



Applying Participatory Research in the Development of Clinical Practice Recommendations for Incorporating Mindfulness into Mental Health Treatment with Youth at Risk for Psychosis

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Abstract

Mindfulness is a promising adjunct strategy that clinicians can use with individuals at risk for psychosis to help manage their distressing symptoms and difficulties with daily functioning. This article explores how mental health clinicians can support young people to safely engage with mindfulness practices as part of their overall recovery through the development of specific guidance for the implementation of mindfulness programs within routine clinical care. A collaborative approach was taken to the development of the recommendations through the adoption of participatory research principles across three phases. The first two phases were published elsewhere. In Phase 3, initial recommendations were formulated, in consideration of the findings of Phases 1 (evidence mapping) and 2 (qualitative analysis of the perspectives of practitioners with experience working with young people at risk for psychosis, and youth at risk for psychosis, regarding the use of mindfulness as an adjunct to usual treatment) and existing mindfulness intervention protocols for psychosis. Initial recommendations were fed back to the practitioner group used in Phase 2 in a validation cycle to ensure recommendations matched their views and for final endorsement. Eight key recommendation areas with corresponding clinical practice points were endorsed, highlighting the practical utility of the recommendations. Recommendations included the benefit of youth-relevant mindfulness content and adapting mindfulness to young people's needs, the importance of trauma-informed principles, the utility of compassion-based practices, and key ways to address barriers to mindfulness uptake for youth at risk for psychosis. It is anticipated that through the implementation of these recommendations, safe and effective implementation of mindfulness interventions within early intervention practice will improve outcomes for young people experiencing attenuated psychotic symptoms and associated morbidity.

Keywords Adolescent · Early intervention · Participatory research · Mindfulness · Psychotic disorders

Despite the promise of mindfulness-based interventions for the treatment and management of symptoms experienced by youth at risk of psychosis, research and practice have lagged. This article describes the development of recommendations for the clinical application of mindfulness interventions for young people identified at risk for psychosis with the aim of increasing the integration of mindfulness applications within mental health treatment services for these young people. It begins with a brief background to current models of treatment for ultra high risk (UHR) young people and identifies

relevant treatment gaps. It then provides a commentary on the potential for mindfulness-based interventions to improve the outcomes for these young people in current practice and the current evidence. In identifying a gap in the availability of specific guidance for the development of mindfulness programs in early intervention for this group, it then describes the process we took to develop recommendations to support the safe and effective implementation of mindfulness for future practice and research. Following describing these guidelines and their application, the paper concludes with a brief discussion regarding the future of mindfulness-based interventions in early intervention service models for the UHR cohort.

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Early Intervention for Young People at Risk for Psychosis: Is There a Role for Mindfulness-Based Interventions?

In the past two decades, research into early intervention in mental illness has seen criteria developed to identify individuals at risk for psychosis. This is done in the hope of preventing, delaying, or treating poorer outcomes associated with the development of psychosis and its risk factors (Correll et al., 2018; Fusar-Poli et al., 2017). Critically, of the groups at risk for psychosis, young people aged 14 to 25 years feature prominently, with around half of the incidences of onset of psychosis occurring before the age of 25 years and a median age of onset in young adulthood (Solmi et al., 2022). Overall, rates of mental illness, including psychosis, are rising in this age group, representing a significant risk to the productive adult lives of these young people (McGorry, Coghill, & Berk, 2023). In part, this has seen an expansion in service models aimed specifically at early intervention for young people globally, such as *Headspace*, an Australian mental health service which specifically caters to the treatment of young people aged between 12 and 25 years (Rickwood et al., 2019; Schley et al., 2019).

