities, approaches, interventions, or treatments differs for the specified age group.

**Family involvement.** Participants noted both the ethical and supportive function of the family, noting they work harder to engage family in treatment in general and in clinical decision-making in particular when working with clients under age 18. One participant noted the increased importance of family consent and engagement for clients with a comorbid trauma-related disorder in particular due to “increased risk with trauma treatment.” Another participant noted wanting “to ensure the individual had […] other identified support persons” in cases where family involvement is low. For clients over age 25, participants noted alternative
support persons like close friends or partners might be more apt to be involved in treatment than members of the client’s family of origin.

**School and employer involvement.** Participants noted a need for “school accommodations and services” for clients under age 18. For example, one participant responded, “Programs for training social skills, emotion regulation, and executive functions […] that have been developed for use in schools […] may be appropriate” for clients under age 18. In contrast, participants noted employers might be less apt to be involved in treatment for clients over age 25 than for younger clients.

**Modification of interventions.** Participants noted the importance of “using age appropriate materials, language, and consideration of developmental tasks.” Participants noted cognitive interventions might be less appropriate or require additional assessment or modification for clients under age 18 compared to older clients. In addition, participants noted the importance of skill building for clients under age 18. For example, one participant responded, “Ensure [the] young person has skills to manage [a] potential increase in symptoms prior to commencing trauma work.”

**Treatment barriers.** Participants were also asked if they were aware of any barriers their early psychosis programs encountered in attempting to treat clients with comorbid early psychosis and trauma-related disorders and, if so, to describe those barriers. Twenty-eight (78%) participants reported being aware of such barriers.

**Differentiating trauma exposure from psychotic experiences.** Participants noted barriers related to differentiating trauma exposure from psychotic experiences, noting high endorsement of traumatic events and other stressful life experiences or difficulty determining whether traumatic events and other stressful life experiences were real or delusional. In addition,
participants reported difficulty determining how to handle reports of FEP as a traumatic event. One participant noted, “We found out a great number of clients in our program reported any type of trauma and/or stressful experience in their lifetime, including traumatic experience often associated with first-episode of psychosis.” Similarly, another participant noted:

The interrelationship between delusional content and perceived trauma exposure/experience [and] patient’s varying level of insight into this presents a challenge to decisions related to tackling ‘trauma’ in treatment. Close to half of the patients in our center report a lifetime history of trauma exposure, but it is unclear from self-report in which percent the reported experiences are reality-based. In some cases, the distinction can be clearly made through collateral informants or through the way the delusional content changes/evolves over time, but sometimes it remains unclear.

Participants described attempts to overcome these barriers by focusing on educating clients about stressful experiences in general and helping clients develop and utilize strategies to cope with stressful experiences in lieu of educating clients about or helping clients to process the reported traumatic events. For example, one participant noted:

Recently, our program has designed and introduced a module of clinical guidelines for ‘coping with symptoms of stressful experiences.’ The main goals of the module are: to provide psychoeducation about the symptoms of stressful experiences, to help clients learn and select the coping strategies that they want to try, and to develop confidence implementing these strategies in the real world.

Similarly, another participant noted:

We tend to take the stance that the person’s stress reaction or response to a ‘traumatic event,’ whether the event is ‘real’ or delusional, is a valid treatment target, and encourage
implementing strategies to cope with anxiety, arousal, and preoccupation associated with the event without focusing on the content of the ‘traumatic event.’

**Symptom interference and exacerbation.** In addition, participants noted barriers related to symptom interference and exacerbation. One participant noted impairment associated with either early psychosis or trauma-related disorders can impede recovery from the other disorder: “Often the degree of impairment from either psychosis or trauma can impede recovery from either disorder. Trauma can also increase risks for psychotic symptoms as stress is a major trigger for relapse with psychosis.” Another participant noted that psychotic symptoms can interfere with the processing of traumatic events, especially in cases where the first episode of psychosis was experienced as traumatic: “Psychotic symptoms can interfere with the client’s ability to process through traumatic events due to the first episode sometimes being traumatic as well for the client.”

**Inadequate training and supervision.** Participants also noted barriers related to inadequate training and supervision. For example, one participant noted that programmatic training, as well as available tools and interventions, are focused on early psychosis treatment despite a clearly identified need to be able to integrate early psychosis and trauma treatment and individual efforts to obtain training in trauma treatments on the part of clinicians have not been effective due to a lack of structured supervision and technical support:

The barriers are specific to training and supervision. Although there is a clearly identified need for integrated trauma treatment, our training focuses on early psychosis interventions and does not offer as many structured tools and interventions for integrated treatment as we do for psychosis alone. Some of our clinicians seek training for
trauma-focused interventions, such as TF-CBT, but we have not been able to provide structured supervision and technical support to be effective.

Another participant noted programmatic efforts to provide training in trauma treatments have not been effective due to a lack of available funding: “I have tried to apply for funding that could allow training of staff in my center so that they could provide more appropriate services at our center, but I have had no luck with this so far.”

**Discomfort treating both trauma and psychosis.** Finally, participants noted barriers related to discomfort treating both trauma and psychosis. Participant noted the difficulty of trying to find therapists to refer clients to that are comfortable providing both early psychosis and trauma treatment:

It is often difficult to find a therapist who is comfortable with both trauma-focused therapy methods and methods that are recommended for psychosis (such as CBT for psychosis and Cognitive Enhancement Therapy) […] Many psychotherapists are just not comfortable seeing clients with psychosis at all, and they may say things like, ‘I just don't know what to do in order to treat patients with a 'thought disorder.’

Some participants, therefore, noted not treating comorbid trauma-related disorders in their early psychosis programs due to specializing in early psychosis, while other participants noted clients are often misdiagnosed in the community due to practitioners specializing in trauma treatment incorrectly conceptualizing psychotic symptoms as trauma symptoms.

**Improving treatment.** Finally, participants were asked to provide any additional information they thought would help to improve the treatment of clients with early psychosis and a comorbid trauma-related disorder. Eleven (22%) participants offered suggestions.
Increase training in trauma assessment and treatment. Participants suggested increased training in trauma assessment and treatment would improve the treatment of clients with comorbid early psychosis and trauma-related disorders. For example, one participant noted, “We have addressed a lot of training but never trained in the context of co-morbidity with trauma & psychosis.” Another participant suggested “early identification of trauma or stressful experiences using a[n] evidence based scale to evaluate need for further treatment.”

Increase trauma research and treatment planning guidance. Participants also suggested increased trauma research in general and related to treatment planning in particular. For example, one participant responded, “I wish that there were more data comparing treatments to guide decisions about what treatment options would be best for a specific individual.” Another participant noted a need for “better uniformity in treatment protocol.” Participants also noted treatment protocols that might result from increased research need to be flexible. For example, one participant explained:

One caveat to earlier answers is that choice of treatment and sequence is very idiosyncratic—it depends [on] which symptoms need attention first, degree of negative symptoms, and variety in trauma-related symptoms, etc. But most important is what does the client and the family want[s] to address most/first.

Increase funding for multidisciplinary programs. Finally, participants suggested increased funding for multidisciplinary programs, rather than solely for specialty programs, would improve the treatment of clients with comorbid early psychosis and trauma-related disorders. For example, one participant responded:

Structured multi-disciplinary programs that can assess and provide various treatments and community supports may be best, but it is not always easy to find funds needed to set up
such programs. Increased funding and incentives to develop these types of programs would be very helpful in terms of increasing the availability of appropriate services for those in need.

