The subjective effect of antipsychotic medication on trauma-related thoughts, emotions and physical symptoms: A qualitative study with people who have experienced childhood trauma and psychosis

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Abstract:

Objectives: Among people with psychosis, those with a history of childhood trauma are likely to experience trauma-related symptoms, such as trauma memory intrusions. Irrespective of whether these individuals continue to remember and re-experience trauma, their treatment very often includes alleviating psychotic symptoms through the use of antipsychotic medication. Antipsychotics, while primarily used to treat psychotic symptoms, can influence nonpsychotic symptoms and alter how people think and feel. We thus aimed to explore how people with childhood trauma and psychosis experience the effects that antipsychotics have on their (1) thoughts, images and memories, (2) emotions and (3) physical responses, related to their childhood trauma.

Design: A qualitative phenomenological research design using semi-structured interviews was implemented.

Methods: Data were analysed using interpretative phenomenological analysis.

Results: Nineteen participants were interviewed. Two super-ordinate themes were conceptualised. Many participants spoke about the *impact of antipsychotics on trauma-related*

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experiences (Theme 1). Some indicated that antipsychotics alleviated the intensity and frequency of trauma-related thoughts, emotions and physical symptoms. A few others reported that their trauma-related flashbacks, thoughts and physical symptoms intensified while taking antipsychotics. Participants spoke about *the role of antipsychotics in confronting and processing trauma* (Theme 2). A few participants reported that by supressing trauma-related thoughts and emotions antipsychotics prevented them from confronting their trauma.

Conclusions: The effects of antipsychotics can be subjectively experienced as beneficial or detrimental depending on how they influence trauma-related thoughts, emotions, and physical responses. Intervention studies are needed to determine how people with childhood trauma and psychosis respond to antipsychotic drugs.

Keywords:

Antipsychotic medication; Childhood trauma; Psychosis; Qualitative research

Data availability statement:

Given the sensitive nature of this qualitative data, it would not be ethically appropriate to share participants' whole transcripts. However, additional quotations to further support the findings are available upon request.

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It has been well-evidenced that more than one third of people who have experienced psychosis report a history of childhood trauma, such as physical, sexual and emotional abuse and neglect (Bonoldi et al., 2013). Studies have also shown that people with a history of childhood trauma and psychosis are likely to experience posttraumatic stress or trauma-related symptoms, such as trauma memory intrusions, and that these may have temporal and content-related links to hallucinations and delusions (Bendall et al., 2013; Brand et al., 2020; Calhoun et al., 2007; Peach et al., 2019; Peach et al., 2021). Irrespective of whether these individuals continue to remember and re-experience past traumatic events, their treatment very often includes alleviating psychotic symptoms through the use of antipsychotic medications.

Antipsychotics have been consistently found to reduce hallucinations and delusions (Leucht et al., 2013). However, antipsychotics can also cause a number of distressing adverse effects, including emotional flattening, cognitive dulling and sedation (Moritz, Andreou, Klingberg, Thoering & Peters, 2013; Waterreus et al., 2012). One recent systematic review of 35 qualitative studies found that users of antipsychotics 'consistently described a distinctive experience characterised by sedation, cognitive impairment, emotional blunting and reduced motivation' (Thompson et al., 2020, p. 161). This review also demonstrated that participants from some studies described how the sedative, cognitive and emotional blunting effects (or global effects) of antipsychotics influenced their psychosis and other symptoms in a

beneficial way (e.g. sedative effects produced a state of calmness) (Thompson et al., 2020). The interaction between the global effects of antipsychotics and some symptoms may thus explain prior findings demonstrating that these medications can alleviate symptoms of mania, insomnia, anxiety, irritability and hyperactivity (Hershenberg, Gros & Brawman-Mintzer, 2014; Tohen et al., 2007; Vita, De Peri & Sacchetti, 2011).

The emotional, cognitive and physiological effects of antipsychotics may thus alter how people with childhood trauma and psychosis experience trauma-related symptoms. For example, antipsychotic induced emotional numbing can potentially reduce the intensity of an individual's re-experiencing of their initial affective response (e.g. intense anger) to specific traumatic events. This may influence how people with childhood trauma and psychosis subjectively experience the global effects of antipsychotics, and, as a result, whether they consider these medications to be helpful in ways beyond the alleviation of psychotic symptoms. We thus aimed to explore how people with childhood trauma and psychosis subjectively experience the effects that antipsychotics have on their (1) thoughts, images and/or memories, (2) emotions and (3) physical responses, related to their childhood trauma.

Methods

We implemented a qualitative phenomenological design using semi-structured interviews. A qualitative method was chosen as it aims to gain an in-depth understanding of subjective experience by giving voice to research participants (Moser & Korstjens, 2017). Phenomenology, as an approach to qualitative research, endeavours to understand how meaning is created through a rich description and close analysis of peoples' lived experience (Harper, 2012; Starks & Trinidad, 2007). A phenomenological design typically incorporates a sample size that ranges between 5 and 25 individuals (Creswell, 2007). We thus endeavoured to obtain between 15 and 20 participants.

The open or semi-structured interview is considered the most appropriate data collection method for a phenomenological study (Padilla-Diaz, 2015; Smith & Osborn, 2008). Open and semi-structured interviews offer participants the opportunity to describe their experience of a specific phenomenon in their own words. This allows for the discovery of data that expands beyond the restricted conceptual parameters of existing quantitative instruments. As such, a more powerful explanation of subjective experience can be obtained (Barrantes-Vidal, 2014).