Early intervention in psychosis has seen specific research interest placed on the *prodrome*. It is believed that during this period particular functional and cognitive decline can be retrospectively recognized, and thereby used to find similarly presenting individuals with elevated risk for future psychosis (Nelson et al., 2013). Corresponding criteria have been developed to classify individuals at higher risk of future psychosis: the *Ultra-High Risk (UHR)*, *Clinical-High Risk (CHR)*, and *At-Risk Mental State (ARMS)* criteria (Yung & Nelson, 2013). The UHR criteria are predominately used in Australia, but internationally these terms are used interchangeably and generally subsume individuals who have experienced functional decline in conjunction with attenuated psychotic symptomatology and a family history of psychosis (Yung & Nelson, 2013). UHR criteria typically designate three subgroups: (a) people experiencing subthreshold positive psychotic symptoms, such as suspiciousness and perceptual abnormalities, known as *attenuated psychotic symptoms (APS)*; (b) individuals with poor functioning in combination with a first-degree relative with a psychotic disorder; and (c) those who have experienced a short period (< 1 week) of full threshold positive psychotic symptoms which resolved without treatment (Yung et al., 2003). Although not all individuals at risk for psychosis will develop a psychotic episode, follow-up data suggest that between 22 and 24% of this population develop a psychotic disorder within 3 years, compared with 1% in the general population (Catalan et al., 2021; Fusar-Poli et al., 2020; Lång, et al., 2022).

Reviews into UHR treatments suggest that some interventions, particularly cognitive behavioral therapy (CBT), can reduce transition to psychosis rates at 12- and 18-month follow-up (Devoe et al., 2020a, 2020b; Zheng et al., 2022). To date, however, systematic reviews and meta-analyses show treatments used with UHR individuals appear less effective at reducing prodromal negative symptoms and improving social functioning (Devoe et al., 2019, 2020a, 2020b; Zheng et al., 2022).

With limited success in reducing negative symptoms and social functioning, interest has grown in complementary treatments, including those incorporating mindfulness. Mindfulness, in brief, is a set of practices which focus on encouraging first-person non-judgmental awareness and acceptance of internal processes (Kabat-Zinn, 1994). Mindfulness interventions align well with existing guidelines for the treatment of at risk for psychosis individuals. These guidelines emphasize the use of psychosocial (i.e., non-pharmacological) interventions over medications, which are often accompanied by adverse side effects (McGorry, 2015). Mindfulness-based approaches are also viewed as well aligned with public health, with the recognition that both are concerned with “upstream” preventative actions for mental health and the need to address psychosocial stress and physical-mental health linkages (for a discussion, see Oman, 2023). Mindfulness interventions have shown potential in later stages of psychotic illness for improving psychotic symptom severity (Ellett, 2023) and associated depressive symptoms and social functioning (Jansen et al., 2019; Khoury et al., 2013; Louise et al., 2018). The use of mindfulness during early first-episode psychosis (FEP) shows clinical promise for reducing anxiety and depression, and improving quality of life for people (Vignaud et al., 2019), with preliminary evidence for its positive effects on negative symptoms for people during the recent-onset psychosis period (Li et al., 2021).

Mindfulness in Practice

There are various ways in which mindfulness-based interventions might support young people identified as having an at-risk mental state, and such interventions critically lessen their risk of transition to a first psychotic episode. Typically, mindfulness-based interventions focus on the cultivation of present-moment awareness, acceptance, and compassion through which practitioners can experience and observe their thoughts and feelings without habitually identifying with them (known as *defusion*) (Oman, 2023). In doing so, mindfulness practice may support these young people build emotional resilience and psychological flexibility thereby lessening their vulnerability to stressful life events and circumstances (Hickey et al., 2017; Oman,

2023) and adopting a more accepting attitude towards their symptoms (Chadwick, 2014). Mindfulness and related approaches such as compassion practices also hold promise for treating self-stigmatization and distress related to symptoms (Hickey et al., 2017; Reich et al., 2021). In addition, mindfulness may be particularly helpful for managing paranoia, a symptom commonly experienced by UHR young people. Recent research has identified that young people with higher levels of distress associated with their attenuated psychotic symptoms had a higher risk of transition to psychosis and a poorer transdiagnostic clinical trajectory (Nelson et al., 2022; Hickey et al., 2022). Mindfulness-based interventions may assist young people to notice paranoid ideas related to both external (e.g., threats from others) and internal threats (e.g., self-criticism) and to approach these cognitive patterns with a more compassionate stance and more affiliative interpersonal responses (Hickey et al., 2017).

Despite their promise and an overall call for greater focus on mindfulness for the at risk group (Ellett, 2023), a recent mapping review of mindfulness for the various stages of psychosis found a single completed study with UHR individuals and one with a mixed group of FEP and UHR youth (Reich et al., 2021). These studies suggest mindfulness-based interventions may be effective in improving psychosocial outcomes for UHR young people including self-esteem, life satisfaction, and social support (Alvarez-Jimenez et al., 2018; Hickey et al., 2019) but overall, the evidence is lacking.