Discussion

Given the growing number of early psychosis programs in the United States, this study represents an essential first step towards addressing the needs of individuals with comorbid early psychosis and trauma-related disorders. It addresses a gap in the treatment and research literature through a national survey of clinical experts who are responsible for overseeing the clinical services provided in early psychosis programs about the opinions and practices that guide the treatment of individuals with comorbid early psychosis and trauma-related disorders in the United States. This supplements the existing outcome literature with consensus evidence. In areas where expert consensus exists, clinical practice guidelines for comorbid early psychosis and trauma-related disorders were offered. Recommendations for future research were proposed in areas in which expert consensus did not exist. The clinical experts reached consensus on 46 (94%) of the 49 expert consensus items.

Clinical Practice Guidelines

Selecting a treatment modality. More than half of clinical experts surveyed in this study rated conjoint or family therapy and individual therapy as their treatment modalities of choice. This finding is consistent with existing clinical practice guidelines for the treatment of psychosis (Dixon et al., 2009; Dixon et al., 2015; Ince, Haddock, & Tai, 2016). Practitioners should see the client together with family members or alternative support persons with client consent or see the client alone at the start of treatment. Additionally, the clinical experts surveyed in this study
believed involving family members in the client’s treatment is particularly important for individuals under age 18. They also believed practitioners should consider the benefits of involving alternative support persons when family involvement is low or when treating individuals over age 25 for whom the involvement of friends or romantic partners may be important.

Consultation with family members or alternative support persons without the client present was also rated as a first-line treatment modality. In cases in which conjoint or family therapy and individual therapy is ineffective, seeing family members or alternative support persons alone with client consent should be considered an appropriate alternative treatment modality. Family members often experience significant burden when caring for individuals with serious mental illness (Awad & Voruganti, 2008). Therefore, family support may be helpful in protecting the family system if the client refuses to engage; however, current practice models suggest that engagement of family alone would likely not be sufficient in promoting recovery in the client (Dixon, 1999).

Selecting a treatment approach. Integrated treatment was rated as a first-line treatment approach and sequenced treatments were rated as second-line treatment approaches for the treatment of comorbid early psychosis and trauma-related disorders. Therefore, the clinical experts surveyed in this study agreed that a single provider treating comorbid early psychosis and a trauma-related disorder at the same time is the most appropriate treatment approach. In cases in which an integrated treatment approach fails, for example due to symptoms of one condition interfering with treatment of the other condition, a single provider treating the interfering condition prior to treating the other condition may be appropriate.
It is important to note that single-diagnosis treatment was rated as a third-line treatment approach, indicating that the clinical experts surveyed in this study believe that treating only early psychosis or only a trauma-related disorder when both conditions are present is inappropriate. Practitioners who elect to use a sequenced treatment approach should clearly delineate client goals and carefully monitor client progress in the initial phase of treatment. A sequenced strategy carries with it the risk that treatment will ultimately focus disproportionately on a single-diagnosis if the provider never feels the client is stable enough to shift to the second phase of treatment (Mueser, Noordsy, Drake, & Fox, 2003).

**Selecting treatment interventions to address psychotic and trauma symptoms.**

Anxiety or stress management, psychoeducation, and case management interventions were rated as treatment interventions of choice for addressing psychotic symptoms. Similarly, anxiety or stress management and psychoeducation interventions were rated as treatment interventions of choice for addressing trauma symptoms. Cognitive restructuring, emotion-focused, interpersonal effectiveness, and meditation or mindfulness interventions were rated as first-line treatment interventions for addressing both psychotic and trauma symptoms. Bilateral stimulation was rated as a second-line treatment intervention for addressing both psychotic and trauma symptoms, while exposure interventions were rated as second-line interventions for addressing trauma symptoms and sensorimotor or movement interventions were rated as second-line treatment interventions for addressing psychotic symptoms.

As a result, practitioners should begin by providing psychoeducation about early psychosis and trauma-related disorders, including description of psychotic and trauma symptoms and information about treatment rationale and efficacy with the goal of helping the client and the client’s family members or alternative support persons come to understand the client’s problems.
as surmountable over time with appropriate treatment. Practitioners should then use anxiety and stress management interventions to help individuals develop coping skills to reduce stress and stress-related difficulties. Throughout treatment, practitioners should also provide case management focused on coordinating services and identifying resources needed by the client. Finally, practitioners should select from first-line interventions (e.g., cognitive restructuring, emotion-focused, interpersonal effectiveness, and meditation or mindfulness) to address any residual psychotic and trauma symptoms before considering the use of second-line interventions (e.g., bilateral stimulation).

**Using trauma-focused treatments.** Trauma-focused treatment—treatment that addresses exposure to traumatic events directly by asking individuals to recall or encounter thoughts, images, feelings, or situations related to traumatic events—was rated as a first-line treatment for individuals age 18-25 with comorbid early psychosis and trauma-related disorders in general and at all stages of psychosis. In addition, trauma-focused treatment was rated as a first-line treatment for individuals presenting with current attenuated or residual psychotic symptoms, as well as a history of both single and multiple traumas and long-duration psychotic symptoms.

These findings are somewhat counterintuitive given that the clinical experts rated interventions often thought of as hallmarks of trauma-focused treatment, such as exposure, as second-line interventions or were unable to agree of their appropriateness. It may be the case that clinical experts believe trauma-focused treatments—many of which involve the use of interventions rated as interventions of choice (e.g., psychoeducation, anxiety and stress management) and first-line interventions (e.g., cognitive restructuring, emotional-focused) before or in addition to exposure—are more appropriate than exposure interventions alone. Practitioners should, therefore, look for the inclusion of psychoeducation and anxiety and stress management,
as well as other appropriate interventions like cognitive restructuring and emotion-focused, when selecting a trauma-focused treatment to use with individuals with comorbid early psychosis and trauma-related disorders.

Trauma-focused treatment was rated as a second-line treatment for individuals presenting with current comorbid psychiatric disorders (i.e., in addition to early psychosis and trauma-related disorders), comorbid personality disorders, low involvement of support persons, and significant life stressors, as well as a history of poor functioning, severe psychotic symptoms, substance use, non-suicidal self-injury, high suicide risk, high violence risk, and hospitalization. As a result, the clinical experts surveyed in this study believe trauma-focused treatment may be appropriate for such individuals if more appropriate alternatives, not explored in this study, have failed. Notably, there were no current or past conditions for which trauma-focused treatment was rated third-line (i.e., inappropriate). Practitioners should, therefore, diligently monitor areas of risk when utilizing trauma-focused treatment with individuals with comorbid early psychosis and trauma-related disorders under these conditions; however, these conditions should not be viewed as contraindications for trauma-focused treatment.

**Recommendations for Future Research**

No consensus was reached on 3 (6%) of the 49 expert consensus items, including the appropriateness of a parallel treatment approach, the appropriateness of sensorimotor or movement interventions for treating trauma symptoms, or the appropriateness of exposure interventions for treating psychotic symptoms. This is consistent with other expert consensus method studies that have found “on average there is no consensus on about 10% of the individual items” (Frances et al., 1996, p. 300). Controversy regarding the subject an item is intended to
address is one factor that often contributes to experts’ inability to achieve consensus (Frances et al., 1996).

**Using a parallel treatment approach.** A parallel treatment approach typically is not recommended in the treatment of comorbid psychiatric conditions because they are difficult to coordinate (Mueser et al., 2003). For example, the treatment of comorbid psychiatric conditions at the same time by different providers, often in different treatment settings, may fail to address the overlapping aspects of the comorbid psychiatric conditions or work at cross-purposes (Mueser et al., 2003). While future research is needed to determine the relative effectiveness of a parallel treatment approach, specifically within the coordinated specialty care model for early psychosis offered by most early psychosis programs surveyed, compared to integrated and sequenced treatment approaches, parallel treatment may have merits in addressing barriers related to practitioner discomfort treating both trauma and psychosis.