To contextualise the qualitative findings and gain a description of the sample relative to previously researched groups, quantitative measures were also used to measure the types of trauma that participants had experienced and the nature of their psychosis.

Interpretative phenomenological analysis (IPA) was selected as the method of qualitative data analysis. IPA aims to capture the principal ideas of participants, and offer a subsequent interpretation of this material that is grounded in their emerging accounts (Larkin & Thomson, 2012). IPA draws on ideography and is concerned with participants' subjective reports rather than the conception of objective accounts (Brocki & Wearden, 2006).

Sampling

Participants were purposefully recruited from the [service 1, blinded for review], [service 2, blinded for review] and the wider Australian community. [Service 1, blinded for review] is a service located in [blinded for review] that provides specialised treatment for young people aged between 15 and 25 years who have experienced a first episode of psychosis. [Service 2, blinded for review] is a not-for-profit organisation offering services for people experiencing mental illness and/or social disadvantage in [blinded for review]. Recruiting from these two services, as well as the wider community, was done to obtain a sample comprised of a broader range of consumers, including those who may: (1) have recently commenced receiving treatment/support from a mental health service (and possibly experienced a first-episode of psychosis), (2) have received treatment/support from a mental health service for a longer period of time, and (3) may have at some point in the past but are not currently receiving treatment/support from a mental health service. Therefore, sampling efforts were a pragmatic mix of both convenience and purposive approaches.

Procedure

An initial discussion was had with a consumer advocate about the study's rationale and feasibility. The consumer advocate gave input into the direction of the study. Ethics approval was obtained from the [blinded for review] Ethics Committee. The recruitment strategy involved asking health professionals, case managers, and consumer advocates if they would be willing to inform patients/clients of the study, approaching consumers who have publically indicated that they have experienced trauma and psychosis and, presenting the study to consumer groups and asking for expressions of interest to participate. Recruitment from the

wider community also involved making contact with a number of community mental health and trauma-based organisations.

Some participants were initially referred by their case managers/health professionals, who were aware of the study's aim and the eligibility criteria, while others contacted the researchers directly. Irrespective of the means of referral, [first author] undertook a 15-20 minute screening process via telephone to confirm whether prospective participants met the study's eligibility criteria. Participants were required to: (1) have taken an antipsychotic medication for the treatment of psychosis, (2) currently be taking this medication (minimum of six continuous weeks), or if medication had been ceased, have taken this mediation for no less than three continuous months in the last 10 years, (3) be aged between 16 and 65 years (participants recruited from [service 1, blinded for review] were to be aged between 16 and 25 years, and participants recruited from [service 2, blinded for review] and the wider community were to be aged between 18 and 65 years), (4) have an adequate comprehension of English, (5) have a history of childhood trauma (physical, sexual and/or emotional abuse, physical and/or emotional neglect), and (6) not have an intellectual disability. It is recognised that many people who take antipsychotics attempt to discontinue their medication (Larsen-Bar, Seymour, Read, & Gibson, 2018). It was determined that these people would not be excluded from the study, as the aim was to obtain a diverse sample (hence the inclusion of criterion 2). Additionally, young people recruited from [service 1, blinded for review] needed to be clinically stabilised (i.e. engaged with the service, have some insight into their illness and have made improvement in symptoms and functioning).

Data Collection

At the scheduled time of their interview, those participants who were aged 18 years or over were initially required to read the participant information sheet/consent form (PICF) Participants under the age of 18 years were also required to have a parent/guardian read and complete the parental version of the PICF prior to the day of their interview. Sufficient opportunity was provided for all participants to ask the researcher questions related to the study. Only when these questions had been addressed to the satisfaction of the participants were they asked to sign the consent form. Participants were also informed that if they felt distressed at any stage throughout the interview process, then the interview would be temporarily stopped and an assessment of their level of distress would be undertaken by the researcher. One participant experienced low levels of distress. After taking a short break, she

wanted to continue with the interview. Upon completion of each interview, the researcher ensured that he was available for an additional hour if further debriefing and/or support was needed. With regard to participants recruited from [service 1, blinded for review] and [service 2, blinded for review], it was ensured that a case manager or support worker would be available to offer support if needed. Prior to the interview, a discussion was had with participants recruited from the wider community about what, if any, additional support they may need to assist them if they experienced any distress.

The majority of participants were interviewed in-person. An interview schedule was used by the researcher. All participants initially provided demographic information. During their semi-structured interviews, participants were initially asked the open question: 'What is it/was it like taking antipsychotic medication?' Participants were then asked three additional questions about whether antipsychotics altered their (1) thoughts/images/memories, (2) emotions and (3) physical symptoms, related to their childhood trauma (Table 1). Depending on how participants responded to these questions, the researcher would ask probing and/or clarifying questions. Participants were not asked about their experiences of psychotherapy. However, if participants voluntarily spoke about what it was like to engage in psychotherapy, then they were asked probing questions about their experiences. At the end of each interview, participants were asked if there was anything further that they wanted to mention about their experience of taking antipsychotics, which they deemed important but had not had the opportunity to speak about. In every interview, this elicited either new information or additional information regarding matters that had already been discussed.

The Childhood Trauma Questionnaire (CTQ; Bernstein et al., 1994), Life Events Checklist (LEC; Gray, Litz, Hsu & Lombardo, 2004), and Structured Clinical Interview for DSM-5 Disorders – Research Version (SCID-5-RV) were administered at the end of each qualitative interview to reduce the chance of the structured questioning in these measures influencing the qualitative accounts. Therefore, these quantitative assessments were not used to determine whether people met the study's eligibility criteria. Questions on the CTQ and LEC were asked verbally by the interviewer to each participant who was interviewed via telephone.

