

Case Report

“Don’t Look Up”: Eco-anxiety presenting in a Community Mental Health Service

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Abstract

This case report discusses a 25-year-old male who was referred to community mental health services from primary care with symptoms of anxiety and depression related to climate change, which the referring clinician believed were of delusional intensity. This case report gives the history of his interaction with the service. A literature review is performed noting the dearth of case reports in this area and a subsequent discussion charts the emerging literature on mental health issues related to climate change. Finally the paper makes some broad recommendations for mental health practitioners on how to approach these issues.

Keywords: Climate change; eco-anxiety; environment; mental health; planetary health; psychiatry

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Case Report

Presenting complaint/history of presenting complaint

A 25-year-old single male was referred to our community mental health team by his GP with symptoms of depression, anxiety, suicidal ideation, impaired day-to-day functioning and investigation of beliefs related to climate change which were felt to be of delusional intensity. The patient presented to his GP with symptoms of depression and anxiety secondary to a preoccupation with climate change and frustration and concern that others did not recognize the importance of these issues. He presented to mental health services for assessment with significant encouragement from his mother, and stated he was hoping to find someone who “understood”, but had limited expectations regarding treatment.

The patient reported a three year history of pre-occupation with global warming and climate change. He initially developed these concerns after taking part in a “Climate Action” march. Subsequently, he traveled to an area where crops had been affected by climate change and witnessed first hand the effects this had on local farmers. He reported a pattern of increasing concern and preoccupation about this over the next three years. He reported reading extensive research on the subject, and came to the conclusion that mass extinction events were likely to happen in the near future. He also developed a specific concern that his parents’ home, which was near the coast, would soon suffer regular flooding. He worked abroad for six months with an environmental NGO but reported feeling that those within this organisation did

not take climate change seriously enough. He started to eat a plant-based diet and reported feelings of sadness when witnessing others eat meat. He also reported regularly warning friends and family about the impact of climate change, and reported feeling annoyed others did not share his concerns, which led to a pattern of social withdrawal.

The patient reported chronic feelings of sadness, but denied anhedonia, identifying time spent in nature as enjoyable. He also reported experiencing free floating anxiety which worsened when he was around others, and improved with meditation. He reported fleeting passive thoughts of self-harm but no suicidal ideation. He had a normal appetite and denied sleep disturbance. The patient reported that preoccupation with climate change was impairing his ability to perform activities of daily living, and that he had been experiencing financial difficulties as he had stopped working secondary to this stressor.

Past psychiatric history

The patient reported previous engagement with mental health services affiliated with his university one year prior to presentation, where a short trial of Escitalopram was discontinued due to associated subjective fatigue. As well as this, during his time working with an environmental NGO abroad he was referred to a crisis mental health team with suicidal ideation in the context of distress and overwhelming thoughts regarding the impact of climate change. He was seen for both psychology and psychiatry input at this time. It was noted by his treating team that the patient would disengage when he sensed the treating clinician did not take his fears of climate change as seriously as he would like. He was seen for a period of six weeks and it was agreed there would be no further follow-up. No formal diagnosis was made.

The patient had no significant family psychiatric history and reported his childhood as “good”. He engaged well with education

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and graduated from university 1 year prior to his presentation to this mental health service. He completed a 6-month internship after graduation but had not worked since this.

Drug and alcohol history

The patient endorsed a pattern of regular drug use including frequent use of cannabis, as well as occasional use of other drugs including magic mushrooms, LSD, ecstasy and MDMA. The patient identified psychedelic use as an important factor to his environmental concerns. He first tried magic mushrooms aged 20 and identified that this “allowed [him] to keep [his] mind open to it”. He used magic mushrooms on one further occasion and LSD once recreationally at a music festival. He denied alcohol or other illicit substance use.

Medical history

His medical history was significant for hypothyroidism and growth hormone deficiency. He was taking 75 mcg levothyroxine and was no longer on active treatment for growth hormone.

Mental state examination

On mental state examination, when first assessed, he was noted to be of average height and thin build, well dressed and well kempt. He was visibly anxious, shaking in his chair. He was co-operative, pleasant and established good rapport. His affect was appropriate and congruent. His thought form was linear and coherent, although his thought content was thought to have overvalued ideas and delusional beliefs. He reported no abnormal perceptions.

Collateral history

Collateral History from the patient’s mother revealed a pattern of escalating beliefs and pre-occupation with causes of social justice. While his primary focus was climate issues, he also became involved with other causes, such as Black Lives Matter, LGBT rights and the “Shell Oil Must Fall” project. He had become disconnected and disillusioned from family due to disagreements regarding their level of concern regarding climate change.