For example, most participants reported working within programs that offer coordinated specialty care for early psychosis: a treatment model within which clients have access to multiple practitioners from different specialties that work together as a team to address the various needs of individuals with early psychosis. If practitioners specializing in the treatment of trauma-related disorders were added to the coordinated multidisciplinary teams of such early psychosis programs, clients could access appropriate treatment for trauma-related disorders without compromising their access to evidence-based early psychosis care. In addition, working with a coordinated multidisciplinary team with specialty in early psychosis care would likely increase the competence and comfort of these trauma specialists with treating clients with early psychosis.

**Using sensorimotor and movement interventions to address trauma symptoms.**
Sensorimotor and movement interventions were included in the current study, despite not being included in the expert consensus study of PTSD conducted over a decade ago (Foa & Davidson, 1999) and being rated as second-line treatment interventions in the expert consensus study of complex PTSD, in order to reflect the wide range of evidence-based interventions used in clinical practice. Sensorimotor and movement interventions are used to assist individuals with trauma-related disorders regulate their autonomic nervous system, think more clearly, and derive information from emotional states more accurately by processing dissociated, incomplete, or ineffective sensorimotor reactions (e.g., trauma-related images, sounds, smells, physical sensations; Ogden & Minton, 2000).

Individuals with early psychosis are frequently vulnerable to excessive autonomic arousal in response to stress (Walker & Diforio, 1997) and may misinterpret anomalous cognitive or perceptual experiences resulting in emotional arousal and behavioral withdrawal (Morrison et al., 2003) secondary to trauma exposure (Read et al., 2014). While mind-body interventions (e.g., sensorimotor and movement interventions) are important to contemporary trauma treatment, their utility for the treatment of psychosis alone has not been well investigated (Jadidi & Mirshoja, 2016). The experts’ rating of these approaches as second-line for the treatment of psychotic symptoms may represent growing interest in the integration of mind-body practices into psychosis care, but more well-controlled studies are needed before conclusions can be drawn (Helgason & Sarris, 2013). Currently, these approaches are not seen as core interventions for individuals with psychosis (Dixon et al., 2009). Therefore, additional research is needed to determine whether sensorimotor and movement interventions could be beneficial for individuals with only early psychosis, as well as for individuals with comorbid early psychosis and trauma-related disorders.
Using exposure interventions to address psychotic symptoms. To date, one published study has noted the positive effect of exposure interventions on chronic psychotic symptoms (van den Berg & van der Gaag, 2012) and two other published studies have noted that the exclusion of exposure may have decreased the observed effectiveness of their treatment protocols (Mueser et al., 2008; Steel et al., 2017). Therefore, additional research is needed to determine whether exposure interventions are also effective for addressing psychotic and trauma symptoms in individuals with early psychosis.

Exposure interventions are a primary component of all cognitive and behavioral interventions. This includes Cognitive Behavioral Therapy for Psychosis (CBTp), the early psychosis treatment in which participants received and programs provided training and supervision most often. It is possible that clinical experts are not utilizing recommended exposure components of CBTp in their practice despite evidence that doing so is beneficial: a phenomenon commonly seen in trauma treatment as well (Becker et al., 2004). For example, clinical experts may worry about the possible negative impact of exposure interventions on the recovery process, such as the exacerbation of psychotic symptoms, and may hesitate to use them. It is also possible that clinical experts are utilizing exposure interventions without recognizing they are doing so. For example, while the clinical experts surveyed in this study were unable to agree on the appropriateness of exposure interventions for addressing psychotic symptoms in individuals with comorbid early psychosis and trauma-related disorders, they agreed that trauma-focused treatments, which typically include some form of exposure intervention, are appropriate for that vast majority of this population.

Training and supervision in Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) was the most commonly reported trauma treatment by survey participants. Within this model,
psychoeducation and anxiety or stress management interventions used in early on in treatment include small bursts of exposure long before more traditional exposure interventions are introduced. This study asked participants to rate the appropriateness of component interventions, as opposed to combinations of interventions, in order to guide the composition of treatment for comorbid early psychosis and trauma-related disorders. Had participants been asked to consider the use of exposure in the context of broader treatment approaches (e.g. CBT), they might have responded more favorably to exposure interventions.

Nonetheless, because it is such an important part of trauma treatment, expert attitudes toward exposure therapy for this population merit greater exploration. Research is needed to determine whether practitioners are not utilizing or not recognizing their use of exposure interventions. Similarly, future studies should determine exposure interventions are considered most appropriate when treating individuals with early psychosis in general and individuals with comorbid early psychosis and trauma-related disorders in particular.

Implications for Clinical Practice

The rating of integrated treatment as a first-line treatment approach for the treatment of comorbid early psychosis and trauma-related disorders is somewhat surprising given that inadequate training and supervision, as well as inadequate institutional and financial support, for integrated treatment emerged as barriers to treatment in the open response data. It may be that integrated treatment is an ideal that clinical experts recognize as most appropriate and often strive to provide even if they are ill equipped to do so. As suggested by the participants, funding to develop innovative programs that strive to address the complex needs of the early psychosis population through staff training and additional program supports should be provided.
The rating of sequenced treatments as second-line treatment approaches, however, is consistent with participants’ report that the exacerbation of early psychosis by a comorbid trauma-related disorder, or visa versa, is potential barrier to treatment. Clinical experts gave examples of psychotic symptoms interfering with or worsening as a result of treatment of a comorbid trauma-related disorder, as well as the traumatic nature of psychotic symptoms for some individuals interfering with treatment of early psychosis. In such cases, (i.e., treating the exacerbating disorder first in part or in entirety) may be more appropriate than integrated treatment.

Twice as many clinical experts rated treating early psychosis first (42%) as a first-line treatment approach compared to treating a trauma-related disorder first (21%). While early psychosis is naturally often the primary presenting concern in early psychosis programs and addressing early psychosis prior to addressing comorbid conditions is consistent with existing clinical practice guidelines for early psychosis (International Early Psychosis Association Writing Group, 2005), it is important to ensure that decisions to treat early psychosis prior to trauma-related disorders is guided by sound clinical decision-making as opposed to avoidance of treating trauma-related disorders on the part of practitioners or programs due to inexperience or discomfort.

Open response data indicated practitioners are often concerned about the validity of high rates of trauma exposure and other stressful life experiences reported by individuals with comorbid early psychosis and comorbid trauma-related disorders, particularly when trauma-related content is mixed with delusional content. As a result, clinical experts surveyed in this study reported program-wide efforts to address this issue by focusing on psychoeducation about stress in general and on developing and using coping skills to manage stress in daily life.
rather than providing psychoeducation about trauma and processing traumatic events. Auditory hallucinations and non-bizarre delusions of guilt, paranoia, or persecution occur in up to 40% of individuals with severe PTSD (David et al., 1999; Hamner, et al., 2000). In addition, the content of these psychotic symptoms are often, though not always, trauma-related (Hamner, Frueh, & Arana, 1999).

The relationship between trauma and psychosis is, however, extraordinarily complex both causally and diagnostically. Future research should aim to provide clearer guidance on how to safely and effectively address the mixture of trauma-related content and delusional or hallucinatory content in treatment. In the meantime, practitioners should obtain collateral information to understand the temporal relationship between reported traumatic events and psychotic symptom development and conceptualize psychotic symptoms with trauma-related content as an indication that trauma-focused treatment, including psychoeducation about trauma, may be appropriate.