Participants were asked if they wanted a copy of their interview transcript and to attend a follow-up interview whereby, upon reading a summary of the study's initial findings, they could share any further insights about their experience of taking antipsychotics. The

majority of participants wanted a copy of their interview transcript. Participants were offered a monetary reimbursement for their time.

Research Team and Reflexivity

All interviews were undertaken by [first author], who is a psychologist with over eight years of clinical experience. [First author] developed an initial draft of the interview questions, and made subsequent adjustments to these questions through ongoing discussion with [second and third / last author]. [Second author] is a senior qualitative researcher with over 20 years of experience in researching trauma, loss, post-traumatic growth, and community resilience, and a prior ten years of clinical experience as a social worker. [Last author] is a clinical psychologist and senior researcher with over 15 years of clinical and research experience in childhood trauma, PTSD, dissociation and psychosis. The authors recognise that their prior clinical and research experiences in the areas of post-traumatic mental health and psychosis may have influenced data collection and analysis. The authors also acknowledge that their professions (psychology, social work) may lead to bias when collecting and interpreting data that explored the relationship between the effects of antipsychotics and psycho-social interventions. In order to maintain neutrality, it was determined that [first author] would purposefully aim to use each participant's language (e.g. metaphors, analogies, descriptive words) when using probing and clarifying questions. Furthermore, within IPA the degree of interpretation can vary. Therefore, in order to minimise their own pre-existing ideas from influencing data analysis, the authors endeavoured to privilege the participants' perspectives on what it is like taking antipsychotics This was achieved by ensuring that the analysis remains as close as possible to the participants descriptions of their lived experience.

Measures

Demographic, Treatment and Illness Information

Demographic questions were asked regarding age, sex, income source, highest level of completed education, marital status, and current and previously taken psychiatric medication. Participants were also asked if they had ever received psychological treatment for their trauma, and if they had previously been diagnosed with posttraumatic stress disorder (PTSD).

Childhood Trauma Questionnaire (CTQ)

Childhood trauma was measured using the CTQ (Bernstein et al., 1994). The CTQ is a 28-item self-report questionnaire that assesses the frequency and severity of childhood trauma across five factors: physical, sexual and emotional abuse, and physical and emotional neglect (Bernstein et al., 1994). The CTQ has four severity classifications across each of the five factors (Bernstein & Fink, 1998).

Life Events Checklist (LEC)

General exposure to potentially traumatic events was measured using the LEC (Gray, Litz, Hsu & Lombardo, 2004). The LEC is a 17-item self-report questionnaire that aims to assess a respondent's exposure to potentially traumatic events through the use of a 5-point nominal scale (Gray et al., 2004).

Structured Clinical Interview for DSM-5 Disorders Research Version (SCID-5-RV)

The SCID-5-RV was used to make a diagnosis of a psychotic disorder, or mood disorder with psychotic features. The SCID-5 is a semi-structured interview guide for determining the major DSM-5 diagnoses (First, Williams, Karg & Spitzer 2015). Four modules were administered: modules A (Mood Episodes), B (Psychotic and Associated Symptoms), C (Psychotic Disorders) and D (Mood Disorders).

Participants

The sample comprised 19 participants (mean age = 36.5 years). Five clients from [service 1, blinded for review] participated in the study, while two were recruited from [service 2, blinded for review]. Twelve people were recruited from the wider community, and four of these were interviewed via telephone. The researcher emailed and/or telephoned all participants to ask if they wanted to participate in a follow-up interview. Nine participants could not be contacted. Two other participants were unable to participate due to a decline in their mental health. One participant stated that she was no longer interested in participating, while a convenient time to undertake the interview could not be arranged with one other participants prior to the cut-off date. One participant reported that she did not have anything further to add to what she mentioned during her initial interview. Follow-up telephone interviews were undertaken with five participants. Participant demographics are outlined in Table 2. Participants' diagnoses and the type of psychiatric medications taken are outlined in

Tables 3 and 4. Ten participants indicated that they had previously been diagnosed with PTSD, while 14 had received psychological treatment for trauma.

Trauma Type and Severity

As measured using the CTQ, the number of participants who experienced different levels of trauma severity for five types of childhood trauma is outlined in Table 5. Twelve of the 19 participants experienced severe to extreme levels of trauma severity for at least one trauma type. Eight participants reported experiencing all trauma types. On the LEC the majority of participants endorsed that they experienced a physical assault (n = 16), an unwanted or uncomfortable sexual experience (n = 15), some other stressful event or experience (n = 15), a sexual assault (n = 13) and/or severe human suffering (n = 9).

Data Analysis

The analysis of the qualitative data followed the IPA guidelines outlined by Smith and colleagues (2009). This involved a number of key steps. [First author] initially undertook a manual process of coding, or a line-by-line annotation of each participant's transcript. The transcripts and associated explanatory comments/codes of four interviewees were evaluated by [second and third / last author]. This was done to ensure that [first author] was coding appropriately—that is, ensuring that the codes reflected what participants were saying.

When the ideas of each participant were identified, descriptive themes for each case were conceptualised. This was achieved by mapping interconnections and patterns between codes, and producing a concise statement that represented what was important in the various codes. Descriptive themes were then grouped into clusters to form superordinate themes. Throughout this process, the research team had regular meetings to discuss the appropriateness of superordinate themes. Follow-up interview transcripts were analysed using the same method. New themes were not identified from the analysis of participants' follow-up interview transcripts. Therefore, the description of each theme in the results includes any relevant information from the follow-up interviews. In the results participants are differentiated by a number.