A key barrier to broader integration of mindfulness into current early intervention practice concerns safety fears regarding mindfulness for this group and for people with psychosis more generally (Ellett, 2023). Clinicians and researchers have expressed concern that mindfulness might initiate transition to psychosis, or trigger trauma responses such as dissociation or flashbacks (Lindahl & Britton, 2019; Reich et al., 2021; Shonin et al., 2014). While recent research suggests the risks of mindfulness for this cohort are relatively similar or lower than other current treatments, the safety of mindfulness is identified as an ongoing area for research and improved reporting (Ellett, 2023).

A related barrier is the lack of clinical recommendations for the safe application of mindfulness interventions with UHR young people specifically. Along with the adoption of recently established guidelines for the operationalizing and monitoring of harm in mindfulness for psychosis research (Ellett & Chadwick, 2021), this represents a key step to encourage the adoption of mindfulness interventions within routine early intervention. In the next section, we describe how we drew together current evidence, with qualitative exploration of key stakeholder views regarding mindfulness for the UHR group to derive clinical practice recommendations for the implementation of mindfulness interventions with youth at risk for psychosis.

Supporting Implementation of Mindfulness Interventions for Young People with At-Risk Mental State: Using Participatory Research Develop Clinical Guidelines for the Use of Mindfulness in Early Intervention

Participatory research typically involves integrating stakeholder and expert views with the existing evidence base with the knowledge that this improves the acceptability and effectiveness of clinical interventions (Bartholomew Eldredge et al., 2016; Wight et al., 2016). This is particularly true when considering interventions for young people, where not only do the interventions need to meet their clinical needs, but must also be youth-friendly (Hawke et al., 2018). Service-user involvement has also been recommended specifically for the development of mindfulness for psychosis interventions (Ellett, 2023).

As such, to establish clinical guidelines for the integration of mindfulness within early intervention practice, we integrated the existing evidence with the views of young people (i.e., end users) and those likely to be delivering these interventions in routine clinical practice (i.e., Mental health practitioners) across three phases. The first two phases have been reported elsewhere (Reich et al., 2021, 2022) and described in summary below. The final phase, along with the derived practice recommendations, are described directly following.

Phase 1: Evidence Mapping

Applying evidence mapping methodology, the first phase involved reviewing current and in progress implementations of mindfulness across stages of psychosis (at risk for psychosis; first-episode psychosis; chronic or established psychosis), with a focus on how (i.e., mindfulness format) and where (i.e., stage of illness) mindfulness has been implemented. The review identified 72 studies of both in-progress and completed research (for full details, see Reich et al., 2021). Data relating to the mindfulness interventions adopted in each study were extracted, including adverse events where reported. Relevant intervention components included homework utilization, number and format of sessions, and the style of mindfulness exercises utilized. Additionally, facilitator comments were analyzed thematically (with the use of content analysis) to identify perspectives regarding how to maximize the safety and efficacy of mindfulness with psychosis. By mapping the evidence against the stage model of illness (McGorry et al., 2007), specific considerations and adaptations relating to the use of mindfulness with individuals at different stages of psychosis could be systematically examined. A key finding of

this review was that only one completed mindfulness study with individuals at risk for psychosis existed at the time of the review (Alvarez-Jimenez et al., 2018) and one including a mixture of UHR and FEP patients (Hickey et al., 2019)—demonstrating a clear need for further research to progress the translation of mindfulness safely and effectively in clinical practice with this cohort. Findings also identified the potential utility of compassion-based practices within early stages of illness, where self-stigmatization often develops, along with specific exercise and intervention modifications applicable across all stages of illness (e.g., shorter exercises to accommodate for cognitive impairments, reduced use of silence).

Phase 2: Stakeholder Input

The second phase placed specific focus on the use of mindfulness with individuals at risk for psychosis. Applying qualitative research methods, key stakeholders were interviewed regarding their attitudes towards mindfulness interventions within treatment models for individuals at risk for psychosis and seeking their recommendations regarding how to encourage mindfulness practice for this cohort, specific mindfulness-based approaches they viewed as most beneficial for this cohort, and ways to maximize participant safety (for full details, see Reich et al., 2022). Semi-structured interviews were conducted with eight practitioners with experience working with UHR individuals and six UHR young people and analyzed using template thematic analysis. Interviews with practitioners explored experiences using mindfulness with UHR individuals, safety concerns held regarding mindfulness, unique UHR characteristics and their relevancy to mindfulness, and obstacles to uptake of mindfulness for this group. Interviews with UHR young people explored previous experiences with mindfulness and attitudes towards mindfulness (including perceived barriers and potential enablers).