The initial differential diagnosis included depression, anxiety, drug induced psychosis, a schizophrenia prodrome and schizotypal personality disorder. A plan was put in place for longitudinal assessment through the day hospital service as well as regular outpatient review. A referral was made to the local early intervention in psychosis service for comprehensive assessment. No investigations (i.e. bloods, imaging) were carried out.

He was commenced on 20 mg fluoxetine mane and olanzapine 5 mg nocte, advised regarding non-pharmacological measures such as breathing and distraction techniques, and given psycho-education regarding the potential diagnosis of psychosis. He was advised to continue engaging with the psychologist he had been seeing through his university. A crisis plan was formulated.

The patient was subsequently assessed by the early intervention in psychosis service team and delusions or delusional disorder were ruled out. It was noted by this specialist team that there had been a pattern of escalating use of psychotropic substances over time. At this time he told the interviewing psychiatrist that “those in denial of climate change are delusional”.

He was followed up by his community psychiatry team for longitudinal assessment. He was reviewed in outpatient clinic, and linked with a day hospital service where assistance with distress tolerance was offered. He reported no issues with adherence but

saw little symptom relief after a two month trial of the above medications. He was referred for psychology input. However, before this happened he left the country to pursue study abroad. He commenced a course which, while unrelated to his environmental concerns, he believed would provide an avenue to having a positive impact on the world. At his final appointment, some improvement in mood was noted, and thought content was no longer considered to include delusional content or overvalued ideas. There was minimal other change to his mental state. Contact was made with a medical team in his country of study to ensure continuity of care and he was discharged from the service.

Discussion

Literature review

As part of this case study, a search for case reports involving mental health issues and climate was performed. A literature search was performed using a combination of the terms “climate change” OR “environment” AND “mental health” OR “psychiatry” in PubMed, PsycInfo, Embase and Cinahl filtering for case reports, with results updated as of March 2022.

A total of two case reports were found. One case report (Comtesse et al., 2021) set out a fictional case study of a mountaineer “A.” dealing with ecological grief. In this fictional case A. was stunned by the lost landscape and longs for it. His thoughts circle around the loss and its consequences. He blamed himself for non-climate friendly, past actions while he cannot accept the loss. He experienced sadness, bitterness, deep anxiety, guilt, and even shame about his lifestyle choices.

In contrast, the 2nd report (Wolf and Salo 2008) presents a case of a patient with major depressive disorder with psychotic features who believed that his own water consumption could lead within days to the deaths of ‘millions of people’ through exhaustion of water supplies. The patient quoted “internet research” as his reason for believing this.

As per the above literature review, there is a lack of literature relating to cases involving mental health and climate.

Diagnosis

While a number of diagnoses were ruled out during the patient’s assessment, it is difficult to place his difficulties within ICD-11 or DSM-V diagnostic criteria. He may have met the ICD-11 criteria for mild-moderate depression. Based on his presenting symptoms, he likely would not reach the threshold for any specific anxiety disorder.

Psilocybin use and drug-induced psychosis

Drug-induced psychosis is an important differential diagnosis in the context of emerging research on psilocybin. A recent cross-sectional study (Nour et al., 2017) demonstrated that lifetime psychedelic use is associated with liberal political views, openness and nature-relatedness. These all seem relevant to this patient. Subjectively his concern with climate was due to being able to “keep an open mind”. He was also noted on collateral to have become engaged with a number of liberal political movements, such as Black Lives Matter.

A number of trials have suggested that use of psilocybin, the psychoactive component of magic mushrooms, increases nature-relatedness (Lyons and Carhart-Harris 2018) defined as the subjective sense of connection with the natural environment. As well as this its use has been associated with the idea of a “pivotal

mental state” defined as a hyper-plastic state aiding rapid and deep learning that can mediate psychological transformation (Brouwer and Carhart-Harris 2021).

This patient was referred for assessment as his GP believed the intensity and impact of his beliefs regarding climate change could be delusional. Clearly, this patient felt very strongly about the severity and impacts of climate change. Could an increased sense of nature-relatedness, taken with the severe impacts of climate change described in the literature combined with psychotropically mediated “psychological transformation” have led to an inability to cope with the psychological strain of climate concerns? Psychological transformation is not inherently positive, and could have had a severe impact for this patient.

Extensive assessment in this case did not point to delusion or psychosis. Throughout all assessments, this patient’s thought form was linear and coherent and the potentially delusional thought content was found to be based on accurate understanding of the scientific literature. In particular, he quoted specific relevant research (Arias et al., 2021) to his assessing team.