An evaluation of the prevalence of superordinate themes across the entire dataset was also undertaken. Demonstrating how many participants reported an experience can make patterns within the qualitative data to be identified with greater clarity and potentially generate new research questions (Dey, 1993; Sandelowski, 2001). While there is no precise method for reporting prevalence in qualitative research, it is important to ensure that there is

consistency in how this is done (Braun & Clarke, 2006). Therefore, the terms/phrases used to describe the prevalence of each theme were allocated a specific numerical range. These terms/phrases are: a few (2–4 participants), some (5–9 participants), many (10–14 participants) and most (15–18 participants).

Results

Two super-ordinate themes were conceptualised: (1) Impact of antipsychotics on Trauma-Related Experiences, and (2) The Role of Antipsychotics in Confronting and Processing Trauma.

Impact of Antipsychotics on Trauma-Related Experiences

Participants provided rich descriptions of the impact that antipsychotic medications had on the ways in which they remembered and re-experienced childhood trauma. Many participants reported that antipsychotics altered how they experienced trauma-related thoughts, images/flashbacks, emotions and physical responses. However, there were differences between participants in how antipsychotics altered the ways in which they remembered and re-experienced their traumas.

Some participants specifically indicated that antipsychotics alleviated the intensity and/or frequency of trauma-related thoughts, emotions and/or physical symptoms. One participant reported that she did not experience any thoughts or emotions while taking a high dose of an antipsychotic. She stated: 'While I was taking the maximum dose, I honestly don't think I had any emotion. I definitely didn't linger on any of those things' [12]. Another participant mentioned that while taking antipsychotic medication, even if she did think about her trauma, the thought would not stay in her mind. However, she stated that if she does not take her medication, 'those thoughts get in there [into her mind] and they don't go away' [16]. This participant further reported that when she thinks about what happened, she feels very sad and angry. She also stated that the trauma-related thoughts were often the cause of physical tension; she described her hands and fingers feeling like playdough. Therefore, because the antipsychotics prevent her thoughts from being 'generated properly' [16], the emotional and physical responses occur less often. She did mention that the physical tension can be triggered by visual stimuli (e.g. seeing something on television) and thus, it still does occur while on the medication. Participant 19 spoke about how antipsychotic medication prevents

her from ruminating over traumatic memories. She emphasised that when she stops taking her medication, trauma-related thoughts flood her mind:

> I take my medication and all of a sudden it's like it's fine; I don't think about it. I'm at peace with it. But when I get off my medication…I just can't stop thinking about it and I'm constantly crying and I'm constantly pacing and constantly just getting really, really mad at my mother and at the people who've hurt me…So the medication definitely helps me kind of subdue my traumatic memories [19].

This participant indicated that when she takes her medication, her perspective about how she was treated by her family changes. She stated that, while taking antipsychotics, she is able to rationalise why her mother treated her badly. In contrast, when she does not take her medication, she is unable to follow this process of rationalisation. This participant also mentioned that the anger is less intense when she is taking antipsychotics. She reported:

> I'm still pissed at her, but at the same time I kind of understand where she's coming from. She should have done better, but you know, she has her reasons for what she did. But when I'm off my medications…I slip into the thought where it's just like: this is absolutely ridiculous; there is no excuse for what she did and the way she treated me…But honestly, I still remain angry to my mother even when I'm on my medication. It's just that it becomes less intense when I'm on my medication [19].

A few participants described how antipsychotics have been valuable in alleviating trauma-related stress and anxiety. These participants mentioned that their anxiety levels can rise rapidly when they are not taking antipsychotics. They mentioned that while they still continue to experience some anxiety, it is less severe than when they were not taking antipsychotics. For example:

> I know that the medication does help me with my anxiety and my stress levels. If I relive my—or something causes me to relive my trauma from my childhood, then I instantly get stressed, whereas in the past it would be like going up like a volcano, whereas now it rises, but it doesn't rise as much [11].

In contrast, a few other participants reported that, while taking antipsychotic medication, their trauma-related flashbacks, thoughts and physical symptoms were intensified or occurred more frequently. One participant described how particular flashbacks became ‘far more frequent, far more vivid’ and ‘much more intensified’ [10] when he was taking antipsychotics. Another participant described how the medication’s side effects were similar to some of her trauma-related physiological symptoms. She said: ‘It’s like the medications they give you the feelings just from the side effects, just the racing heart, the sweating’ [7]. Thus, she stated that these experiences were ‘happening all the time, even when you don’t ask for it’ [7] while taking antipsychotics. Another participant described how antipsychotics changed how he viewed his trauma, stating that it was like viewing it through ‘one of those tinted glass bottles, rather than a clear glass bottle’ [14]. He said that by viewing it through a tinted glass bottle ‘you can add things in. It can be a stronger effect on you’ [14]. He further described how the trauma is ‘amplified a bit’ and that it is like examining it through ‘a magnifying glass’ [14].

Some participants indicated that antipsychotics did not change their trauma-related thoughts, emotions and/or physical responses. Participants described how they continued to experience specific physical symptoms when exposed to particular triggers. One participant stated: ‘It’s like sometimes the most normal things could trigger it, could trigger those memories. It’s like someone could touch—brush by me or touch my shoulder or something, and I could react to it’ [1].