The views of the stakeholders corroborated the mapping review's findings—including regarding the helpfulness of incorporating compassion-based practices alongside mindfulness, the utility of different exercise modifications, and the importance of adapting to heterogeneity and targeting symptoms like attenuated psychotic symptomology and anxiety. Stakeholders also highlighted the helpfulness of interventions being youth-friendly (e.g., using content that appeals to young people), and discussed important ways to navigate common barriers to mindfulness uptake, for example, targeting self-criticism early in mindfulness skill uptake. Practitioners discussed important safety considerations and corresponding adaptations. This included the importance of using trauma-sensitive principles with mindfulness (e.g., using grounding exercises, encouraging flexible participation in exercises), the helpfulness of group co-facilitation,

and reducing the use of silence during mindfulness exercises. Both stakeholder groups spoke to the clinical promise of mindfulness strategies, with potential benefit of mindfulness discussed for stress management, social functioning, emotional regulation, negative symptoms, self-criticism, and increasing positive emotions. Finally, young people and stakeholders recognized mindfulness can facilitate self-determination and empowerment over treatment choice – aligning with person-centered care principles (Morgan & Yoder, 2012). Nevertheless, barriers to practice were also identified by both stakeholder groups, including unhelpful perspectives of mindfulness practice, highlighting the need for the formulation of and translation of clinical guidelines supporting the uptake of safe and beneficial mindfulness interventions for this vulnerable group.

Phase 3: Formulation of Recommendations

Applying search parameters adapted from the mapping review conducted in Phase 1 (Reich et al., 2021), an updated literature search was also undertaken to identify and appraise any additional relevant publications specific to the UHR cohort. One additional study was identified that examined the delivery of a mindfulness-based intervention in a mixed cohort of UHR and FEP young people (Hickey et al., 2021) and two studies examined transdiagnostic mindfulness-based interventions utilizing cohorts of young people with either elevated depression or attenuated psychotic symptoms (DeTore et al., 2023; Weintraub et al., 2023). The inclusion of self-compassion practices within mindfulness-based programs for young people with psychotic experiences was supported by Hickey et al. (2021) reporting large improvements in self-compassion in this group after participating in their pilot study of a mindfulness and compassion program for youth experiencing psychotic symptoms. Participants anecdotally recalled mindfulness practices, such as breath and walking practices, as being *convenient*. In a randomized study comparing telehealth forms of CBT to mindfulness-based cognitive therapy (MBCT) for young people with mood or attenuated psychosis symptoms, Weintraub et al. (2023) demonstrated comparable benefits in adolescents' attenuated psychotic symptoms, mood, and anxiety post-treatment. Notably, participants overall rated the CBT program as more satisfying and more aligned to their treatment goals than MBCT. This may reflect a lack of understanding of the benefits of drawing attention to and acceptance of some internal experiences in contrast to the more active stance of CBT which encourages changes and modifications in distressing thinking and behavioral patterns. In the third study, a four-session group intervention designed to build the resilience of college students demonstrating either mildly elevated depressive symptoms and/or subclinical psychotic symptoms was evaluated in a randomized wait-list control

trial (DeTore et al., 2022). The transdiagnostic program incorporated sessions designed to build skills in mindfulness and self-compassion and apply these in daily life. Findings highlighted the potential benefits of a brief 4-session incorporating mindfulness and compassion practices to build coping skills (e.g., mindfulness practice) and reduce distress associated with mood and psychotic symptoms in at-risk young people in high school or college settings, adding to small body of literature examining mindfulness for UHR in clinical settings.

Drawing on these findings and the findings of Phases 1 and 2, draft recommendations were then formulated with clinical practice points, following methods for other evidence-based recommendations for psychological intervention (e.g., Golden et al. (2022); Thomas et al., 2011). Categorization of recommendations were also guided by the Better reporting of interventions: template for intervention description and replication (TIDieR) checklist (Hoffmann et al., 2014). This checklist focused our attention on stakeholder feedback from Phase 2 that related, for example, to whether the intervention was modified during the course of the study to support its safety (Item 10), the exercises helpfully incorporated into a specific mindfulness intervention, (Item 3, e.g., the use of mindful eating), as well as specific

tailoring to the UHR cohort viewed to be important (Item 9, e.g., length of specific mindfulness practices).