Limitations

A limitation of all studies utilizing the expert consensus method is that expert opinions and, therefore, the clinical practice guidelines may be wrong (Frances et al., 1996). As a result, it is recommended that practitioners consider the results of this study in conjunction with the results of existing and emerging literature on the treatment of comorbid early psychosis and trauma-related disorders. In addition, the outcomes associated with implementation of these preliminary clinical practice guidelines should be evaluated to determine whether they are efficacious and effective.

Further, given that the adoption of original research in routine clinical practice can take up to two decades (Agency for Healthcare Research and Quality, 2001), it is possible that the
clinical experts in the treatment of early psychosis surveyed in this study may not be apprised of the most recent research findings in early psychosis treatment or recent research findings or clinical practices in trauma treatment. It is, therefore, recommended that this study be replicated in the future, both with research experts in early psychosis treatment and with clinical experts and research experts in trauma treatment, in order to capture a broader perspective on appropriate treatment of individuals with comorbid early psychosis and trauma-related disorders. It is also recommended that this and subsequent studies be replicated over time, including new, innovative, and integrative treatments as they emerge.

Additionally, the survey utilized in this study was anonymous to encourage participants to respond as honestly as possible about their opinions and practices in the course of treating individuals with comorbid early psychosis and trauma-related disorders. As a result, potential differences between participants and non-participants could not be evaluated.

Finally, the response rate for this study (42%) is lower than the response rates typical of expert consensus method studies; however, the number of participants included in this study (n = 49) is comparable (Frances et al., 1996). While the expert consensus method is appropriate for use with clinical experts, it has been used primarily with preselected groups of research experts known for making significant contributions to research related to the disorders of study (Frances et al., 1996). For a clinical consensus study, this lower response rate appears to be sufficient to yield numbers of participants comparable to studies sampling research experts.

**Conclusions**

For well over a decade, the field of psychology has been amassing data describing a strong theoretical and clinical relationship between trauma exposure and early psychosis; however, this study represents a first attempt to gather empirical data related to appropriate
treatment of comorbid early psychosis and trauma-related disorders. This exploration was
inspired not so much by scientific intrigue as by desire to better aid the high-risk and
underserved individuals with comorbid early psychosis and trauma-related disorders I have
treated over the years.

One case serves to illustrate the impetus for this project. A young client, who initially
presented with first-episode psychosis following exposure to a series of trauma events, described
periodic loss of awareness beginning after trauma exposure. During a first-episode of psychosis,
the client came to believe this loss of awareness was the result of the client’s thoughts being
broadcast out for others to hear. This caused feelings of intense paranoia due to believing that
others knew what the client had been thinking during these periods of unawareness when the
client did not.

My training in the treatment of early psychosis taught me to conceptualize this
experience as a delusion, while my training in the treatment of trauma taught me to conceptualize
this experience as dissociation. Taking an integrated approach, I conceptualized this experience
as a delusion about dissociation. My client needed both assistance recognizing and challenging a
though blocking delusion and understanding and coping with dissociation as a common response
to trauma exposure. For the sake of this young client and many others like this client, I hope that
this study will serve as a launching point in the development of an integrative and
evidence-based treatment model for individuals with comorbid early psychosis and
trauma-related disorders.

The clinical experts reached consensus on 46 (94%) of the 49 expert consensus items.
Perhaps most important, however, is what this study did not find: the clinical experts surveyed in
this study did not rate the use of trauma-focused treatment, or any component intervention
including exposure interventions, as inappropriate for individuals with comorbid early psychosis and trauma-related disorders under any condition. In contrast, the clinical experts agree that not treating early psychosis and trauma-related disorders when both conditions are present is inappropriate. As a result, practitioners should use existing and emerging research evidence, clinical expertise and judgment, and client preferences and values to treat comorbid early psychosis and trauma-related disorders in individuals presenting with both conditions (Melchert, 2015).
References


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http://www.schizophrenia.com/earlypsychosis.htm


**Appendix A: Early Psychosis Programs in the United States**

<table>
<thead>
<tr>
<th>State</th>
<th>Early Psychosis Program</th>
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<tbody>
<tr>
<td>Arizona</td>
<td>Early Psychosis Intervention Center (EPICENTER)</td>
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<tr>
<td>California</td>
<td>Aftercare Research Program</td>
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<td>PREP/BEAM San Francisco</td>
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<td>PREP/BEAM San Mateo</td>
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<td>PREP Monterey</td>
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<td>PREP Alameda</td>
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<td>Cognitive Assessment and Risk Evaluation (CARE) Program</td>
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<td></td>
<td>Early Diagnosis and Preventive Treatment (EDAPT) Clinic</td>
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<td>First Hope</td>
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<td>INSPIRE</td>
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<td>Kickstart</td>
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<td>LIFE Path</td>
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<td>Momentum for Mental Health</td>
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<td>Orange County Center for Resiliency Education and Wellness (OC CREW)</td>
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<td></td>
<td>Prevention / Early Intervention Services for Transition-Age Youth</td>
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<td></td>
<td>Prodrome Assessment Research and Treatment (PART) Program</td>
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<td>Stanford Early Psychosis Clinic (INSPIRE Clinic)</td>
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<td>Starlight Community Services</td>
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<td>Supportive Outreach &amp; Access to Resources (SOAR) -- Napa County</td>
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<td></td>
<td>Supportive Outreach &amp; Access to Resources (SOAR) -- Solano County</td>
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<tr>
<td></td>
<td>Telecare Early Intervention and Recovery (TEIR) Program</td>
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<td></td>
<td>The Staglin Music Festival Center for the Assessment and Prevention of Prodometal States (CAPPS)</td>
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<td>UCSF Early Psychosis Clinic</td>
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<td>Ventura Early Prevention Services (VIPS)</td>
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<tr>
<td>Colorado</td>
<td>Adolescent Treatment and Preventive Development (ADAPT)</td>
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<tr>
<td>Connecticut</td>
<td>Prevention through Risk Identification, Management &amp; Education (PRIME)</td>
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<td>Research Clinic</td>
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<td></td>
<td>Specialized Treatment in Early Psychosis (STEP)</td>
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<td></td>
<td>The Early Psychosis Program at the POTENTIAL Outpatient Clinic</td>
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<tr>
<td>Florida</td>
<td>EPIC Program</td>
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<td>NAVIGATE Team</td>
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Georgia
Emory Mental Health & Development Program
Prevention and Early Intervention Program

Illinois
ADAPT Chicago
First Episode Psychosis Program at University of Illinois Medical Center

Indiana
Prevention and Recovery Center for Early Psychosis (PARC)

Iowa
First Episode Recovery Support Team (FERST)
RESTORE Program (Eyerly Ball)

Maine
Portland Identification and Early Referral (PIER) Mental Health Attitudes of Youth (MAY) Study

Maryland
Strive for Wellness Clinic
MPRC First Episode Clinic (FEC)
RAISE Connection Program
Johns Hopkins Early Psychosis Intervention Clinic (EPIC) / Maryland EIP (EPIC/EIP)
OnTrack Maryland at Family Services, Inc.