One participant reported that while ‘the maximum dosage’ [12] of an antipsychotic stopped all trauma-related thoughts, emotions and dreams, these experiences continued when she took moderate doses of the drug. Another participant reported that antipsychotics have not changed how she experiences trauma-related thoughts, primarily because she has ‘blocked out’ [1] her trauma. However, she did mention that she can still be triggered by different environmental stimuli. Another participant described how she has continued to question ‘why it [the trauma] happen’ [4], which then makes her feel sad.

Some participants stated that they were unsure whether the antipsychotic medication altered particular trauma-related thoughts, emotions and/or physical responses. Participants described how specific trauma-related experiences may have been altered by a number of different factors, including: antipsychotics, other medications or counselling. One participants stated:

'I've forgotten it, I don't know whether it's the medication that's done that…or way I've thought about things. Or the way that the professionals talk to me about things. It could be numerous factors' [6].

Another participant mentioned that she thought about her trauma more often since commencing antipsychotic medication. She stated: 'It's more difficult to repress it' [13] but was unsure whether 'this was because of the medication or not' [13]. She reported that prior to her psychotic episode she would 'repress' as much as she could; thus, it may be that she is now remembering the trauma.

The Role of Antipsychotics in Confronting and Processing Trauma

Some participants described how antipsychotics influenced their ability to confront and process their childhood trauma. These participants emphasised that confronting their traumatic memories was an important therapeutic step towards healing from trauma. When describing the ways in which antipsychotics influenced their ability to confront trauma, participants also spoke about the differences between antipsychotic drug treatment and trauma-focused psychotherapy.

A few participants reported that antipsychotics prevented them from confronting their trauma by subduing traumatic memories. Participants stated that this can be beneficial in the short term, in that it can give them relief from distressing trauma-related thoughts and emotions. They reported that by not constantly thinking about past traumatic events, their daily lives become easier. However, participants also mentioned that this may not necessarily be beneficial in the long term, and that they do need to confront their traumatic pasts in order to deal with them. To illustrate:

> The medication helps me not have to deal with that so I can go about my day-to-day life…Otherwise, I'll be stopping at least once a day to cry, even though I kind of do need to cry and I do need to confront these emotions and I do need to deal with these issues [19].

> I don't think that subduing or hiding my trauma from myself in the long term is going to do me any good. But in the short term, I think it's a great thing that I get to give my brain a rest from the trauma [16].

It levels you out again but you're not dealing with the trauma [9].

One participant stated that she was unable to meaningfully engage in trauma therapy while taking a high dose of an antipsychotic. She said that antipsychotics prevented her from experiencing certain emotions, which she saw as a fundamental part of psychotherapy. She stated:

> The point of this trauma work that I was doing anyway was to learn to feel your feelings, and I had been emotionally repressed for the majority of my life because of my childhood trauma…So I wasn't taught how to feel my feelings, and my feelings didn't feel safe. So, I had to learn to do that and on 800 milligrams of Seroquel, I couldn't feel my feelings [5].

This participant described how she had to lower the dose of her medication to a point where she could experience her emotions, while also not being overwhelmed by the intensity of trauma therapy. She reported that she 'flooded really easily in trauma therapy with emotion', and that a low dose of antipsychotics 'would just keep a bit of a lid on it' [5].Thus, while a higher dose of the medication did not allow her to confront her trauma, a lower dose helped her contain the intense emotions that she experienced during therapy until she was able to develop nonpharmacological coping strategies. She mentioned:

> The drugs are a cocoon, right, they provide this little cocoon that you can sit in. Because you're not exposed to the extreme emotions that you might be otherwise, and if you need a rest from the intensity of the trauma work, you get the rest through the drugs [5].

A few participants spoke about how psychotherapy helped them process and address their childhood trauma, and how this differed from antipsychotic drug treatment. Participant 5 indicated that therapy involved learning how to 'integrate' particular experiences and tolerate emotions. She reported that 'when you are getting a strong feeling or a trauma flashback and you take some medication to push it away, you are not integrating the experience '[5]. This participant further mentioned that she did not know that she had experienced childhood

trauma prior to experiencing a major psychotic episode. However, she understood that the psychotic episode happened for a reason, and while antipsychotic medication alleviated her initial distress, she 'wanted healing' and 'healing wasn't going to come from a pill' [5].

Another participant stated that her childhood trauma was a 'big mass of things', and that in therapy they helped her 'dissect all the trauma that went on and then look at each individual component' [11]. This participant also described how she was able to address her childhood trauma through the combined use of antipsychotic medication and counselling. She reported that, for some time, the medications she took did not alleviate her auditory hallucinations, which prevented her from meaningfully engaging in counselling. She eventually tried a drug that alleviated these hallucinations and gave her a clearer mind, which then allowed her to adequately confront her trauma in counselling. To illustrate:

> It was only through counselling that I was able to confront and approach my childhood trauma effectively. This was made possible due to the drugs letting me have a clearer mind with fewer voices. However, with the drugs alone, I would not have been able to confront my past [11].

Discussion

To our knowledge, this is the first qualitative study to demonstrate that antipsychotic medications influence how people with childhood trauma and psychosis subjectively experience trauma-related thoughts, emotions and physical symptoms. It was also found that, for some participants, antipsychotics can have an impact on how they confront and process childhood trauma.