These draft recommendations were fed back to the practitioner stakeholder group engaged in Phase 2 of this research in a validation cycle recommended for the co-design of public health interventions (Leask et al., 2019) and drawing on the aims of participatory research. This was undertaken to strengthen confidence in the relevance and utility of these recommendations and to facilitate refinement for dissemination. All eight practitioners interviewed for Phase 2 (Reich et al., 2021) of this research were contacted via email, inviting their contribution to the finalization of the recommendations, with five agreeing to participate (see Table 1 for relevant demographic details). Practitioner feedback in the validation cycle contributed to improvements in the order and structure of the recommendations, and wording changes to support their practical utility (Fig. 1). Some recommendations were also nuanced for greater utility in clinical practice, for example, the recommendation that co-facilitation of mindfulness programs could be provided by either mental health practitioners or peer workers. In addition, rather than recommending that body scan practices be avoided for this group, practitioner feedback endorsed the potential benefits of drawing mindfulness awareness to the body for UHR young people, as long as these practices were titrated via graded exposure. All five practitioners engaged in the validation process of the proposed guidelines endorsed the final set of practice recommendations which are described in the following section.

Table 1 Background data of mental health practitioners endorsing the recommendations

	Occupation	Sex	Experience level with UHR
P1	Clinical psychologist	M	19 years
P2	Clinical psychologist	F	13 years
P5	Mental health nurse	F	2 years
P6	Mental health occupational therapist	F	3 years
P8	Social worker	M	5 years

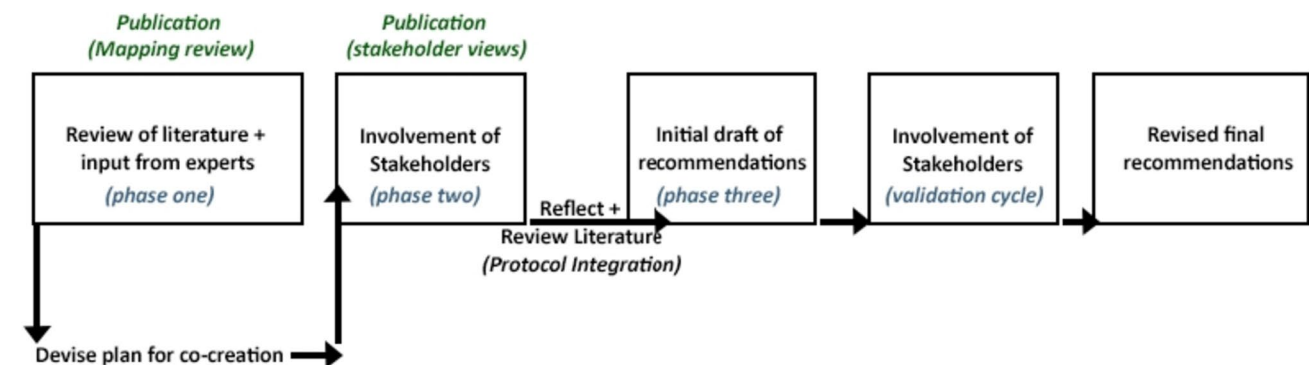


Fig. 1 Validation cycle adapted from participatory methodologies used for co-creation of public health interventions. *Note.* Adapted from: “Framework, principles and recommendations for utilizing par-

ticipatory methodologies in the co-creation and evaluation of public health interventions,” by Leask et al., 2019, *Research Involvement and Engagement*, 5, p. 4

Recommendations for the Use of Mindfulness Interventions with Youth at Risk for Psychosis

The final set of recommendations we developed for the use of mindfulness with young people at risk of psychosis is shown in Table 2.