Massachusetts
Center for Early Detection, Assessment, & Response to Risk (CEDAR)
First-Episode and Early Psychosis Program (FEPP)
Prevention and Recovery in Early Psychosis (PREP)
Prevention and Recovery in Early Psychosis (PREP) West
Screening and Treatment of Early Psychosis (STEP) Clinic
The Collaborative Pathway

Michigan
Early Treatment and Cognitive Health (ETCH)
NAVIGATE Team of Easter Seals Michigan
NAVIGATE Team of InterAct of Michigan

Minnesota
First-Episode Early Psychosis Program (FEPP)

Mississippi
NAVIGATE-Enhanced PACT Team

Missouri
First Contact Assessment Service

Montana
NAVIGATE-Enhanced TAY Team
New Mexico  Early Assessment and Resource Linkage for Youth (EARLY) Consultation Clinic

New York  Early Treatment Program (ETP)/OnTrackNY Lenox Hill Hospital
          Early Treatment Program (ETP) Zucker Hillside Hospital
          Kings OnTrackNY
          NAVIGATE Team of the Adult, Child, and Family Clinic
          OnTrack at Lake Shore Behavioral Health, Inc.
          OnTrack NY Central New York (CNY)
          OnTrack NY@MHA (Westchester)
          OnTrack NY@Parsons
          OnTrackNY at Jewish Board
          OnTrackNY Rochester
          OnTrackNY Suffolk
          OnTrackNY@Bellevue
          Recognition and Prevention (RAP) Program
          The Center of Prevention & Evaluation (COPE)
          The Lieber Schizophrenia Research Clinic (LSRC)
          Washington Heights Community Service

North Carolina  Outreach and Intervention Support Services (OASIS) -- Carrboro
                Outreach and Intervention Support Services (OASIS) -- Raleigh
                Prevention through Risk Identification, Management & Education (PRIME) Study

Ohio  Early Psychosis Intervention Center (EPICENTER) Ohio
       FIRST Cuyahoga County
       FIRST Greater Cincinnati (Greater Cincinnati Behavioral Health Services)
       FIRST Greater Lima
       FIRST Lucas & Wood Counties
       FIRST Mahoning County
       FIRST Portage County
       FIRST Stark County
       FIRST Trumbull County
       FIRST Summit County
       The Best Practices in Schizophrenia Treatment (BeST) Center

Oklahoma  NAVIGATE Program of HOPE Community Services
         EASA Baker County
Oregon

- EASA Center for Excellence
- EASA Center for Human Development, Inc. (Union County)
- EASA Clatsop Behavioral Healthcare
- EASA Columbia Community Mental Health
- EASA Community Health Alliance (Douglas County)
- EASA Deschutes Co. Child & Family Program
- EASA Jackson County Mental Health
- EASA Klamath Basin Behavioral Health
- EASA Life Works NW Beaverton (Washington County)
- EASA Life Works NW Milwaukie (Clackamas County)
- EASA Lifeways, Inc. (Malheur County)
- EASA Lifeways, Inc. Hermiston (Umatilla County)
- EASA Lifeways, Inc. Pendleton (Umatilla County)
- EASA Linn Co. Mental Health
- EASA Marion Co. Children's Behavioral Health
- EASA Mid-Columbia Center for Living -- Hood River
- EASA Mid-Columbia Center for Living -- The Dalles
- EASA Multnomah Co. Mental Health & Addiction Services
- EASA Options Creekside Center
- EASA Peace Health Oregon / Lane County Behavioral Health Services
- EASA Polk County Mental Health
- EASA Rockwood Community Health Center (Multnomah County)
- EASA Tillamooka Family Counseling Center
- EASA Wallowa Valley Center for Wellness
- EASA Yamhill Co. Adult Mental Health

Pennsylvania

- Penn Psychosis Evaluation and Recovery Center (PENN PERC)
- Psychosis Education, Assessment, Care, and Empowerment (PEACE)

Texas

- First Episode Psychosis Program (FEPP)

Utah

- Weber Human Services

Virginia

- NAVIGATE Team of Highlands Community Services
- Turning Point

Washington

- New Journeys Early Intervention Project
Appendix B: Email to Prospective Participants

Greetings,

I am a doctoral candidate in the Department of Clinical Psychology at Antioch University New England. As the clinical director (or other person who is responsible for overseeing the clinical services) of an early psychosis program in the United States, I am writing to invite you to participate in my dissertation research by completing an online survey. I want to know your expert opinion about how to best treat clients with early psychosis and trauma-related disorders. I intend to use the results of the online survey to inform clinical practice guidelines and recommendations for future research related to the treatment of clients with early psychosis and trauma-related disorders. The online survey consists of 24-30 questions and takes about 15-20 minutes to complete.

This study has been approved by the Institutional Review Board of Antioch University New England and is being conducted under the supervision of the Chair of the Dissertation Committee, Martha B. Straus, PhD. Your participation may benefit the field of psychology or clients with early psychosis and trauma-related disorders indirectly by increasing the knowledge base on how to best treat clients with early psychosis and trauma-related disorders. In addition, your participation may benefit you directly in up to two ways: you are eligible for up to two optional participation incentives, including (1) entry into a raffle for one of four $25 Amazon gift cards and (2) receipt of a copy of the results of this study. There are no known risks to participating in this study.

To review additional information about this study and access the online survey, please click here.

Thank you in advance for your time and consideration.

Respectfully yours,

Casey A. Cragin, M.S.
(XXX) XXX-XXXX
xxxxxxx@antioch.edu
Appendix C: Survey

Purpose of the Study

As the clinical director (or other person who is responsible for overseeing the clinical services) of an early psychosis program in the United States, you are being asked by a researcher at Antioch University New England to complete an online survey. The researcher wants to know your expert opinion on how to best treat clients with early psychosis (i.e., onset of threshold psychotic symptoms occurring less than 5 years ago) and comorbid trauma-related disorders (i.e., posttraumatic stress disorder or other psychiatric disorder resulting from exposure to one or more traumatic event). The researcher will use the results of the online survey to inform clinical practice guidelines and recommendations for future research related to the treatment of clients with early psychosis and trauma-related disorders. The online survey consists of 24-30 questions and takes about 15-20 minutes to complete.

Confidentiality

No identifying information will be collected or attached to survey responses. Survey responses will be stored in a password-protected, electronic database. Only researchers directly involved in this study will have access to survey responses. Study results will be reported only as data that summarizes the responses of all participants.

Benefits of Participation

Your participation may benefit the field of psychology or clients with early psychosis and trauma-related disorders indirectly by increasing the knowledge base on how to best treat clients with early psychosis and trauma-related disorders.

Your participation may benefit you directly in up to two ways: as a prospective participant, you are eligible for up to two optional participation incentives including (1) entry into a raffle for one of four $25 Amazon gift cards and (2) receipt of a copy of the results of this study. To opt-in to one or both of these optional participation incentives, please email the researcher at xxxxxxx@antioch.edu with “RAFFLE” and/or “RESULTS” in the subject line.

Risks of Participation

There are no known risks to participating in this study.

Voluntary Nature of the Study

You may skip any questions you are not comfortable answering or exit the survey at any time; however, please answer as many questions as you can. If you choose not to complete the survey, there will be no penalty and it will not affect your eligibility for optional participation incentives.

Contacts

If you have any questions about the study or survey, you may contact the Principal Investigator, Casey A. Cragin, M.S., by telephone at (XXX) XXX-XXXX or by email at xxxxxxx@antioch.edu or the Chair of
the Dissertation Committee, Martha B. Straus, PhD, by telephone at (XXX) XXX-XXXX or by email at mstraus@antioch.edu.

If you have any questions about your rights as a research participant, you may contact the Chair of the Institutional Review Board Committee, Kevin P. Lyness, PhD, by telephone at (XXX) XXX-XXXX or by email at klyness@antioch.edu or the Vice President of Academic Affairs, Melinda Treadwell, PhD, by telephone at (XXX) XXX-XXXX or by email at mtreadwell@antioch.edu.