Impact on Trauma-Related Experiences

A key finding of this study was that there were differences between participants in how antipsychotics altered the way they remembered and re-experienced childhood trauma. Some participants indicated that their medication alleviated the frequency and/or intensity of distressing trauma-related thoughts, emotions and/or physical symptoms—and considered this helpful. In contrast, while taking antipsychotics, other participants experienced more intense or frequent flashbacks, thoughts of past traumatic events and/or physiological symptoms of anxiety. These experiences were described as distressing. A few participants reported that, while antipsychotics alleviated the intensity of trauma-related emotions, they

continued to experience physical symptoms, such as tremors or a rapid heart rate, when exposed to specific triggers. Some participants reported that thinking about trauma served as a trigger of subsequent emotional distress and anxiety. As such, when their medication alleviated the frequency of these thoughts, participants also experienced a reduction in the intensity of particular emotional and physiological responses.

These differences can be explained by a number of interrelated factors. Participants remembered and re-experienced past traumatic events in differing ways. This is consistent with prior research demonstrating that, after being exposed to a traumatic event, people may experience different types of PTSD-related symptoms (McMillen, North & Smith, 2000; Runyon, Faust & Orvaschel, 2002). For example, while some people may meet the full criteria for a diagnosis of PTSD, others may only experience specific arousal and intrusive symptoms (McMillen et al., 2000). In this study, some participants reported experiencing intense trauma-related emotions when thinking about their abuse or neglect. Others did not experience specific emotions as intensely, but rather continued to experience intrusive thoughts and other physical symptoms (tension, increased heart rate) triggered by external cues. Thus, each participant reported antipsychotic-induced changes to the idiosyncratic ways in which they remembered and re-experienced childhood trauma.

Prior studies have suggested that antipsychotic induced emotional and cognitive blunting can have a beneficial effect on psychopathological symptoms (Thomson et al., 2020). Therefore, the influence of antipsychotics on how participants remembered and re-experienced past traumatic events may have also depended on the medication's general effect on their emotional and cognitive state. Participants who experienced the suppression of trauma-related emotions may have also experienced more general antipsychotic induced emotional flattening. It is thus possible that the emotional flattening that is sometimes experienced as an adverse effect of antipsychotics can positively influence how people remember and re-experience their trauma.

Participants reported being on high doses of antipsychotics during certain periods. This is consistent with the findings of Schneeberger and colleagues (2014), who demonstrated that among 183 people with severe mental illness those with a history of stressful childhood experiences (including emotional, physical and sexual abuse) were prescribed higher doses of psychotropic medications (including antipsychotics). Being on high doses of antipsychotics affected how participants in the current study experienced their trauma memories and, thus, what they reported during their interviews. Furthermore,

different participants appeared to respond differently to the same second-generation antipsychotics. For example, while a few participants reported that Quetiapine alleviated their trauma-related symptoms of anxiety, the same drug exacerbated these symptoms in others. Many participants had tried multiple antipsychotic medications. Therefore, what participants reported in terms of how they experienced the effects of antipsychotics was dependant on which medications they had tried before their interviews, and how they responded to those particular medications. This demonstrates that particular antipsychotics can have an unpredictable effect on how individuals experience their trauma memories.

Confronting and Processing Trauma

Our findings demonstrated that by subduing participants' trauma memories, antipsychotics prevented a few participants from confronting their childhood trauma. These participants mentioned that not having to confront trauma was beneficial in the short term, in that they had some relief from the distress associated with the constant remembering and re-experiencing of trauma. However, they also recognised that confronting trauma was an important therapeutic step towards healing. Therefore, having their trauma memories supressed by antipsychotics was not considered beneficial in the longer term. Thus, these participants appeared to face an internal conflict between the short-term benefits of suppressing trauma-related thoughts and emotions and the potential longer-term detriment of not allowing themselves the opportunity to address their childhood trauma.

These findings reveal that people's beliefs about the relationship between their childhood trauma and presenting mental illness, as well as how trauma should be addressed, influence their views on the value of using antipsychotics to manage trauma-related symptoms. A few participants in this study indicated that they have considered discontinuing or reducing the dose of their medication in the future to process their trauma. One participant also spoke in detail about how she lowered the dose of her medication to engage in trauma-focused therapy. Trauma-focused therapies include in vivo exposure, which involves a gradual increase in physical or sensory contact with situations, locations and objects that trigger distressing symptoms, and/or imaginal exposure, whereby the individual voluntarily recalls traumatic events in vivid detail (Perrin, 2013). In line with the beliefs of particular participants in this study, the successful implementation of these techniques requires the individual to reach an optimal level of arousal (Kezelman & Stavropoulos, 2012). The ability of antipsychotics to lower arousal and subdue emotion may, therefore, prevent an individual

from adequately activating their trauma memory and, in turn, engaging in meaningful trauma-focused psychological therapy.

A few participants also discussed what they gained from trauma-focused therapy and how this differed from antipsychotic drug treatment. Researchers have suggested that trauma-based psychological therapies, such as trauma-focused cognitive behaviour therapy (TF-CBT) and prolonged exposure therapy (PET)—both of which have strong empirical support for the treatment of PTSD (Ehlers et al., 2010)—may also be safe and effective treatments for traumatised individuals presenting with psychosis (van den Berg et al., 2018). There is also emerging evidence that these treatments may improve hallucinations and delusions (Brand, Bendall, Hardy, Rossell, & Thomas, 2021; de Bont et al., 2016). Our findings suggest that the effectiveness of these therapies may be influenced by the emotional, cognitive and physiological effects of the antipsychotic medications they may be taking.