Collectively, these recommendations recognize that mindfulness is not easily applied with UHR young people, who often present with poor motivation and deficits in everyday and social functioning, cognitive impairment, and distressing symptoms (Conrad et al., 2014; Lim et al., 2015). The recommendations also acknowledge that if mindfulness uptake is to be successful in practice, facilitators need to address young people's social anxiety, paranoia, and suspiciousness, particularly in group settings. To do so, we encourage facilitators to utilize youth-friendly material and procedures. This means taking things slowly and casually with this group and ensuring mindfulness practice appeals to young people who, like youth more generally, benefit from informal relationship building and often have different values and goals to older cohorts, such as social development and individuation (Boat et al., 2009; Lynch et al., 2021). We also recommend that facilitators elicit young people's motivation to practice via identifying their goals and values, and encourage social bonding, particularly early in group programs. We note that many youth at risk for psychosis have high levels of self-criticism, which often contributes to negative symptoms and interferes with treatment. Wherever possible, we encourage facilitators to anticipate self-criticism in young UHR mindfulness practitioners (e.g., via a group discussion about how this individually manifests) and address common misunderstandings of mindfulness that may deleteriously encourage negative symptoms, like avolition. Importantly, we highlight the role of psychoeducation early in mindfulness programs for this group, to clarify the goals and outcomes of mindfulness practice, including the emphasis that mindfulness does not require relaxation or a *blank mind*. Paradoxically, the negative symptoms that act as potential barriers to mindfulness uptake in this group are areas for which mindfulness treatments show promise. For example, by increasing positive emotions which might lead to young people's increased desire for social connection (Alvarez-Jimenez et al., 2018).

Our recommendations also recognize that the UHR group experience symptoms across several symptom domains, including attenuated psychotic symptomatology, mood and anxiety symptoms, attentional problems, and general functioning concerns (Conrad et al., 2014; Lim et al., 2015). While this heterogeneity lends support to the use of mindfulness due to mindfulness' transdiagnostic

promise (Böge et al., 2020; Reich et al., 2021), it also means that mindfulness interventions will be most effective and safe when tailored towards the unique needs of each young person. Mindfulness facilitators are encouraged to take time to understand young people's present symptomatic concerns, and where possible tailor psychoeducation and mindfulness exercises towards them, for example, by referencing thoughts related to self-criticism or anxiety during facilitator-guided exercises. This may be more difficult in group-based interventions; however, it is likely a group will share common traits like self-criticism that can be targeted. Individuals can also be given audio-recordings of guided mindfulness practices personalized to reference their relevant concerns.

Importantly, we advise facilitators to place specific attention on attenuated psychotic symptoms because they are often distressing for UHR young people, associated with poorer functioning, and indicate risk for psychotic disorders (Nelson et al., 2022; Yung et al., 2021). Rather than avoiding reference to these experiences, we encourage facilitators to gently draw attention to them, for example by referencing them in guided exercises and potentially targeting them via psychoeducation, for example, by discussing the *threat* system and its relationship with paranoia (Hickey et al., 2017).

As discussed earlier in this paper, a prominent consideration in the formulation of these recommendations was to address the safety of youth at risk for psychosis. High rates of childhood and interpersonal trauma are identified in UHR, and there have been concerns mindfulness may be iatrogenic in certain forms with individuals with trauma histories (Kraan et al., 2015; Loewy et al., 2019; Reich et al., 2021). A key recommendation relates to the utilization of trauma-informed principles when applying mindfulness with this group (Treleaven & Britton, 2018). This includes encouraging the use of grounding techniques like the five senses, particularly for those prone to dissociation and flashbacks. The five senses exercise involves an individual paying sequential attention to different environmental cues noticed by their senses (Kiyimba, 2020). Also important is the recognition that up to 50% of UHR individuals report using cannabis (Farris et al., 2020). It is important psychoeducation be provided regarding the risks of practicing while intoxicated. Facilitators should also recognize the importance of avoiding intense periods of practice, for example, concentration meditation for hours at a time.