Please print and retain a copy of this informed consent document for your records.

☐ I have read and understood the information provided above. I AGREE to participate in this study and wish to be directed to the beginning of the survey.

☐ I DO NOT AGREE to participate in this study and wish to exit the survey.
For the purposes of this survey, the questions below refer to the following key terms:

**Early Psychosis** — Onset of threshold psychotic symptoms less than 5 years ago

**Psychotic Symptoms** — Delusions (e.g., paranoid, grandiose, or somatic ideas or beliefs that are firmly held despite contrary evidence), hallucinations (e.g., auditory, visual, somatic, olfactory, or gustatory perceptions in the absence of corresponding external stimuli), or disorganized communication (e.g., losing track of or jumping around from one topic to another in conversation; behaving in ways that do not fit the situation)

**Trauma-Related Disorder** — Posttraumatic stress disorder (PTSD) or other psychiatric disorder resulting from exposure to one or more traumatic event

**Traumatic Event** — A situation (e.g., child physical, sexual, emotional, or psychological abuse; child neglect; domestic, school, or community violence; natural disasters like fire, tornado, floor, or hurricane; vehicular or other serious accident; war, terrorism, or refugeeism; medical trauma; and traumatic grief like sudden and/or violence death of a loved one) in which an individual is exposed directly or indirectly (e.g., witnessing, learning about) to actual or threatened death, serious injury, or sexual violence

**Trauma Symptoms** — Reexperiencing or intrusion symptoms (e.g., recurrent, involuntary, or distressing thoughts or images of the traumatic event), avoidance symptoms (e.g., avoidance of thoughts of, feelings about, and reminders associated with the traumatic event), negative cognitions or mood (e.g., persistent, distorted, or exaggerated negative beliefs about self, others, world, or cause or consequences of the traumatic event accompanied by negative emotions or inability to experience positive emotions), and hyperarousal symptoms (e.g., impaired emotional, behavioral, or cognitive regulation)

Please keep these definitions in mind as you answer the questions below.

Q1 What is the highest level of education you have completed? Please specify your discipline (e.g., psychiatry, psychology, social work, marriage and family therapy) in the space provided.

- Doctorate (e.g., PhD, PsyD, EdD) or Professional Degree (e.g., MD) (please specify discipline) [Small Text Box]
- Master's Degree (e.g., MA, MSW, MFT) (please specify discipline) [Small Text Box]
- Bachelor's Degree (e.g., BA, BS) (please specify discipline) [Small Text Box]
- Associate’s Degree (e.g., AA, AS) (please specify discipline) [Small Text Box]
- Other (please specify) [Small Text Box]

Q2 Have you personally treated a client with early psychosis in the last 12 months?

- Yes
- No
Q3 Have you personally treated a client with early psychosis and a comorbid trauma-related disorder in the last 12 months?

- Yes
- No
- Unknown

Q4 Have you personally received formal training and/or supervised clinical experience in the treatment of early psychosis?

- Yes, formal training and/or supervised clinical experience
- No
- Unknown

If Yes Is Not Selected, Then Skip To Q6

Q5 Please LIST the treatments for early psychosis in which you have received formal training and/or supervised clinical experience:

- Formal Training: [Medium Text Box]
- Supervised Clinical Experience: [Medium Text Box]

Q6 Have you personally received formal training and/or supervised clinical experience in the treatment of trauma-related disorders?

- Yes, formal training and/or supervised clinical experience
- No
- Unknown

If Yes Is Not Selected, Then Skip To Q8

Q7 Please LIST the treatments for trauma-related disorders in which you have received formal training and/or supervised clinical experience:

- Formal Training: [Medium Text Box]
- Supervised Clinical Experience: [Medium Text Box]

Q8 In what state is your early psychosis program located?

- Arizona
- California
- Colorado
- Connecticut
- Florida
- Georgia
- Illinois
- Indiana
- Iowa
Q9 In what type of setting is your early psychosis program based? Please select all that apply.

☐ Community
☐ Hospital
☐ University
☐ Other (please specify) [Small Text Box]

Q10 What age range does your early psychosis program serve?

Minimum age of clients served [Small Text Box]
Maximum age of clients served [Small Text Box]

Q11 Coordinated Specialty Care (CSC) is a recovery-oriented treatment program for clients with early psychosis. A team of specialists work with the client, involving family members or support persons as much as possible, to create a personal treatment plan and offer psychotherapy, medication management, family education and support, and education and employment support services. Examples of CSC programs in the United States include NAVIGATE, the Connection Program, OnTrackNY, the Specialized Treatment Early in Psychosis (STEP) Program, and the Early Assessment and Support Alliance (EASA).

Does your early psychosis program offer Coordinated Specialty Care for early psychosis?

☐ Yes
☐ No
☐ Unknown
Q12 Which of the following services does your early psychosis program offer? Please select all that apply.

- Comprehensive Assessment
- Case Management
- Medication Management
- Group Psychotherapy
- Individual Psychotherapy
- Family Psychoeducation and Support
- Supported Education and/or Employment Services
- Care Coordination (e.g., regular meetings of clinical team to coordinate services provided by all clinic staff)
- Other (please specify) [Medium Text Box]

Q13 Does your clinical staff receive formal training and/or supervised clinical experience in the treatment of early psychosis?

- Yes, formal training and/or supervised clinical experience
- No
- Unknown

If Yes Is Not Selected, Then Skip To Q15

Q14 Please LIST the treatments for early psychosis in which your clinical staff receives formal training and/or supervised clinical experience:

- Formal Training: [Medium Text Box]
- Supervised Clinical Experience: [Medium Text Box]

Q15 Does your clinical staff receive formal training and/or supervised clinical experience in the treatment of trauma-related disorders?

- Yes, formal training and/or supervised clinical experience
- No
- Unknown

If Yes Is Not Selected, Then Skip To Instructions [Before Q17]

Q16 Please LIST the treatments for trauma-related disorders in which your clinical staff receives formal training and/or supervised clinical experience:

- Formal Training: [Medium Text Box]
- Supervised Clinical Experience: [Medium Text Box]

For Questions 17-20, you will be asked to rate the appropriateness of different treatment modalities, approaches, and interventions for clients age 18-25 with early psychosis and a comorbid trauma-related disorder. If your early psychosis program serves clients under age 18 or over age 25, you will have an opportunity to share how your responses would differ for these age groups later in the survey.
For each item, use scores in the 7-9 range to indicate a degree of appropriateness, scores in the 4-6 range to indicate a degree of equivocal opinion, or scores in the 1-3 range to indicate a degree of inappropriateness, with the following anchor points:

9 = Extremely Appropriate: Your modality, approach, or intervention of choice (you may have more than one per question)

7-8 = Appropriate: A first-line modality, approach, or intervention you would often use

4-6 = Equivocal: A second-line modality, approach, or intervention you would sometimes use (e.g., after first-line modalities, approaches, or interventions failed)

2-3 = Usually Inappropriate: At most, a third-line modality, approach, or intervention you would rarely use

1 = Extremely Inappropriate: A modality, approach, or intervention you would never use

Q17 Providers can choose from a variety of treatment modalities to involve clients and family members or support persons to varying degrees in treatment. Please rate the appropriateness of each of the following MODALITIES for clients age 18-25 with early psychosis and a comorbid trauma-related disorder. Please consider each modality separately.