Similarly, while some elements of this patient’s presentation may match schizotypal personality disorder, other features make this less likely. While there had been some social withdrawal, previous close interpersonal relationships were noted. The sole “oddity of thought” was an elevated level of concern regarding climate change, with no strange perceptions, inappropriate speech or inappropriate affect.

Cannabis use and Cannabis associated mood disturbance

The patient described his cannabis use as “frequent”. Cannabis use has been linked with risk of neurocognitive deficits, including short-term and long-term memory impairment (Figueiredo et al., 2020), and affective dysregulation (Dorard et al., 2008). It is also associated with structural brain changes, including reduced hippocampal volume (Owens et al., 2021) and neocortical thinning (Albaugh et al., 2021). Cannabis use may have played a role in the development of negative cognitive schema in this patient.

Eco-anxiety and solastalgia

There are a number of terms in the literature to describe this patient’s elevated concern, the most prominent of which are eco-anxiety and solastalgia. Both of these fit with this case to some degree. While neither of these are clinical diagnoses, the concepts are interesting to explore in relation to this case.

Eco-anxiety has been described as “Anxiety relating to a multitude of ecological crises” (Hogg et al., 2021) and “A chronic fear of environmental doom.” (Clayton et al., 2017). It is a relatively new concept and is the subject of some controversy (Thompson et al., 2022). A standardized, validated tool has recently been developed to measure eco-anxiety, the “Hogg Eco-Anxiety Scale” (Hogg et al., 2021). This is a 13-item questionnaire measuring four dimensions: affective symptoms, rumination, behavioral symptoms, and anxiety about one’s negative impact on the planet. As set out in this case report, this patient would likely score highly on this scale, but notably this tool requires further validation and investigation before it would be appropriate for use in clinical practice.

Solastalgia is a neologism coined by the Australian philosopher Glenn Albrecht to describe the distress caused by environmental change (Albrecht et al., 2007). It refers specifically to distress produced by environmental change impacting on people while they are directly connected to their home environment, and a

resulting loss of solace and psychological comfort associated with the idea of “home”. Examples of these changes are persistent drought, as seen in parts of rural Australia (Department of Agriculture and Food, 2013), or sea level rises destroying one’s home environment, as is currently happening in the Marshall Islands in the Pacific (World Bank and Islands 2021). While solastalgia can be future-focused, it is usually thought of in the context of active changes or degradation of the home environment. The patient was concerned about future impacts on his home environment, amongst wider concerns. The chronicity of the distress, i.e. that it is anticipatory, means an anxiety state is more accurate.

Previous case reports

It is interesting to contrast this case with the two existing case reports. While both Wolf’s patient and this patient came to their conclusions through internet research, there was less of a leap of logic for this patient. The content was also less bizarre, with less grandiosity.

The fictional case of eco-anxiety is very similar; however, the level of distress does seem more severe in our patient. While many of the experiences of the fictional patient, such as bitterness, guilt and shame, may have come to the fore with psychology input, this was not possible to explore in this case due to the patient leaving the country and being discharged from the service. It is also interesting to note in the real world example, the character we see is more “three-dimensional”. This is to be expected, and also shows the benefit of having a real world case clinical case study, as the picture is generally less clear cut in clinical practice.

How does psychiatry deal with environmental concerns in a clinical context?

We present this case in the context of a significant surge in research around climate anxiety and climate distress. Both within the literature and within public discourse, the potential links between climate change and mental health are gaining more attention.

In a recent survey (Hickman et al., 2021), 10,000 children and young people, from ten countries, were asked about their experiences of climate-related anxiety. Close to 60% said they felt “very” or “extremely” worried about climate change. This feeling was summed up in the words of one 16-year-old: “I think it’s different for young people. For us the destruction of the planet is personal”.

Recent opinion in both Irish (Power et al., 2022) and British (Bailey et al., 2021) journals has called for psychiatry to take a more active role in advocating for climate justice. Given the level of distress in young people regarding this issue, it is likely that over time more patients will present to mental health services with these issues. If this is the case, it will be important for clinicians to have an awareness of these issues. Prompt assessment and diagnosis may help patients get the care they need in a timely fashion.

While the literature on potential treatments for eco-anxiety is in its infancy, a recent scoping review of Interventions for the Treatment of Eco-Anxiety (Baudon and Jachens 2021) aimed to give an overview of approaches thus far applied. These are primarily psychological and social in nature including “linking with practitioners’ inner work and education, fostering clients’ inner resilience, encouraging clients to take action, helping clients find social connection and emotional support by joining groups, and connecting clients with nature”. However, further research is

needed to elucidate which treatments may be most appropriate for this emerging issue.

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