Finally, our recommendations emphasize the utility of compassion practices in the implementation of mindfulness for this group, recognizing the high rates of shame, self-stigmatization, and self-criticism evident for these young people (Hickey et al., 2017; Park et al., 2021). Compassion practices may target these facets by upregulating "safety" systems and downregulating "threat" systems (Hickey et al., 2017), while also supporting young people to adjust to distressing internal

Table 2 Recommendations for the safe and beneficial use of mindfulness as adjunct treatment for youth at ultra high risk of psychosis

Recommendation	Practice points
Use youth-relevant mindfulness content	<ul style="list-style-type: none"> • Take things slowly and casually. Ensure social bonding is central to interventions • Frame practice to youth-relevant values and goals, such as social connection and relationship building or sport • Utilize mindfulness with experiential activities like physical exercise, and incorporate informal mindfulness (e.g., when eating or showering), video material, music, and art • Facilitation alongside a peer-worker for group mindfulness interventions can help engage and empower young people
Adapt mindfulness exercises and intervention formats to individual and/or group needs	<ul style="list-style-type: none"> • The UHR group is highly heterogeneous—adapt interventions to individual and/or group characteristics, including issues with social anxiety, social/daily functioning, depression, paranoia, trauma, self-criticism, shame, and negative symptoms like avolition • Gain an understanding of group or individual characteristics, then target via relevant psychoeducation and guided mindfulness exercises which reference thoughts, feelings, or experiences related to, for example, social anxiety, paranoia, or suspiciousness
Use trauma-informed principles with mindfulness exercises	<ul style="list-style-type: none"> • Encourage flexible participation (e.g., choice over exercises, and modification of or withdrawal from exercises or practicing room); offer alternatives to traditional mindfulness breath practices, such as mindful walking, mindful eating, mindfully touching a pet • Monitor for signs of dissociation and dysregulated arousal (such as hyperventilation or excessive sweating) • Be wary of participant reactions to mindfulness exercises that bring attention to body, like the body-scan. Some exercises like the body-scan can be used effectively via careful graded exposure (e.g., an individual scanning just from their feet to their ankles) • Teach, encourage, and utilize grounding exercises, for example, the five senses, dropping anchor, walking meditations
Integrate compassion-based practices alongside mindfulness	<ul style="list-style-type: none"> • Compassion practices can increase motivation to face difficult experiences, as well as help target shame and self-stigmatization • People highly self-critical may find mindfulness initially confronting and benefit from starting with compassion practices • Individuals may find compassion from oneself or others unpleasant or threatening (Gilbert et al., 2011)
Adapt format and exercises to ensure safety and effectiveness of skill-uptake	<ul style="list-style-type: none"> • For groups, to help monitor group members, utilize co-facilitation with a trained mental health practitioner or peer-worker • Reduce the use of silence by increasing facilitator guidance during exercises • Utilize smaller (4–8 people) groups, ensure sessions do not go longer than an hour, and allow at least one break a session • Start teaching mindfulness with a more structured approach, and then encourage individuals to guide their own learning
Ensure facilitator/teacher is trained and supervised, passionate, and accessible	<ul style="list-style-type: none"> • Ideally, mindfulness facilitators should have a personal mindfulness practice, with a lived experience of mindfulness' benefits • Training and regular supervision are essential. Experience with UHR features, for example, attenuated psychotic symptomology (APS), will encourage safe and effective adaptation of mindfulness exercises to individuals and/or groups • Endeavor to make facilitators available between sessions, to monitor barriers and adverse effects, for safe and effective skill uptake • The relationship between the facilitator and participant is fundamental to intervention success. Ensure the development of trust and safety within the therapeutic relationship is central to interventions. Some individuals will preference one-on-one training

Table 2 (continued)

Recommendation	Practice points
Some individuals should be monitored or considered for exclusion	<ul style="list-style-type: none"> • Consider excluding young people in active stages of substance use, particularly those using substances such as methamphetamine • At a minimum, it should be emphasized that mindfulness should be avoided when individuals are intoxicated, particularly given cannabis use rates of ~50% in UHR (Farris et al., 2020) • Monitor reactions in individuals with APS and histories of rapid deterioration (e.g., significant mental health decline over 1 week)
Address barriers to uptake of mindfulness	<ul style="list-style-type: none"> • Address neurocognitive and functioning issues with slow pacing, shorter exercises, greater facilitator direction, repetition of exercises and/or homework, and use of concrete rather than abstract material (e.g., avoid use of abstract metaphors). Be aware that medication and substance use can affect individual cognitive ability and functioning, and thereby mindfulness skill uptake • Use psychoeducation, social bonding, and mindfulness to target anxiety, paranoia, and suspiciousness, particularly in group settings • Provide psychoeducation regarding self-criticism and negative symptoms, and interference in mindfulness skill uptake; and pre-empt common misconceptions of mindfulness (e.g., mindfulness requires relaxation or “not thinking”; safety concerns regarding practice)

content that can arise with mindfulness practice (Martins et al., 2017). Compassion practices have shown acceptability and promise with chronic and first-episode psychosis (Braehler et al., 2013; Khoury et al., 2015). Nevertheless, it is important practitioners are aware many UHR young people may show a “fear of compassion”, or have difficulty accepting compassion towards themselves (Gilbert et al., 2011; Hickey et al., 2017, 2019) and for these individuals, mindfulness facilitators are encouraged to provide slow-pacing and gently support them to move from showing compassion to others before directly it to themselves and their experiences (Hickey et al., 2017, 2019).