<table>
<thead>
<tr>
<th>MODALITY</th>
<th>Extremely Appropriate</th>
<th>9</th>
<th>8</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Therapy: See the client alone (i.e., without family members or support persons)</td>
<td>⬜️</td>
<td>⬜️</td>
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<td>Consultation: See family members or support persons alone (i.e., without client)</td>
<td>⬜️</td>
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<tr>
<td>Conjoint or Family Therapy: See client and family members or support persons together</td>
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</table>
Q18 Providers can choose from a variety of treatment approaches when treating clients who present with comorbid psychiatric conditions. Please rate the appropriateness of each of the following APPROACHES for clients age 18-25 with early psychosis and a comorbid trauma-related disorder. Please consider each approach separately.

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<thead>
<tr>
<th>Approach</th>
<th>Extremely Appropriate</th>
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<th>7</th>
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<th>4</th>
<th>3</th>
<th>2</th>
<th>Extremely Inappropriate</th>
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<tr>
<td>Single-Diagnosis: Treat psychotic symptoms only</td>
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<td>Single-Diagnosis: Treat trauma symptoms only</td>
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<td>Sequenced: Treat psychotic symptoms first; then treat trauma symptoms</td>
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<td>Sequenced: Treat trauma symptoms first; then treat psychotic symptoms</td>
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<td>Parallel: Treat psychotic symptoms and trauma symptoms at the same time, but with different providers</td>
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<tr>
<td>Integrated: Treat psychotic symptoms and trauma symptoms at the same time with the same providers</td>
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For each item, use scores in the 7-9 range to indicate a degree of appropriateness, scores in the 4-6 range to indicate a degree of equivocal opinion, or scores in the 1-3 range to indicate a degree of inappropriateness, with the following anchor points:

9 = Extremely Appropriate: Your modality, approach, or intervention of choice (you may have more than one per question)

7-8 = Appropriate: A first-line modality, approach, or intervention you would often use

4-6 = Equivocal: A second-line modality, approach, or intervention you would sometimes use (e.g., after first-line modalities, approaches, or interventions failed)

2-3 = Usually Inappropriate: At most, a third-line modality, approach, or intervention you would rarely use

1 = Extremely Inappropriate: A modality, approach, or intervention you would never use

The treatments providers use to address client symptoms are often comprised of a variety of interventions. The interventions listed below reflect those included in similar studies, but may not reflect the full range of interventions you (or members of your clinical staff) use to address psychotic or trauma symptoms in practice. Please help us to better understand the full range of interventions used by early psychosis programs by using the "Other" option to list and rate any additional interventions you would like to include in your response. Please click here to download definitions of the interventions listed for your reference.
Q19 Please rate the appropriateness of each of the following interventions for ADDRESSING PSYCHOTIC SYMPTOMS for clients with early psychosis and a comorbid trauma-related disorder. Please consider each intervention separately.

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<tr>
<th>Intervention</th>
<th>Extremely Appropriate</th>
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<th>8</th>
<th>7</th>
<th>6</th>
<th>Equivocal</th>
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<th>2</th>
<th>Extremely Inappropriate</th>
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<td>Anxiety / Stress Management</td>
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<td>Bilateral Stimulation</td>
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<td>Case Management</td>
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<td>Cognitive Restructuring</td>
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<td>Emotion-Focused Strategies</td>
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<td>Exposure Strategies</td>
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<td>Interpersonal Effectiveness Training</td>
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<td>Psychoeducation</td>
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<td>Sensorimotor / Movement Strategies</td>
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<td>Other (please specify) [Medium]</td>
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Q20 Please rate the appropriateness of each of the following interventions for ADDRESSING TRAUMA SYMPTOMS for clients with early psychosis and a comorbid trauma-related disorder. Please consider each intervention separately.

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<tr>
<th>Intervention</th>
<th>Extremely Appropriate</th>
<th>8</th>
<th>7</th>
<th>6</th>
<th>Equivocal</th>
<th>4</th>
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<th>2</th>
<th>Extremely Inappropriate</th>
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<tbody>
<tr>
<td>Anxiety / Stress Management</td>
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<td>Bilateral Stimulation</td>
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<td>Case Management</td>
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<td>Cognitive Restructuring</td>
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<td>Emotion-Focused Strategies</td>
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<td>Interpersonal Effectiveness Training</td>
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</table>
For Questions 21-24, you will be asked to rate the appropriateness of trauma-focused treatment for clients age 18-25 with early psychosis and a comorbid trauma-related disorder in general and under specific clinical and psychosocial conditions. Again, if your early psychosis program serves clients under age 18 or over age 25, you will have an opportunity to share how your responses would differ for these age groups later in the survey.

**Trauma-Focused Treatment** includes treatments from a variety of theoretical orientations that address exposure to traumatic events directly by asking clients to recall or encounter thoughts, images, feelings, or situations related to traumatic events.

For each item, use scores in the 7-9 range to indicate a degree of appropriateness, scores in the 4-6 range to indicate a degree of equivocal opinion, or scores in the 1-3 range to indicate a degree of inappropriateness, with the following anchor points:

- **9 = Extremely Appropriate**: Your treatment of choice (you may have more than one per question)
- **7-8 = Appropriate**: A first-line treatment you would often use
- **4-6 = Equivocal**: A second-line treatment you would sometimes use (e.g., after first-line treatments failed)
- **2-3 = Usually Inappropriate**: At most, a third-line treatment you would rarely use

<table>
<thead>
<tr>
<th>Mindfulness</th>
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<tbody>
<tr>
<td>Psychoeduction</td>
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<td>Sensorimotor / Movement Strategies</td>
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<td>Other (please specify) [Medium Text Box]</td>
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</table>
1 = Extremely Inappropriate: A treatment you would never use

Q21 Please rate the appropriateness of trauma-focused treatment for clients age 18-25 with early psychosis and a comorbid trauma-related disorder:

<table>
<thead>
<tr>
<th>Extremely Appropriate</th>
<th>9</th>
<th>8</th>
<th>7</th>
<th>6</th>
<th>Equivocal</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>Extremely Inappropriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trauma-Focused Treatment</td>
<td>○</td>
<td>○</td>
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</tbody>
</table>

Q22 Please rate the appropriateness of trauma-focused treatment for clients age 18-25 with early psychosis and a comorbid trauma-related disorder AT EACH STAGE OF PSYCHOSIS. Please consider each stage separately.

<table>
<thead>
<tr>
<th>Extremely Appropriate</th>
<th>9</th>
<th>8</th>
<th>7</th>
<th>6</th>
<th>Equivocal</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>Extremely Inappropriate</th>
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<td>Genetic Risk and Deterioration: Family history of psychosis and decline in functioning without attenuated or threshold psychotic symptoms</td>
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For each item, use scores in the 7-9 range to indicate a degree of appropriateness, scores in the 4-6 range to indicate a degree of equivocal opinion, or scores in the 1-3 range to indicate a degree of inappropriateness, with the following anchor points:

9 = **Extremely Appropriate**: Your treatment of choice (you may have more than one per question)
7-8 = **Appropriate**: A first-line treatment you would often use
4-6 = **Equivocal**: A second-line treatment you would sometimes use (e.g., after first-line treatments failed)
2-3 = **Usually Inappropriate**: At most, a third-line treatment you would rarely use
1 = **Extremely Inappropriate**: A treatment you would never use

Assume you (or a member of your clinical staff) are considering the use of trauma-focused treatment for a client age 18-25 with early psychosis and a comorbid trauma-related disorder that you consider stable, but you are concerned about increasing symptom severity or contributing to client crisis or hospitalization.

Q23 Please rate the appropriateness of proceeding with trauma-focused treatment for clients age 18-25 with early psychosis and a comorbid trauma-related disorder **UNDER THE FOLLOWING CURRENT CONDITIONS**. Please consider each condition separately.