Conceptual and Clinical Implications

A number of important conceptual and clinical implications can be drawn from the study's findings. It was demonstrated that antipsychotics alter how people with a history of childhood trauma and psychosis experience their trauma memories. These alterations can be beneficial or detrimental and thus play a significant role in whether people consider their medication helpful. Therefore, it may be valuable for clinicians to (1) have a sound understanding of how each individual remembers and re-experiences traumatic events, and (2) engage in ongoing assessment of how this remembering/re-experiencing of trauma is influenced by the effects of antipsychotic drugs. Furthermore, clinicians may decide to enquire whether and, if so, how people prefer to manage their trauma and the role of antipsychotics in this process. While some people may believe that they must confront their trauma to heal, possibly through psychological therapy, others may be content in having particular trauma-related experiences supressed by antipsychotics. Those individuals who do wish to confront their trauma may thus request to have their medication dose lowered. Clinicians may also choose to engage in an open dialogue with these clients about how lowering their medication dose may affect their experiences in therapy (e.g. emotions may be experienced more intensely).

Trauma-focused therapies require people to discuss past traumatic events and can, therefore, cause increased emotional distress and/or initial symptom exacerbation in some people (Foa, Zoellner, Feeny, Hembree & Alvarez-Conrad, 2002; Tong, Simpson, Alvarez-Jimenez & Bendall, 2019). As described by one participant in this study, a low dose of

antipsychotics may help people contain the distressing emotions experienced during therapy. As such, an optimal medication dose may be one that allows the client to adequately experience their emotions during therapy, while also preventing extreme levels of distress. The optimal dosage may change as psychotherapy progresses and people learn how to regulate their emotions using non-pharmacological strategies.

Moreover, current theories of PTSD suggest that avoidance of trauma-related sensations, thoughts and emotions maintains PTSD symptoms by preventing people from adequately processing their trauma memories and learning more helpful patterns of responding to trauma-related cures (Ehlers & Clark, 2000; Fleurkens, Rinck & van Minnen, 2014). Therefore, when conceptualising antipsychotics from the perspective of theories of PTSD maintenance, the ability of these medications to suppress participants' trauma memories may be a form of indirect post-traumatic avoidance. Prior studies have demonstrated that people with a history of childhood trauma are likely to use avoidance as a coping strategy (Phanichrat & Townshend, 2010; Reddy, Pickett, & Orcutt, 2006). It has also been consistently evidenced that, in adults with a history of childhood trauma, avoidant coping strategies are associated with current psychopathology and increased psychological distress (Bal, Van Oost, Bourdeaudhuij & Crombez, 2003; Johnson, Sheahan & Chard, 2003). As demonstrated in this study, some traumatised individuals may experience short-term benefits by having their trauma memories supressed by antipsychotics. However, this can also be a form of avoidant coping, which may be less adaptive and therefore detrimental in the longer term. It may thus be valuable for clinicians to be aware of theoretical models of PTSD maintenance and provide clients with psycho-education about the potential long-term negative effects of avoidant coping.

Strengths and Limitations

Participant recruitment for this study was extremely difficult. Many willing and/or eligible people were often mentally unwell which prevented them from participating. The recruitment of 19 participants was therefore a strength of this study.

The study did have some limitations. Due to the recruitment difficulties, only five young people were recruited from [service 1, blinded for review]. It was initially expected that the sample would comprise a greater number of young people who had experienced a first-episode of psychosis ([service 2, blinded for review] clients). The sample was also predominantly comprised of females. However, there was an even spread of participants

across the different age ranges. As such, when considering the clinical complexity of this cohort, the sample appeared to comprise a diverse group of people. Moreover, a few participants were uncertain about whether antipsychotics altered their trauma-related symptoms/experiences. This was primarily because they were also taking other psychiatric medications. As such, it was difficult for them to distinguish which medication was altering how they remembered or re-experienced trauma. However, this uncertainty only related specific symptoms; most of the participants appeared certain about whether antipsychotics altered how they experienced their trauma memories.

Directions for Further Research

Our findings suggest that the effect of antipsychotics on how people experience their trauma memories can influence their mental health and general functioning. As such, the role of the effect of antipsychotics on trauma-related symptoms should be considered in intervention studies of antipsychotic medications. This could include: (1) assessment of childhood trauma, and (2) assessment of PTSD, and of exacerbation of these symptoms in side effect evaluations. Studies may aim to recruit participants who are not prescribed an additional psychiatric medication. Further research is also needed on whether the emotional and cognitive effects of antipsychotics influence how people with psychosis experience trauma-focused psychological therapy.

Conclusions

This study demonstrated that the wide-ranging psychological effects of antipsychotics can be subjectively experienced as beneficial or detrimental depending on how they influence trauma-related thoughts, emotions and physical responses, and individuals' conceptualisation of healing from trauma. It is important that clinicians assess and monitor the effect of these medications on an individual's trauma-related symptoms/experiences, as this should be a factor in antipsychotic drug treatment decision-making. Further intervention and exploratory studies are needed to determine how people with childhood trauma and psychosis respond to antipsychotic drug treatment.

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Table 1

Interview Questions on the Effect of Antipsychotics on Trauma-Related Experiences

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1. As you know, we're specifically interested in finding out how people who were abused and/or neglected as children have experienced antipsychotic medication. Some people who were abused and/or neglected as children continue to experience distressing thoughts, images and/or memories about what happened. If this is the case for you, has your medication influenced or changed the way you experience(d) any thoughts/images/memories of the abuse/neglect?

2. Some people who were abused and/or neglected as children also experience different types of emotions that are specifically related to their abuse/neglect. For example, some people feel really angry or sad when they think about what happened. If this is the case for you, has your medication changed how you experience specific emotions related to your abuse/neglect?