Future Practice and Research Directions

These recommendations take account of emerging research that supports the benefits of mindfulness-based practices and interventions for UHR young people, who exhibit a range of distressing experiences and psychosocial and mental health vulnerabilities. This evidence provides hope that through the incorporation of mindfulness-based practices into routine clinical practice, some of the limitations of current treatments may be addressed, including recovery gaps in negative symptoms and social functioning. Importantly, through the participation of key stakeholders in their generation, including mental health practitioners working with these young people alongside the young people who will potentially benefit from them themselves, relevant accessibility and safety concerns have been considered and addressed. As noted by Ellett (2023), to date, this has been a significant barrier to wider uptake in clinical practice.

In addition, the heterogeneity of UHR and the understanding that these young people may go onto develop mental health conditions other than psychosis, also points to the potential utility of a transdiagnostic treatment like mindfulness (Reich et al., 2021; Weintraub et al., 2020). This is welcome, with a broader inclusion of transdiagnostic therapies and holistic models of recovery within early intervention services being suggested to improve outcomes for young people at risk of serious mental illness including psychosis (Colizzi, Lasalvia, & Ruggeri, 2020; DeTore et al., 2022; O’Dea et al., 2022). Mindfulness and meditation strategies have been identified as a key target for inclusion in future integrated and multidisciplinary youth mental health service models (Colizzi et al., 2020) and public health more generally (Oman, 2023) and are viewed as particularly helpful for at-risk young people with multiple symptoms of psychopathology (DeTore et al., 2022). Moreover, the transdiagnostic impact of mindfulness practices on self-esteem, rumination, and negative affect is highlighted as a possible mediator in reducing the risk of the development of psychosis in at-risk young people (von Hardenberg et al., 2022) but more research to understand the mechanisms of action of mindfulness in this group is welcomed (Vignaud et al., 2019). The training and supervision needs of mindfulness facilitators have also been identified as areas of further development, especially as the field moves towards wide-scale roll-out (Ellett, 2023). It is also timely to consider the relevance and risk of digital delivery of mindfulness. As yet, it is unclear whether online mindfulness delivery such as through apps that remove the supportive element of a trained facilitator are suitable or safe for at-risk people (Ellett et al., 2022; Cross et al., 2023; Ellett, 2023).

Conclusions

Taken together, these recommendations emphasize the opportunities provided by clearer guidance for the use of mindfulness with UHR young people in practice. Nevertheless, we also recognize that research and practice into mindfulness in UHR is in its relative infancy and thus a relatively small number of studies contribute relevant guidance to the development of these recommendations. While strengthened by participatory research principles, including the input of a small number of experienced practitioners working in this field as well as incorporating the views of UHR youth, we also recognize that these stakeholders may not entirely represent the views of the diverse population of young people at risk of psychosis or those working therapeutically with this group clinical practice. We look forward to the application of these guidelines in research and practice which will drive further refinement, and most importantly support young people at risk of psychosis to safely use mindfulness in their recovery.

Author Contribution Melissa O’Shea: conceptualization, methodology, formal analysis, writing—original draft preparation; writing—review and editing; supervision. Daniel Reich: conceptualization, methodology, investigation, formal analysis, writing—original draft preparation. Subhadra Evans: conceptualization, methodology, writing—review and editing, supervision.

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Data Availability This manuscript has no associated data.

Declarations

Ethics Approval Ethics approval was granted through Alfred Health, a Victorian state government-owned organization engaged in the provision of public healthcare services.

Informed Consent Participants were provided a plain language statement and consent form and consented to participation in this research and publication of associated data.

Conflict of Interest The authors declare no competing interests.

Use of Artificial Intelligence This research did not use AI tools.

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