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<td>Significant Life Stressors</td>
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### Early Psychosis and Trauma-Related Disorders

**Low Involvement of Family Members or Support Persons**
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- 8
- 7
- 6
- 5
- 4
- 3
- 2
- 1

**Attenuated or Residual Psychotic Symptoms**
- 9
- 8
- 7
- 6
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- 1

**Comorbid Personality Disorder**
- 9
- 8
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**Other Comorbid Psychiatric Disorder**
- 9
- 8
- 7
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**Other (please specify) [Medium Text Box]**
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- 8
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Q24 Please rate the appropriateness of proceeding with trauma-focused treatment for clients age 18-25 with early psychosis and a comorbid trauma-related disorder **UNDER THE FOLLOWING PAST CONDITIONS**. Please consider each condition separately.

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Q25 Does your early psychosis program serve clients under age 18?
EARLY PSYCHOSIS AND TRAUMA-RELATED DISORDERS

Q26 Would any of your responses about appropriate approaches, modalities, interventions, or treatments for clients with early psychosis and a comorbid trauma-related disorder differ for **CLIENTS UNDER AGE 18**?

- Yes (please describe) [Large Text Box]
- No

Q27 Does your early psychosis program serve clients over age 25?

- Yes
- No

Q28 Would any of your responses about appropriate approaches, modalities, interventions, or treatments for clients with early psychosis and a comorbid trauma-related disorder differ for **CLIENTS OVER AGE 25**?

- Yes (please describe) [Large Text Box]
- No

Q29 Are you aware of any **BARRIERS** your early psychosis program has encountered in attempting to treat clients with early psychosis and a comorbid trauma-related disorder?

- Yes (please describe) [Large Text Box]
- No

Q30 Please provide any other information you think would help to improve the treatment of clients with early psychosis and a comorbid trauma-related disorder in early psychosis programs: [Essay Text Box]
Appendix D: Definitions of Key Terms

**Early Psychosis** — Onset of threshold psychotic symptoms less than 5 years ago

**Psychotic Symptoms** — Delusions (e.g., paranoid, grandiose, or somatic ideas or beliefs that are firmly held despite contrary evidence), hallucinations (e.g., auditory, visual, somatic, olfactory, or gustatory perceptions in the absence of corresponding external stimuli), or disorganized communication (e.g., losing track of or jumping around from one topic to another in conversation; behaving in ways that do not fit the situation)

**Trauma-Related Disorder** — Posttraumatic stress disorder (PTSD) or other psychiatric disorder resulting from exposure to one or more traumatic event

**Traumatic Event** — A situation (e.g., child physical, sexual, emotional, or psychological abuse; child neglect; domestic, school, or community violence; natural disasters like fire, tornado, floor, or hurricane; vehicular or other serious accident; war, terrorism, or refugeeism; medical trauma; and traumatic grief like sudden and/or violence death of a loved one) in which an individual is exposed directly or indirectly (e.g., witnessing, learning about) to actual or threatened death, serious injury, or sexual violence

**Trauma Symptoms** — Reexperiencing or intrusion symptoms (e.g., recurrent, involuntary, or distressing thoughts or images of the traumatic event), avoidance symptoms (e.g., avoidance of thoughts of, feelings about, and reminders associated with the traumatic event), negative cognitions or mood (e.g., persistent, distorted, or exaggerated negative beliefs about self, others, world, or cause or consequences of the traumatic event accompanied by negative emotions or inability to experience positive emotions), and hyperarousal symptoms (e.g., impaired emotional, behavioral, or cognitive regulation)
Appendix E: Definitions of Interventions

**Anxiety/Stress Management** – A broad class of techniques that focus on the development of coping skills to reduce stress and stress-related difficulties such as muscle ache, rumination, or poor sleep. Techniques include muscle relaxation training, focused breathing or breathing retraining, or sleep hygiene.

**Bilateral Stimulation** – A class of techniques which include the presence of alternating attention and stimulation such as eye movements which track the back and forth of a visual stimulus (e.g., therapist finger) or through other stimuli such as a tone or tap on body while the individual thinks about or imagines troubling memories. The purpose of this intervention is to desensitize the individual to troublesome thoughts, images, or memories and to reduce overall distress.

**Case Management** – The coordination of services and resources to benefit the client. This includes medication, employment training, housing, day treatment, or HIV testing.

**Cognitive Restructuring** – Interventions designed to help individuals alter their understanding of the meaning of their experiences. Techniques include exploring and revising identified maladaptive cognitions or reappraising the meaning of an event or experience.

**Emotion-Focused Strategies** – Techniques that focus attention to and awareness of the individual’s emotional experiences for the purposes of clarifying meaning and enhancing appraisal of past, ongoing, and future events and to help guide actions and decisions. Emotion regulation interventions focus on improving the individual’s ability to manage, modify, and express emotions within a range that optimizes achievement of goals.

**Exposure Strategies** – Individuals remember and describe the thoughts, images, or feelings or encounter situations associated with troublesome events or experiences for the purposes of tolerating and reducing the distress associated with the memory. This usually, but not always, includes a reappraisal and revision of the meaning of the events or experiences.

**Interpersonal Effectiveness Training** – Interventions focus on improving social skills, identifying and resolving interpersonal difficulties in relationships of various kinds (e.g., work, social, and intimate relationships) and strengthening positive interpersonal and relational expectations.

**Meditation/Mindfulness** – Interventions in which directed attention is given to a single stimulus such as one’s breath, a sound, or a light for a sustained period of time for the purposes of reducing physical and mental stress and improving concentration and sense of well-being. Mindfulness is a class of techniques which draws attention to a variety of subjective experiences such as feelings and sensations without judgment or action with the goal of reducing distress and anxiety and enhancing sense of well being.

**Psychoeducation** – Systematic description to clients and their significant others about symptoms and education about treatments (e.g., rationale, efficacy). The goal of psychoeducation is to
provide support to clients by expressing understanding and familiarity with client’s problems and by reassuring clients that symptoms and problems can be overcome with time and treatment.

**Sensorimotor/Movement Strategies** – Interventions that focus on bodily sensations and movement to address and resolve troublesome memories in a nonverbal fashion and to improve attention, decrease dissociation, and increase energy and sense of the experience of bodily integration.
Appendix F: Institutional Review Board Approval for Exempt Status

From: klyness@antioch.edu

To: xxxxxxx@antioch.edu, klyness@antioch.edu, bsammons@antioch.edu

Date: Tuesday, June 28, 2016

Subject: Online IRB Application Approved: Early Psychosis and Trauma-Related Disorders: Clinical Practice Guidelines and Future Directions June 28, 2016, 10:06 am

Dear Casey A. Cragin, M.S.,

As Chair of the Institutional Review Board (IRB) for 'Antioch University New England, I am letting you know that the committee has reviewed your Ethics Application. Based on the information presented in your Ethics Application, your study has been approved.

Your study has been approved for Exempt status by the IRB. As an exempt study, there is no requirement for continuing review. Your protocol will remain on file with the IRB as a matter of record. While your project does not require continuing review, it is the responsibility of the P.I. to inform the IRB if the procedures presented in this protocol are to be modified or if problems related to human research participants arise in connection with this project. Any procedural modifications must be evaluated by the IRB before being implemented, as some modifications may change the review status of this project. Please be reminded that even though your study is exempt from the relevant federal regulations of the Common Rule (45 CFR 46, subpart A), you and your research team are not exempt from ethical research practices and should therefore employ all protections for your participants and their data, which are appropriate to your project.

Sincerely,

Kevin Lyness