3. Some people who were abused and/or neglected as children also feel different physically when they think about what happened. For example, some people, when they are reminded of the abuse/neglect, experience an increase in heart rate or feel really tense. If this is the case for you, has your medication changed the way you feel physically when you are reminded about what happened?

Table 2

Participant Demographics (N = 19)

Variable	n (%)
Sex	
Male	5 (26.3%)
Female	14 (73.7%)
Age range	
16–24 years	6 (31.6%)
25–34 years	3 (15.8%)

Variable	n (%)
35–44 years	5 (26.3%)
45–54 years	2 (10.5%)
55–64 years	3 (15.8%)
Marital status	
Married	5 (26.3%)
In a relationship	2 (10.5%)
Divorced/separated	3 (15.8%)
Single/never married	9 (47.4%)
Highest level of completed secondary education	
Year 11 or below	7 (36.9%)
Year 12/VCE	12 (63.1%)
Additional qualifications†	
None	1 (5.3%)
Trade/technical training	4 (21.1%)
Certificate	6 (31.6%)
Tertiary diploma	7 (36.8%)
Tertiary degree	3 (15.8%)
Currently secondary school	1 (5.3%)
Currently tertiary education	3 (15.8%)
Employment status†	
Unemployed	2 (10.5%)
Full-time work	1 (5.3%)
Part-time/casual work	5 (26.3%)
Student	8 (42.1%)
Volunteer work	4 (21.1%)
Self-employed	1 (5.3%)
Disability support pension	1 (5.3%)
Country of birth	
Australia	13 (68.4%)
Overseas	6 (31.6%)

Variable	n (%)
Ethnic Self-Identification	
‡	7 (36.9%)
Not specified	12 (63.1%)
Number of lifetime psychiatric impatient admissions	
No impatient admissions	1 (5.3%)
1 impatient admission	6 (31.6%)
2 impatient admissions	1 (5.3%)
3 impatient admissions	2 (10.5%)
4 impatient admissions	0 (0%)
5 or more impatient admissions	9 (47.4%)

Note. † Participants were able to choose multiple options.

‡ Details about ethnicity are removed to ensure participant anonymity.

Table 3

Psychosis Diagnosis (N = 19)

Variable	n (%)
Psychosis Diagnosis †	
Schizophrenia	10 (52.6%)
Schizoaffective disorder, depressive type	3 (15.8%)
Schizoaffective disorder, bipolar type	2 (10.5%)
Unspecified psychotic disorder	1 (5.3%)

Bipolar disorder, with psychotic features	3 (15.8%)
Age of onset of frank psychotic symptoms	
0–9 years	2 (10.5%)
10–19 years	11 (57.9%)
20–29 years	5 (26.3%)
30–39 years	0 (0%)
40–49 years	1 (5.3%)

Note. † DSM-5 diagnosis of a psychotic disorder or mood disorder with psychotic features made using the SCID-5-RV.

Table 4

Types of Psychiatric Medications Taken (N = 19)

Variable	n (%)
Currently taking antipsychotic medication	
Yes	17 (89.5%)
No	2 (10.5%)
Type of antipsychotic medication(s) currently taking	
Clozapine (Clozaril)	1 (5.3%)
Olanzapine (Zyprexa)	2 (10.5%)

Variable	n (%)
Quetiapine (Seroquel)	2 (10.5%)
Aripiprazole (Abilify)	3 (15.8%)
Asenapine (Saphris)	2 (10.5%)
Paliperidone (Invega)	1 (5.3%)
Quetiapine (Seroquel) & Aripiprazole (Abilify)	1 (5.3%)
Quetiapine (Seroquel) & Lurasidone (Latuda)	1 (5.3%)
Aripiprazole (Abilify) & Chlorpromazine (Largactil)	1 (5.3%)
Aripiprazole (Abilify) & Lurasidone (Latuda)	1 (5.3%)
Aripiprazole (Abilify) & Amisulpride (Solian)	1 (5.3%)
Asenapine (Saphris) & Amisulpride (Solian)	1 (5.3%)
Number of different antipsychotic medications tried/taken	
2 types	10 (52.6%)
3 types	1 (5.3%)
4 types	2 (10.5%)
5 or more types	6 (31.6%)
Type of antipsychotic medication previously taken	
Olanzapine (Zyprexa)	8 (42.1%)
Quetiapine (Seroquel)	5 (26.3%)
Risperidone (Risperdal)	6 (31.6%)
Other/type unknown	10 (52.6%)
Other psychiatric medications prescribed	
Antidepressant	9 (47.4%)
Benzodiazepine	6 (31.6%)
Mood stabiliser	4 (21.1%)
Anti-side-effect	2 (10.5%)

Table 5

Frequency of Severity Categories Across the Five Scales of the Childhood Trauma Questionnaire (N = 19)

	Classification			
Scale	None (or minimal) n (%)	Low (to moderate) n (%)	Moderate (to severe) n (%)	Severe (to extreme) n (%)
Emotional abuse	2 (10.5%)	7 (36.8%)	2 (10.5%)	8 (42.1%)
Physical abuse	9 (47.4%)	2 (10.5%)	2 (10.5%)	6 (31.6%)
Sexual abuse	6 (31.6%)	2 (10.5%)	4 (21.1%)	7 (36.8%)
Emotional neglect	5 (26.3%)	2 (10.5%)	4 (21.1%)	8 (42.1%)
Physical neglect	6 (31.6%)	3 (15.8%)	4 (21.1%)	6 (31.6%)